

Annual report 2023

TELESTE



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Year 2023 and strategy



Broadband Networks

Our solutions enable reliable, ultrafast broadband connections and TV services for households and businesses.

Digital technologies and access to fast and secure internet form the backbone of a networked society. They bring services available to people and go hand in hand with sustainable development.

100 million
Internet users benefit
from our solutions.



Public Safety & Mobility

Our solutions increase safety and security and improve the smooth mobility of people.

The digitalisation of travel-related information makes public transport easy and attractive. Smart technologies bring security to public places. Evolving smart cities create new services for people's everyday life.

Our technology serves
1,5 billion
public transport passengers annually.

Established
1954

Turnover
151.3
milj. €

#TelesteTeam
members
750

Turku
Finland
HQ

We make your everyday life
smart, safe and **smooth.**

We want to be
**our customers' best
partner** for building
a networked society.

Our goal is to be **the leading
ESG player in our
industry.**

Customer centricity • Respect • Reliability • Result orientation

A year of surprises challenged us to change

After the exceptional years during the COVID-19 pandemic, we expected a return to a more normal operating environment in 2023. That was not to be the case. Much like the preceding years, 2023 turned out to be both unpredictable and difficult. On the whole, the beginning of the year went as expected, and we improved our net sales and profitability. After the summer, however, the market demand for our larger business unit took a notable negative turn, which meant that the company's total net sales were lower than expected. Amidst the changes, we intensified our efforts to develop the strategic core of our business and our organisation.



The most significant reasons for the weak overall result in 2023 included the general global economic situation, higher costs and interest rates, and the volume of the Broadband Networks business being lower than expected. Due to cost reduction measures and investment cuts by network operators, our orders received did not reach our expectations. In addition, some of the deliveries originally scheduled for the latter part of the year were postponed due to delivery delays and problems with the availability of materials.

We expect the uncertain market situation to continue, with continued supply chain challenges particularly with regard to electronics components and semiconductors. In response to the circumstances, we initiated a number of measures in 2023 to increase the efficiency of our operations, cut costs and protect cash flow. We also continued our measures to pass the higher costs through to sales prices in both of our businesses. By prioritising our operations and adapting our cost structures, we create the foundation for improving profitability.

THE BROADBAND NETWORK MARKET SLOWED ON THE THRESHOLD OF A NEW TECHNOLOGY GENERATION

The demand for broadband services continues to grow, driven by remote work and the increasing consumption of digital services. This requires telecommunications

operators to make investments in increasing network capacity and data transmission speeds. In cable-based infrastructure, this means a gradual transition to next-generation DOCSIS 4.0-compliant 1.8 GHz network updates that will provide subscribers with access to broadband connections with speeds of up to 10 gigabits.

Our DOCSIS 4.0-compliant network product development projects continued with high intensity in 2023. The next-generation smart amplifiers we are developing for the North American market entered the final acceptance testing phase with our main customer, and we expect the deliveries to begin in early 2024. At the same time, we are gradually preparing for high volume deliveries. In Europe, investments in new technologies will begin later than in North America, but the deliveries of our passive 1.8 GHz products are already under way.

DOCSIS 4.0 technology ensures the competitiveness of cable network connections alongside optical fibre for years to come. This creates significant growth potential for the network products market, especially in North America, where we expect operators to make investments in the new technology from 2024 onwards. Predicting market development in Europe is more difficult, and it depends on the timing of the adoption of next-generation technologies.

STEADY DEVELOPMENT IN PUBLIC SAFETY AND MOBILITY MARKET

The market for video security and public transport information systems is growing steadily, driven by the development of urban environments, the increase of environmentally sustainable public transport services, and the increasing popularity of smart digital systems for a smoother life. The market is characterised by public sector investments aimed at ensuring the smooth operation and safety of services and infrastructure.

In public transport information systems, we delivered several projects in 2023 to major rolling stock manufacturers. We also made progress on a number of other customer projects in Europe and the Middle East. We purposefully sought to establish a stronger foothold among public transport operators and in the services business in particular. In addition, we continued the measures initiated in 2022 to improve the profitability of our projects and revise our organisation and processes.

Public transport information systems are continuously developing to be increasingly smart and real-time. Smart functionality is also increasing in video security and situational awareness solutions, and their scope is expanded by various mobile systems, for example. Next-generation solutions will include not only video but also increased management and analysis of various types

of data streams. The rapid development of technology requires us to continuously make R&D investments in new intelligent solutions, and the share of software systems in these solutions will continue to grow.

STRATEGIC STEPS TOWARDS THE FUTURE

In 2023, we initiated measures to streamline Teleste's legal group structure, which will involve carving-out our Broadband Networks and Public Safety and Mobility businesses into separate legal entities. The planned corporate structure will clarify the operational control of the businesses and increase the flexibility of the business units' operations. At the same time, it will enable us to better take account of the special characteristics of both businesses.

We established an Advisory Board at the beginning of 2023 to support the North American networks business. The role of the Advisory Board is to steer our operations in the North American market. By strengthening cooperation and expertise, we expand our insight into the needs and expectations among operators in North America and ensure that we can take full advantage of the growth opportunities presented by the market.

Linda Kallas joined the company as the new Senior Vice President, Group Strategy, and member of the Management Group. Under


her leadership, we will continue to advance our programme to sharpen our strategy. In June, we also sharpened our focus on the broadband networks technology business by divesting Teleste's subsidiary Teleste Network Services SA to local management. The subsidiary was previously responsible for the Broadband Networks' business unit's engineering and services business in the Swiss market.

OUR SUCCESS IS BUILT ON OUR CULTURE

Teleste celebrates its 70th anniversary in 2024. This milestone is a great opportunity for our company to look back on the journey we have taken and think about what kind of company we will be in the future. We want to create value for our customers, investors, Telestians and the whole world. Now and in the future, our goal is to focus on creating the foundations for safe and good daily life for everyone.

Teleste's history is a journey of change and renewal. While predicting the future is difficult, we believe that change continues to be vital in our operating environment today. We pursue success and growth, and we work together to achieve these goals. Our efforts will be supported by Teleste's culture vision, which was published in 2023 and is built around our company's key strengths: innovation, joy and respect. These qualities will continue to be the cornerstones of our success in the years to come.

Esa Harju
CEO of Teleste



“ Amidst the changes, we have intensified our efforts to develop the strategic core of our business and our organisation. This prepares us to continue to develop smart, safe and smooth daily life in Teleste's next decade.

Esa Harju, CEO

Key figures

ORDERS RECEIVED

Orders received by the Group amounted to EUR 149.6 (188.5)* million, decreasing from the previous year's higher than normal level. The decrease was due to the optimization of telecommunication operators' own inventories, the general decrease in network investments in Europe and the slow volume growth of next generation distributed architecture products.

NET SALES

The Group's net sales reached EUR 151.3 (165.0) million. Revenue of Broadband Networks business decreased in traditional HFC access network products in Europe. Deliveries of next-generation Distributed Architecture products and expansion into the North American market did not progress at the planned pace. In addition, the divestment of the Swiss service business on June 30, 2023, decreased net sales. In the Public Safety and Mobility business, net sales increased due to growth in the delivery of project-specific systems and ongoing progress in serial deliveries of on-board solutions.

* Figures inside brackets refer to fiscal year 2022

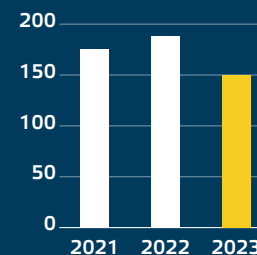
PROFITABILITY

Adjusted operating result decreased due to lower net sales, although profitability at the gross profit level increased by more than 2 percentage points. The cost reductions implemented by the company were not sufficient to compensate for the effect of the Broadband Networks business's significantly lower net sales at the end of the year. During the year, the company started a series of measures to improve business profitability and prioritize operations. These measures are aimed at reducing costs and ensuring cash flow, and they will begin to realize gradually from the beginning of 2024.

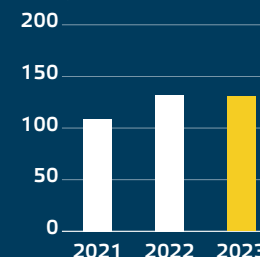
CASH FLOW AND BALANCE SHEET

Cash flow from operating activities was EUR 10.8 (-7.8) million, increasing significantly from the previous financial year. Cash flow from operating activities was improved by a decrease in working capital. The Group's equity ratio strengthened and was 45.4% (39.7%). The decreased EBITDA increased the debt ratio, even though the company reduced interest-bearing debt during the financial year. Improving working capital, repaying interest-bearing debts, and improving profitability are key financial goals during 2024.

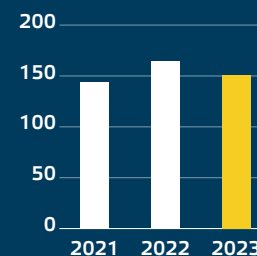
Orders received, EUR million



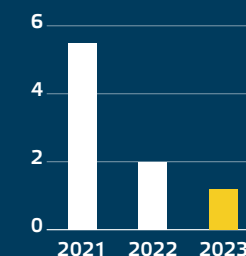
Order book (period-end), EUR million



Net sales, EUR million



Adjusted operating result, EUR million



As Teleste Group for 2024, we aim for better business profitability compared to the previous two years. The primary objective of the Broadband Networks business is growth in North America. In the Public Safety and Mobility business, we continue to develop our operations and aim for a moderate and controlled increase in business volume.

Juha Hyytiäinen, Chief Financial Officer

Strategic priorities

- Grow our business in next-generation broadband network technologies
- GoWest – Penetrate the US market
- Become the market leader in public transport information and security solutions
- Build a solid position in security solutions for selected public authorities
- Provide high value-added services for network operators and the public transport industry
- Drive lean operations and quality by passionate professionals

KEY DRIVERS

Climate change mitigation is an immediate need that drives everyone to seek ways to reduce CO2 emissions. Our solutions promote the use of public transport and high-quality smart communication networks that play an important role in achieving climate goals.

Urbanisation drives the demand for public transport services and highlights the need for public security. Utilising smart technologies for data communication networks and real-time sharing of information, our solutions enable smooth and safe living environments for people, while creating a foundation for the networked society on a global scale.

Digitalisation and technological development are key enablers for new, increasingly personalised services over the internet, and phenomena such as IoT, which require a high level of connectivity. Our technologies ensure multi-gigabit connectivity and networks evolving in pace with the demands for more capacity and more reliable, high-quality services.



Linda Kallas appointed SVP, Group Strategy

Linda Kallas (M.Sc., Eng.) joined Teleste as the company's new SVP, Group Strategy and member of the Management Group on 1 June 2023. The aim of the appointment is to strengthen and develop the company's long-term strategy work and communicate Teleste's objectives even more clearly to stakeholders.

// *Teleste has an excellent opportunity to be successful in the evolving markets thanks to the company's strong customer centricity and ability to develop technological innovations. Our aim is to clarify the concrete means by which this will be achieved.*

Linda Kallas,
Senior Vice President, Group Strategy



Broadband Networks



BUSINESS OVERVIEW

Entering new era on cable access network technologies

Modern data communication networks began shaping up when the Internet was opened for public use in the early 1990s, and the World Wide Web enabled sharing graphical content over the Internet. Since 1995, the Internet has gone from triumph to triumph as consumers have been hooked on the constant flow of new service innovations built on the digital platform. Today, more than 5 billion people are consuming Internet services either over fixed or wireless networks.

Data traffic has experienced massive growth ever since the birth of the Internet. The annual growth rate of data consumption was approximately 30% from 2019 until 2023. A significant step up occurred in 2020 when societies had to move to remote presence due to the COVID-19 pandemic. The growth has continued since then, but at a lower rate. For instance, in the United States, the data volume delivered over cable infrastructure grew by 25% during 2021-2022. Today, 95% of all data consumed in Europe and the United States has been delivered via fixed networks.

NEW SERVICES SET NEW DEMANDS ON THE NETWORKS

Traditionally, fixed networks have been used to deliver triple-play services, i.e. voice, video, and data services. In recent times, the data services have been extended to embrace remote work and remote learning, virtualized healthcare, streaming video and audio services, eGames, and several others. Broadband networks have become mission-critical infrastructure for today's societies, providing a digital platform for new innovations like smart cities, virtual reality, and the Internet of Things.

The rapid development of service innovations will bring new requirements for broadband infrastructure. The main demands are:

- 1) 10 Gbps maximum speed;
- 2) ultra-low latency required for e.g. online gaming applications;
- 3) enhanced cybersecurity and data protection;
- 4) reliability; and
- 5) optimized power consumption.

Looking into the future, there are only two choices which can fulfil these requirements: building either new fibre-to-the-home networks or updating existing coax infrastructure with DOCSIS 4.0 technologies. Legacy fixed telephony networks and DSL technologies are not competitive anymore.

DOCSIS 4.0 TECHNOLOGY BRINGS COMPETITIVENESS

Technology cycles in telecommunications networks are long: upgrading cable network infrastructure typically takes several years, during which millions of network elements are replaced with next-generation products. In addition, before the network upgrades can commence, technology vendors need to

spend years on research and development to implement new technologies into mature products. This is also valid for the DOCSIS 4.0 technology: After years of consistent R&D work, network upgrades can commence in 2024.

Even when considering these extensive development efforts, the main advantages of DOCSIS 4.0 are fast network deployments and lower upgrade costs based on utilising the existing coaxial cabling. In a typical DOCSIS 4.0 upgrade, the cost per subscriber is estimated at 200-300 USD per subscriber. In comparison, building a completely new fibre-to-the-home network with underground cabling is typically a 5–10-year project, with capital expenditure multiple times higher than in the DOCSIS 4.0 investment.

NORTH AMERICA AND EUROPE ON DIFFERENT TRACKS

In the United States, cable infrastructure passes almost 100% of all households, and cable operators hold approximately 70% market share of broadband connections to them. Fibre network operators in the US struggle to win significant market share from cable operators. In North America, DOCSIS 4.0 upgrade investments enable cable operators to successfully compete against their fibre competitors as the network performance matches that of fibre, but upgrade cycles are shorter and there is no burden on homeowners due to re-cabling of the home or property. The DOCSIS 4.0 investment wave will create significant market growth in North America.

In Europe, the market differs: cable infrastructure typically covers less than half of the

households in a particular country. Accordingly, cable operators hold less than 20% market share of all broadband households. There is significant momentum in building fibre infrastructure to replace obsolete fixed telephony networks. Cable operators are responding to this competition by building fibre infrastructure in areas not covered by coax, and we can expect several European operators to continue building also in areas covered by cable networks over with fibre. As a result, the investment wave for DOCSIS 4.0 in Europe will stay at a modest level.

INTELLIGENT INNOVATIONS AS STEPPING STONE TO CONQUERING NEW MARKETS

Teleste's Broadband Networks core business is focused on implementing new cable access technologies into products. With our innovative products, fixed telecom operators can respond to increasing data traffic growth by conducting cost-efficient network upgrades over the lifetime of their networks.

For the past few years, our core strategy has been to bring DOCSIS 4.0 capable products first to the market. Parallel to this, we have been laying the groundwork to enter the North American cable market. Our pioneering work and years of experience in Europe, enabling smart and automated access network solutions for network operators, are generating significant interest in the US, where similar automated network solutions will be built in conjunction with the DOCSIS 4.0 investment wave.

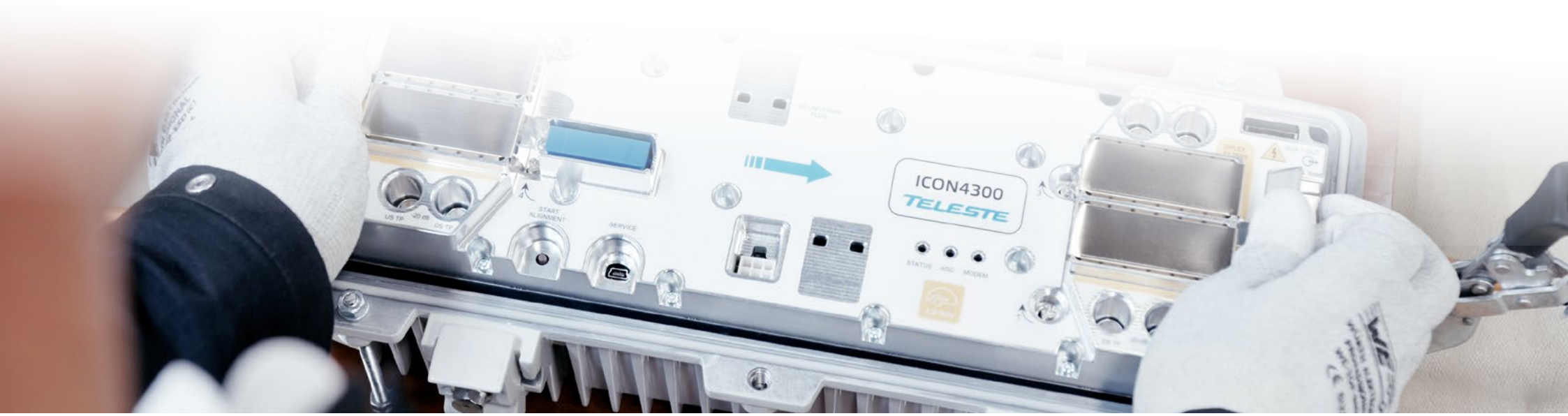
Hanno Narjus

Head of Teleste's Broadband Networks business unit



North American Advisory Board

In January, Teleste appointed an Advisory Board that brings together experienced business leaders in the cable and telecommunications industries to provide guidance to the company in the North American market. The North American Advisory Board is chaired by **Hanno Narjus**, SVP, Broadband Networks at Teleste. The other members are **Esa Harju** (CEO, Teleste), **Stephanie Mitchko Beale** (former CTO, Charter Communications), **Joe Godas** (former SVP, Network Engineering & Technology, Charter Communications), **Neil Tang** (President, Antronix) and **Linda Kallas** (SVP of Group Strategy, Teleste). The advisors' collective knowledge and experience in the cable network business will support Teleste's continued growth as an access network infrastructure leader.



NEXT-GENERATION CABLE NETWORKS

1.8 GHz technology on the threshold of deployment

Our intelligent 1.8 GHz technology provides the foundation for next-generation cable networks.

Our 1.8 GHz amplifier technology enables cable operators to respond to the continuously growing demand for network capacity. Our new amplifiers will drive DOCSIS 4.0 compliant next-generation cable networks that bring multi-gigabit speeds to end customers.

SMOOTHER UPGRADES THROUGH INNOVATION

Our powerful amplifiers offer not only high data transmission speeds but also a number of smart solutions that make the equipment smoother to use and reduce operating costs. We are now also introducing these solutions to the North American market. Examples of the smart solutions include automatic device configuration and hot-swappable diplex filters, which together enable quick frequency split upgrades in the field. The technology

ensures the reliable functioning of the equipment by automatically calculating and implementing optimal adjustments for a new frequency split. At the same time, the time, and costs of upgrade work are reduced by not having to transport the equipment to the laboratory for upgrades.

OVER 15 YEARS OF INTELLIGENT NETWORK DEVELOPMENT

With proven reliability and performance, our intelligent network products are based on over 15 years of innovation. This technology now gives operators the opportunity to take full advantage of the potential presented by the imminent wave of 1.8 GHz investments. The higher the frequency range of network equipment, the more precisely they need to be adjusted. This is achieved through automation and remote management, which are enabled by the intelligent technology. In the future, artificial intelligence will also create new opportunities for expanding the smart solutions.



DISTRIBUTED ACCESS ARCHITECTURE

Growing use of distributed access architecture

The transformation of cable networks will improve broadband connections and ensure the future competitiveness of the networks.

In 2023, we delivered distributed access architecture devices for several network upgrades. Among our customers were **Telia**, which is the leading telecommunications provider in the Nordic and Baltic regions, as well as the Poland-based telecommunications operator **Chopin Cable Television** and **Stadtwerke Schwedt GmbH**, which operates a city network in Germany.

Distributed access architecture provides operators' subscribers with the increasingly high-speed and reliable broadband connections necessary for popular streaming and entertainment services as well as remote work. At the same time, the change in architecture ensures a cost-efficient path for transitioning to future broadband technologies.

The transition from conventional centralised cable networks to distributed networks is achieved by taking advantage of the existing infrastructure. The solution does not require new network cabling, which makes it ideal for quick deployment in apartment buildings, for instance.

RECOGNITION FOR OUR DAN3 REMOTE PHY DEVICE

Designed for distributed access architecture, our Remote PHY devices provide operators with an effective investment path for securing the future of their networks. Our technology received recognition in October 2023, when our DAN3 Remote PHY device was awarded four out of five stars in the Broadband Technology Report's annual Diamond Technology Reviews. Designed with the needs of apartment buildings in mind, DAN3 helps operators bring multi-gigabit speeds to each apartment quickly and cost-efficiently.

An agile innovation model drives the development of FTTH products

When operators deploy new fibre-to-the-home solutions, the development of our optical passives ensures that they have the products they need to make network construction and installations easier.



Our agile innovation model has enabled us to develop operator-specific optical passives and solutions for all parts of the fibre network and customer installations. Our model is based on a careful assessment of customer requirements and, for example, the use of 3D printing to support product development.

Thanks to our design methodology, we can deliver cost-efficient solutions to all fibre installation needs. We guarantee high quality for our products and have the capability to deliver them in large volumes in target times as short as eight weeks. Another advantage we offer to customers is that our minimum batch sizes are typically smaller than those of our competitors.



VOO used Teleste's passives to upgrade its network

The Belgium-based telecommunications operator **VOO** has started an ambitious network upgrade project to respond to the network users' continuously growing demands for higher capacity and faster speeds. Teleste's technology and design expertise have been leveraged in the implementation of upgrades to the in-home part of the network. Teleste's team designed eight customised RF passives that are a perfect fit with VOO's project-specific needs. Our modular design approach enabled us to guarantee high quality for the products and deliver them within a short period of time. The products were also designed to be easy and quick to install, which minimises disturbances for end customers.

Video headend customers transition to a new device generation

The continuous development of video services challenges cable operators to transition to next-generation video headend solutions.

Our hardware-based video headend solutions provide customers with unparalleled advantages in performance, reliability, and customer satisfaction. They are based on our continuous development efforts and commitment to working systematically in a changing market. Our Luminato 4X4 headend platform is a next-generation device designed for the delivery of seamless video services in both conventional and distributed access networks.

A SWAP OFFER FOR CUSTOMERS

Our swap offer campaign in 2023 provided our customers with an excellent opportunity to transition from the first generation of Luminato devices to the advanced Luminato 4X4 Edge QAM device. Customers were also offered the chance to replace Edge

QAM devices from other manufacturers with Luminato 4X4 devices to ensure better network performance and a long life cycle.

The swap offer was taken by a large number of operators who plan to continue the provision of high-quality TV channels as part of their service offering.

OVER 13 YEARS OF UNINTERRUPTED USE

Our Luminato headend platform is known for its reliability and durability. In 2023, we ran a campaign amongst our customers to find the Luminato device that has been in use the longest. The Broadcast Hero campaign produced impressive results by revealing that our customers have many Luminato devices that have been used to distribute video without any interruptions for several years. The customer that won the campaign has used their device without interruption for over 13 years!



Telenor deployed Teleste's Luminato Manager software

The cable TV operator **Telenor** now manages its Luminato 4X4 video headends in Sweden with the help of our centralised software. Telenor's country-wide network consists of more than 70 Luminato 4X4 Edge QAM devices that deliver TV services to subscribers.

Luminato Manager is a plugin software module for our CATVisor Argus network management system. It improves device management through remote configuration and batch upgrades, for example. Upgrading video headends out in the field is typically a time-consuming activity, as each device has to be physically attended to. Our software makes it possible to avoid repeated visits in the field, making upgrades faster and more efficient. Avoiding truck rolls, remote management is also positive for the environment.



Public Safety and Mobility

Towards deeper cooperation with customers

In 2023, we at Teleste continued to develop our operations in challenging circumstances. Our operating environment was heavily shaped by geopolitical crises and the rising costs and interest rates. At the same time, the continued digitalisation of public transport and the growing emphasis on needs related to public safety and security had a positive impact on our business. In spite of the challenges, we maintained our direction on our path of growth. Over the past few years, we have learned to operate more efficiently and systematically in unstable market conditions. We know what we are good at, and we also know where we can still improve.

THE CORNERSTONES OF OUR BUSINESS

The operating environment became tighter in 2023, which motivated many of our customers to increase the efficiency of their operations. At the same time, their expectations, and requirements towards us increased. In practice, this means that our customers consider their purchases more carefully than before, and place more emphasis on delivery reliability, among other factors.

We respond to our customers' needs by building strategic partnerships. Customer orientation and cooperation have become established as the clear cornerstones of our operations, and our goal is to build customer relationships that are based on trust and dialogue. We encourage our customers to engage in open dialogue about their needs and expectations. Our aim is to engage in cooperation that brings success to both parties.



It is also crucial for our business that we have the ability to identify the opportunities involved in our cooperation with customers, as well as manage the related risks. To accomplish this, we need to consider, mitigate, and accurately price the potential risks. Systematic planning and the ability to adapt to a changing environment play a vital role in our efforts to ensure that we can continue to offer reliable and long-term partnerships for our customers in the future.

EMPHASIS ON OPERATING PRACTICES AND PRODUCT MANAGEMENT

In today's business environment, our success in the market starts from understanding the customer's needs right from the design stage. Our product management capabilities determine how well our products serve our customers and Teleste's growth. Appropriate design, cost-efficient production, high quality, reliability, serviceability, eco-friendliness and a long life cycle are key priorities for the equipment we manufacture. This also applies to our customer software, which must adapt to evolving operating environments and remain updateable and secure for many years.

STRENGTHENING THE ORGANISATION CREATES A CULTURE OF HIGH PERFORMANCE

In 2023, we enhanced our organisation's ability to support our growth targets. We strengthened our team by introducing new

key individuals and roles that bring together many of the core areas of our operations, including production, software engineering and financial management. By establishing even broader visibility across team boundaries, we ensure that our activities are supported by accurate and up-to-date information. We also want every team member to understand the significance of their work as part of the bigger picture.

Highly skilled and motivated personnel, a culture of excellent performance and high-quality leadership provide a robust foundation for our strategy. We develop these building blocks one step at a time. We want to listen to our personnel, giving everyone the opportunity to influence their work.

We must respond to our customers' expectations and the rapid development of technology by continuing to improve our level of excellence. The future presents us with many opportunities to play an increasingly significant role in the safety and mobility of large numbers of people. We are already working to take advantage of those opportunities.

Valerian Sand

Head of Teleste's Public Safety and Mobility business unit



HIPE develops human-technology interoperability

Funded by Business Finland, the HIPE (Human-technology interoperability and artificial emotional intelligence) project studies how the power of AI and emotional intelligence can be leveraged to advance state-of-the-art technologies. In addition to Teleste, the participants in the groundbreaking initiative include Helvar, ISKU, Framery, Ambientia, Mall of Tripla, the University of Lapland and VTT Technical Research Centre of Finland. In the project, Teleste focuses especially on personalised passenger information, safety, and security. We are exploring possibilities to adapt passenger information systems to the individual needs and emotional states of public transport users, thereby providing them with personalised information in versatile situations.



ON-BOARD SYSTEMS

S-ARRIVE 1.0 keeps passengers up to date

Our highly anticipated S-ARRIVE® 1.0 software provides uninterrupted on-board passenger information.

With its first official release, our S-ARRIVE software is aimed at public transport operators who want to ensure that real-time information is easily and quickly accessible to passengers on board, for example in moving trains. The software seamlessly integrates with our other on-board systems and our S-VMX video surveillance system. Together, these systems provide operators with effective tools for developing their services.

BUILT ON EXTENSIVE EXPERIENCE AND CUSTOMER COOPERATION

The development of S-ARRIVE combines our extensive experience in public transport software solutions with our on-board software systems known for their proven reliability and effectiveness. In addition, our long-term customers played an important role in the development of the software by sharing their invaluable expertise in systems and solutions able to provide genuine added value.

EFFICIENCY THROUGH PRODUCTISATION

The S-ARRIVE software is based on careful productisation in which documentation and testing play a key role. Successful productisation improves the efficiency of our software engineering through the standardisation of functionality that is essential for passenger information. At the same time, it frees up time for customised implementations and the development of new features.

Our aim is to provide operators with a clear set of software on top of which they can easily build their on-board passenger information system. Convenient maintenance is another advantage, with regular software updates guaranteeing, among other things, up-to-date information security. In the future, we will add new interfaces to S-ARRIVE to expand its remote management and integration possibilities and create more opportunities for service development.



VIDEO SECURITY AND SITUATIONAL AWARENESS SOLUTIONS

Mobile solutions expand video security systems

The demand for mobile solutions as part of comprehensive video security systems is growing. At the same time, the need for inter-system integration is increasing.

In 2023, we expanded our existing customerships and made further progress in the deployment of mobile technologies as part of advanced citywide or nationwide public security systems.

LIVE VIDEO FROM THE FIELD TO THE OPERATIONS CENTRE

At the core of mobile video surveillance is the transmission of real-time video between field patrols, vehicles, and security operations centres. To function, these systems require high network capacity and technology that ensures the seamless and secure transmission of video and other information. Our development efforts are aimed at ensuring the reliable deployment of mobile systems, as well as their reliable functioning as part of our customers' infrastructures.

INCREASED SYSTEMS INTEGRATION

Another notable trend in the development of public safety and security systems is the evolution towards larger ecosystems. "Umbrellas" that integrate separate video surveillance, situational awareness and other systems enable more comprehensive and versatile understanding of situations and increase capabilities with regard to operational solutions. In infrastructures that consist of multiple public authorities and operators, improving the efficiency of decision-making is also a source of significant added value.

READY FOR THE NIS2 DIRECTIVE

The EU's new Network and Information Security Directive, NIS2, will enter into force in late 2024. The aim of the Directive is to improve the resilience and cybersecurity capabilities of critical industries and essential services. As regards our video security solutions, we have already prepared for the upcoming changes by ensuring that our IT systems and processes are in compliance with the new requirements.

Developing display technologies add value to customers

Our RGB LED displays designed for stations, platforms and stops were renewed.

Our range of RGB LED displays, which was renewed in 2023, responds to our customers' wishes for more comprehensive customisation and optimisation opportunities. At the same time, the displays enable operators to reduce maintenance costs and improve the viewing experience for passengers. The product renewal effort was carried out in close cooperation with our public transport operator customers.

MODULARITY HELPS OPTIMISE COSTS

Thanks to our modular technology, the new RGB LED displays can be delivered in various sizes and installed either vertically or horizontally. The display units have been developed for outdoor use and can be delivered with or without a protective glass. The protective glass is also quick to replace. This allows our customers to choose the right products for each use case and equip them with UV-protected glass or vandal-proof glass as necessary. The extensive customisation

options help our customers optimise their purchases and the related costs.

FASTER MAINTENANCE OPERATIONS

The replaceable RGB LED display unit and PC and interface box developed for the range of displays represents a significant improvement with regard to the daily operations of public transport operators. If a technical fault occurs, it is no longer necessary to remove the entire display for servicing purposes. Instead, the display unit or PC and interface box can be replaced. This keeps interruptions short and makes maintenance of the displays much more efficient.

FRAMELESS STRUCTURE OFFERS A MODERN VIEWING EXPERIENCE

The frameless structure of the displays makes it possible to utilise their full surface to display content. A larger surface improves the viewing experience and visuality for passengers and makes the delivery of information more effective. Using the displays without a separate protective glass further improves their brightness and colours.



Information displays for Trafikverket in Sweden

Teleste delivers RGB LED displays to **Trafikverket**, the Swedish Transport Administration, in partnership with **Swarco**, a company that specialises in intelligent traffic management systems. The new displays will gradually replace Trafikverket's existing displays at stations across Sweden. The state-of-the-art technology used in the displays facilitates a smoother public transport experience by providing real-time information on journeys. Moreover, the display solution represents a major leap forward in sustainable and environmentally friendly public transport infrastructure. This is enabled particularly by remote diagnostics features that improve the life cycle management of the displays and optimise the use of maintenance resources.

New information displays in Turku and Helsinki

Real-time and accessible passenger information makes public transport more attractive.

Teleste's TFT LCD information displays designed for stations and platforms serve the users of public transport services in central Turku and along the new light rail line in Helsinki. Supporting smooth travel through real-time passenger information, these displays provide a key component of highly functional public transport.

Modern information displays provide the users of public transport with easy access to the information they need without having to search for it across different sources. This creates a more convenient travel experience, reduces unnecessary waiting, and facilitates quicker transfers between stops. The basic starting points for the design of the displays include the reliability of the technology, long life spans and improving eco-friendliness, for example by reducing power consumption.



A woman with long blonde hair, wearing a dark blue blazer over a dark blue top with a bow, is sitting on a couch and looking at a laptop. A man with short brown hair and glasses, wearing a dark blue blazer over a white shirt, is sitting next to her, also looking at a laptop. They are both smiling and appear to be working together. The background shows a modern office environment with large windows and grey curtains. The text "Our way of working" is overlaid on the left side of the image, with a yellow vertical bar to its left.

Our way of working

Corporate responsibility plays an increasingly important role

Our goal is to be an industry leader in social and environmental responsibility and corporate governance. We take all facets of corporate responsibility into consideration to ensure that Teleste works continuously to build a sustainable future for the generations to come. At the same time, we respond to our customers' and investors' expectations and secure our position as an attractive employer. Increasing reporting requirements, such as the EU's taxonomy reporting framework and the Corporate Sustainability Reporting Directive (CSRD) provide a natural frame of reference for continuing and deepening the comprehensive assessment of our activities.



One of our most significant improvements in the area of environmental responsibility in 2023 was to extend the scope of our emissions calculation to include Scope 3 emissions for the first time. The calculations were based on the figures for 2022 and provided us with a foundation for updating our emission reduction targets. To improve the recycling rate, we started the separate collection of plastic at our production facility in Littoinen and organised waste sorting training at all of our Finnish sites.

In the materiality assessment we conducted in 2021, the most effective measures for promoting sustainability themes were identified as the continuous development of Teleste's products and services, promoting ecological digital development and ensuring the sustainability of the supply chain. The emission inventories based on the figures for 2022 demonstrate that we also play a key role in the achievement of our customers' emissions reduction targets.

In 2023, we also paid particular attention to improving the sustainability of our supply chain by updating our Supplier Code of Conduct and Sourcing policy. During the year, we also focused on strengthening the competence of our personnel with regard to sustainability issues and risk identification.

The impact of our sustainability efforts has been monitored by the international EcoVadis sustainability assessment for several years now. In 2023, we also committed to the world's largest corporate responsibility

initiative, the UN Global Compact, which is based on the principles of the initiative and UN Sustainable Development Goals. Together, EcoVadis, the UN Global Compact and the EU's reporting obligations support the continuous development of Teleste's sustainability efforts.

In the area of social responsibility, we have a long-standing focus on strengthening leadership at Teleste, and the leadership principles launched in 2020 have guided the development of supervisory work. The key objectives of the leadership principles are to support a positive employee experience and business success. To complement our leadership principles, we began a culture development effort in 2022. In that, we achieved an important milestone in spring 2023 by launching Teleste's culture vision, which was created together by Telestians.

Telestians represent various backgrounds, nationalities and cultures, but we all share Teleste's values and way of working. Our new culture vision expands the objectives of leadership and aims for strong employee engagement, well-being at work, a robust capability for innovation, and strong performance. Our social responsibility efforts have also included enhancing our cooperation with educational institutions through several collaboration projects, particularly in Finland and Poland. We have also provided many traineeship and summer job opportunities and participated in the Responsible Summer Job campaign.



We have systematically developed our corporate responsibility. We are pleased to have been accepted into the UN Global Compact network! It provides us with an even broader framework and new tools for genuinely impactful sustainability efforts.

Leena Hälinen,
Quality & Sustainability Director

Teleste's new culture vision sets the direction for the company's cultural transformation

Teleste initiated a culture development effort in 2021 with the aim of building a consistent organisational culture for the company. We believe that a strong culture will promote employee engagement, enhance well-being at work and encourage innovation. Ultimately, we believe that strong culture that is present in all of the work we do will also be reflected in our customer relationships by strengthening them and leading to even stronger performance.

Our culture development effort is divided into multiple stages, and we are committed to continuing the process in the coming years. In the first stage, which took place in 2021–2022, we focused particularly on understanding our culture's current state, as well as its strengths and areas that require further development. Based on the results of that assessment, we built Teleste's culture vision in 2023. We had over 400 Telestians participate in our work on

the vision. The outcome was the identification of four cornerstones for building a strong organisational culture for Teleste. We want the identified cornerstones to guide the day-to-day work of everyone at Teleste.

After we launched the vision in late 2023, we began to purposefully put it into action in the daily life of our entire company. As part of the process of putting the vision into action, Teleste's supervisors participate in an extensive customised training programme that is implemented in collaboration with Aalto EE. Backed up by the programme, our goal in 2024 is for our culture to support strong performance by all of our employees. We trust that a strong culture will be reflected in even smoother and more meaningful encounters with customers, colleagues, and other stakeholders in the daily life of Telestians.

Our culture highlights
joy, innovativeness
and **respect**

We form our culture in every
action we take



We build **smart, safe**
and **smooth** future

Our emissions inventory demonstrates that most of Teleste’s carbon footprint is generated in our value chain. The emissions generated during the use of the products we sell emerged as our most significant source of emissions (89,044 tCO2e). In the calculation the life span of the products was estimated to be 10 years.

The magnitude of these emissions is influenced by the products’ energy consumption, duration of use and, most importantly, the environmental friendliness of the energy used. The result of the calculations solidifies our view that investing in product innovation and technologies will enable us to further reduce both our own and our customers’ carbon footprint. We decided to begin the reduction of Scope 3 emissions by focusing first on transport-related emissions, and we set a separate target for them.

LONG-TERM DEVELOPMENT OF THE ENERGY EFFICIENCY OF PRODUCTS

Improving the energy efficiency of our products has been one of the priorities of our product development activities for several decades. In all of our business lines, our products are designed for maximum efficiency without compromising on performance. Our customers benefit from this by having not only highly performing equipment but also decreasing energy consumption and lower electricity costs.

For example, our Intelligent Networks technology has enabled us to launch network devices that optimise their power consumption according to the network’s actual capacity usage. Broadband networks are large in scale, which means that even minor improvements in the efficiency of equipment can reduce total energy consumption and, consequently, the carbon footprint. Many of our intelligent devices and software products can also be controlled and maintained remotely, which reduces on-site maintenance activities and cuts down our customers’ fuel costs and emissions.

RELIABILITY IS AT THE CORE OF SUSTAINABLE SOLUTIONS

In our product design, we take account of the full life cycle environmental impacts of our products. This is reflected in a strong focus on product durability and serviceability. Most of our devices have a long technical life cycle. Instead of having to be replaced every few years, they serve our customers far into the future.

We use a number of design tools to ensure the reliability of our products. Examples of these tools include Design Failure Modes and Effects Analysis (Design FMEA), which aims to prevent quality problems by revealing potential technical defects and enabling the necessary adjustments and corrections in the design stage.

Our products are designed to be recyclable at the end of their technical life cycle. For example, most of our network devices feature aluminium housing that can be disassembled into a single-material part for reuse. We also actively avoid the use of materials that are non-recyclable or otherwise involve adverse environmental impacts or concerns.

Indicator	Base year 2022	Target 2026	Target 2030
Scope 1 emissions [t CO2e]	261	- 40%	- 100%
Scope 2 emissions [t CO2e]	915	- 20%	- 50%
Scope 3: Downstream and upstream transportation emissions [t CO2e/ t cargo transported]	0.541	- 10%	- 20%



As a technology company, we have a significant opportunity and responsibility to be at the leading edge of sustainable development by creating new innovations and adopting green technologies and eco-friendly materials.

Pasi Järvenpää, Senior Vice President, Research and Development

Smart products from a smart factory

Teleste is widely recognised among customers as a pioneer in intelligent networks and a reliable provider of rail information solutions. The smarter our products become, the more precision is needed in their manufacturing. The necessary level of precision can be achieved by taking advantage of our products' built-in automatics in their manufacture and calibration. The seamless integration of the products and their manufacturing environment ensures the optimal performance, quality, and manufacturability of our latest line of smart amplifiers, for example, while enabling us to proactively resolve potential issues.

We have systematically developed our current production operations for over 15 years and Lean principles have guided the development for over a decade. In the past few years, we have purposefully incorporated new technology into our

logistics, sourcing and production chain. Today, Teleste's smart manufacturing operations, logistics and sourcing are heavily data-driven, and all of our personnel participate in their continuous development.

THE VALUE CHAIN IS IN OUR OWN HANDS

Close cooperation between product development, sourcing and production operations is the foundation for our smart manufacturing concept. It ensures that our products have high quality and compliance with requirements from the design stage to customer deliveries. Having a close link between product development and manufacturing also enables us to react effectively to any changes in component availability or customer requirements, for example.



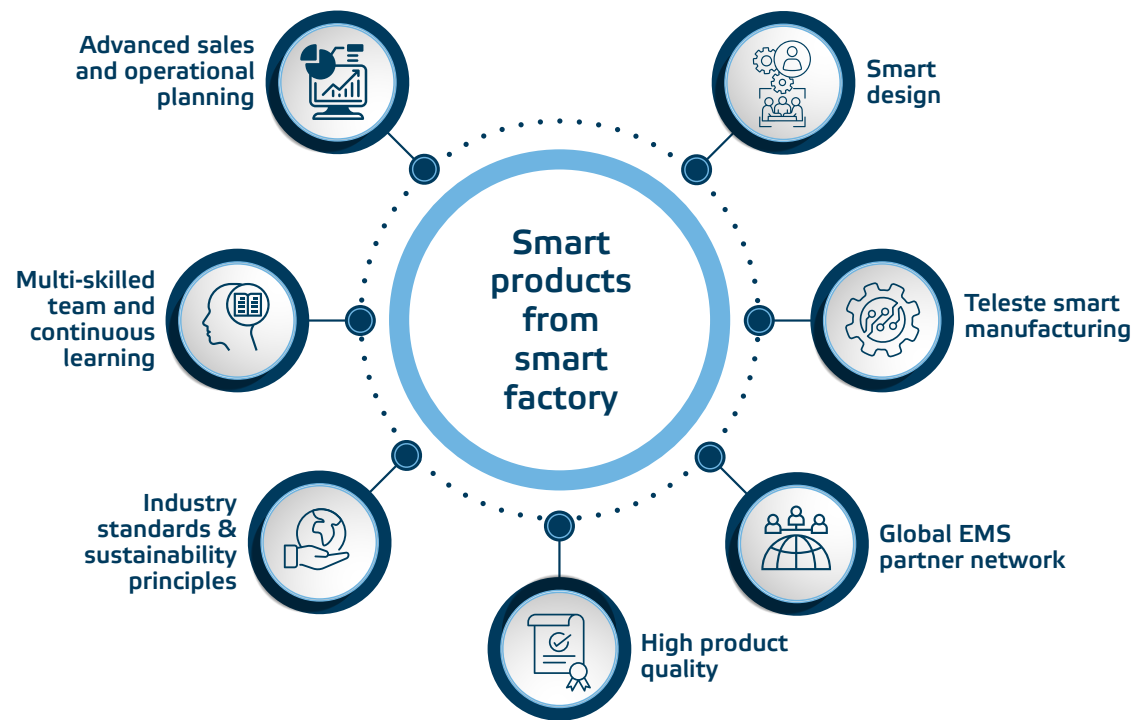
Thanks to our determined development efforts, we can call our production process one of the world's best in our size category of production facilities. I am particularly proud of the contribution Telesteians make to the continuous development of production operations, logistics and sourcing.

Markus Mattila, Senior Vice President,
Operations, Logistics & Sourcing

LEVERAGING DATA AND OUR OWN DEVELOPMENT ACTIVITIES

We have digitalised our production operations to a significant degree in recent years. In 2021–2022, we deployed Teleste's new warehouse management system (WMS), which was designed by our in-house specialists. Prior to that, we had improved picking by incorporating an intelligent picking system into our manufacturing process. In 2023, we continued our digitalisation efforts by incorporating goods receiving and dispatch functions into our digital WMS.

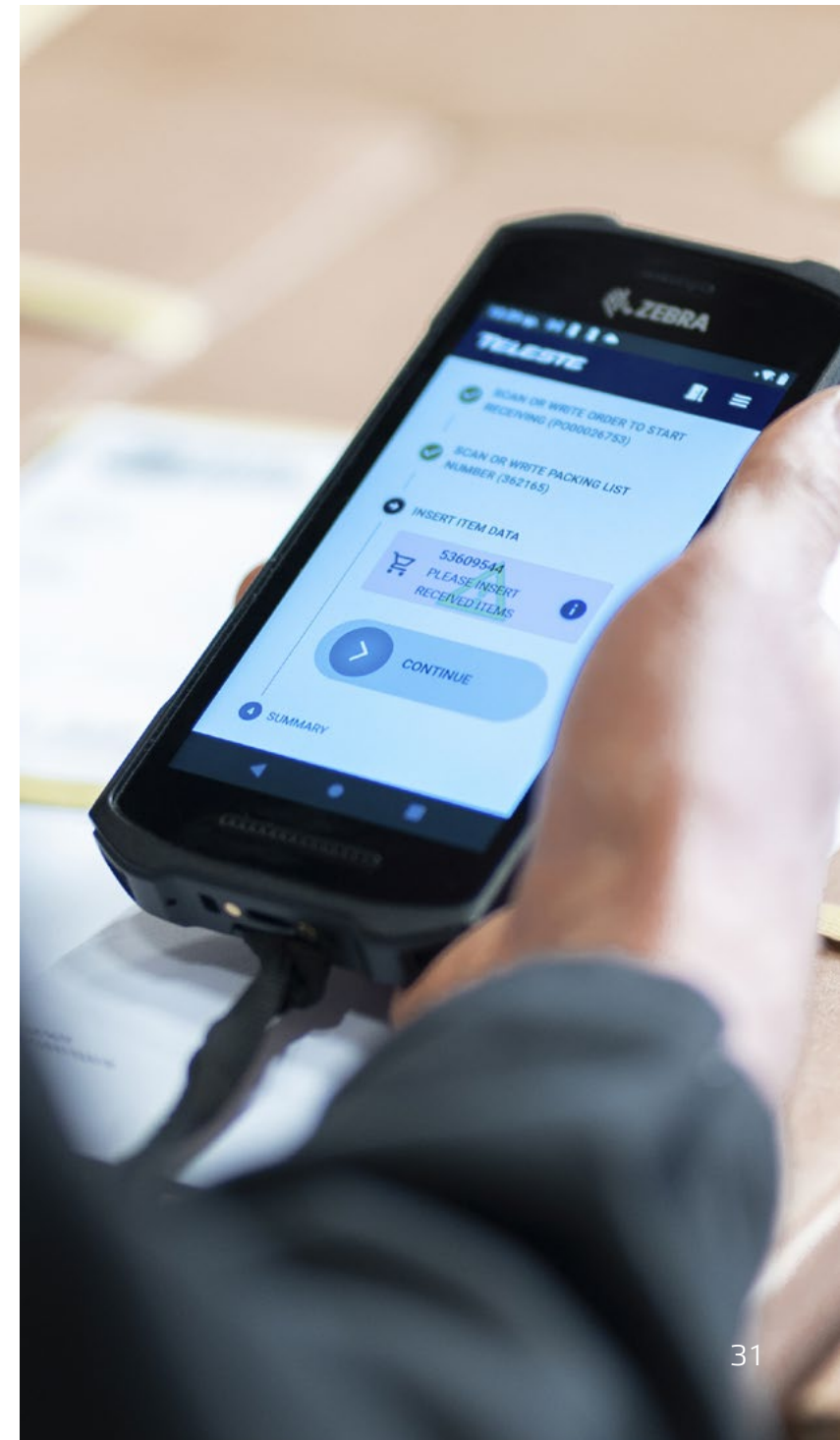
The control systems developed by our in-house specialists correspond to our business requirements and improve the management of production processes and warehouse functions. The systems are based on data collected at various



INTUITIVE WORK STAGES GUIDE OUR PROFESSIONALS

stages of our processes that provides a foundation for effective decision-making and optimisation. This enables us to minimise unnecessary production stages, defects and wasted resources. Real-time visibility into our operations also helps us react quickly to any changes in product development or customer needs.

Our highly skilled and motivated professionals continuously evaluate and improve our production process. In addition to pursuing efficiency, we aim to make it easy to use our methods and technologies. Our workflow is so intuitive that it takes less than three minutes to learn a single production stage!



Responsible sourcing

In 2023, we started new concrete measures to develop our supply chain and ensure that a significant proportion of our suppliers operate in accordance with our sustainability principles.

Sustainable and responsible business goes beyond the Teleste organisation and requires a focus on our entire value chain. The measures we took in 2023 are aimed at improvements in our own processes and our supply chain. These efforts are driven by Teleste’s values and industry standards, as well as future laws and regulations.

CONTINUED DEVELOPMENT OF SUSTAINABLE OPERATING PRACTICES

During 2023, we continued to develop our sustainable methods and working practices. We also strengthened our team’s expertise regarding sustainability issues and supply chain risks. In addition to these measures, we established sustainable sourcing practices that underscore the significance of sustainability in our sourcing activities. The principles also outline our teams’ approach and improvement goals relating to key sustainability topics.

NEW SUPPLIER CODE OF CONDUCT

We have updated our Supplier Code of Conduct. It establishes the minimum sustainability expectations for our suppliers. The aim of the updated Supplier Code of Conduct is to align with standards of our industry, and it includes requirements for our supply chain in the areas of human rights, decent work, health, safety, ethics and the environment. We also expect our cooperation partners to extend similar social, environmental and ethical expectations to their suppliers.

In 2023, we also conducted a corporate responsibility survey to request our key suppliers to evaluate their own operations from the perspective of sustainability. The topics covered in the survey included governance, human rights, health and safety, ethics, the environment, the use of conflict minerals, and supplier management. The observations made from the survey provided us with tools for specifying targets for supplier cooperation and engaging the commitment of suppliers with regard to sustainability issues.

92%

of our key suppliers are confirmed to operate in accordance with our sustainability principles

86%

of our suppliers completed our corporate responsibility survey in 2023

FOCUS ON RISK IDENTIFICATION AND ASSESSMENT

To identify and assess risks related to supplier sustainability, we are in the process of adopting a new operating model that will apply to both existing and future suppliers. Going forward, we will conduct supplier sustainability assessments that are based on identified ESG risks in each supplier’s country.

We will work together with the suppliers within the scope of the risk assessment to evaluate their risks in key areas of sustainability. The observations made in these assessments may lead to audits or the creation of a plan for improvement. Teleste will terminate the supplier relationship if it is deemed necessary due to the seriousness of the observations and/or the inadequate development of assessment results.

| Management



Board of directors



1. Jussi Himanen, M.Sc., born in 1972
Member of the Board since 2019

**2. Timo Luukkainen, B.Sc. (Econ.),
M.Sc.(Eng.), MBA (IMD), born in 1954**
Chairman of the Board since 2020
Member of the Board 2016-2020

3. Vesa Korpimies, M.Sc. (Econ.), born in 1962
Member of the Board since 2019

**4. Mirel Leino-Haltia, PhD (Econ.), CFA,
born in 1971**
Member of Board since 2020
Chairman of the Audit Committee since 2020

5. Heikki Mäkijärvi, M.Sc. (Eng.), born in 1959
Member of the Board since 2018

6. Kai Telanne, M.Sc. (Econ.), born in 1964
Member of the Board since 2008

The management group



1. Hanno Narjus, Broadband Networks, Senior Vice President
Joined Teleste in 2006, Member of the Management Group since 2007

2. Juha Hyytiäinen, CFO
Joined Teleste in 2013, Member of the Management Group since 2013

3. Linda Kallas, Group Strategy, Senior Vice President
Joined Teleste in 2023, Member of the Management Group since 2023

4. Markus Mattila, Operations, Logistics & Sourcing, Senior Vice President
Joined Teleste in 2008, Member of the Management Group since 2008

5. Valerian Sand, Public Safety and Mobility, Senior Vice President
Joined Teleste in 2022, Member of the Management Group since 2022

6. Esa Harju, President and CEO
Joined Teleste in 2016 Member of the Management Group since 2016

7. Tuomas Vanne, People and Culture, Senior Vice President
Joined Teleste in 2019, Member of the Management Group since 2019

8. Pasi Järvenpää, Research and Development, Senior Vice President
Joined Teleste in 1994, Member of the Management Group since 2013

North American Advisory Board



1. Neil Tang, M.Sc. (E.Eng.)
Antronix Inc., President/CEO since 2013
Worked at Antronix Inc. since 1997

2. Linda Kallas, M.Sc. (Eng.)
Group Strategy, Senior Vice President,
Teleste Corporation

3. Esa Harju, M.Sc.(Eng.)
President and CEO of Teleste Corporation

4. Joe Godas, BBA (BCIS)
Charter Communications SVP 2020-2022
Altice USA, SVP 2016-2020
Cablevision Systems Corp, SVP 1992-2016

5. Hanno Narjus, M.Sc. (Econ.)
Chairman of the Advisory Board
Teleste Broadband Networks, Senior Vice President

6. Stephanie Mitchko-Beale, B.Sc. (E.Eng.)
Charter Communications EVP, CTO 2019-2022
Cadent TV COO/ CTO 2014-2019
Cablevision Systems Corp, SVP 1999-2014



INFORMATION FOR SHAREHOLDERS

Information for shareholders

TELESTE SHARE

Teleste Corporation is listed on Nasdaq Helsinki in the Technology sector and is quoted in the small cap segment. The company shares are included in the book-entry securities system. The company has one series of shares. In Annual General Meeting each share carries one vote and confers an equal right to a dividend.

On 31 December 2023 Teleste's registered share capital stood at EUR 6,966,932.80 divided in 18,985,588 shares. As to the company share price in 2023, the low was EUR 2.55 (3.13) and the high EUR 4.75 (5.76). Closing price on 31 December 2023 stood at EUR 2.70 (3.54).

- Trading code TLT1V
- ISIN code FI0009007728
- Reuter's ticker symbol TLT1V.HE
- Bloomberg ticker symbol TLT1VFH

FINANCIAL RELEASES IN 2024

Teleste Corporation Financial Statement 2023 was released on 9 February 2024.

Other releases during 2024:

- Interim report January–March at 3 May 2024
- Half year financial report January–June at 14 August 2024
- Interim report January–September at 6 November 2024

Financial reports are published as stock releases. Publications are available on Teleste's website both in English and in Finnish. Teleste meets investors, analysts and representatives of the media in news conferences set up in connection with releases of financial reports.

Silent period

Silent period begins 30 calendar days before the publishing of the Interim reports, Half year financial report, and Financial statement release and lasts until the publishing of the Interim reports, Half year financial report, and Financial statement release. During silent periods, Teleste's spokespersons refrain from discussing and commenting on issues related to the company's financial performance or meeting with capital market representatives.

ANNUAL GENERAL MEETING

Teleste Corporation's Annual General Meeting (AGM) will be held on 11 April 2024 commencing at 2 p.m., in Helsinki Expo and Convention Centre, 2nd floor, meeting room 208, address: Rautatieläisenkatu 3, Helsinki. Registration and distribution of voting tickets begin at 1 p.m. Shareholders registered on the list of shareholders with Euroclear Finland Oy on 28 March 2024 are entitled to participate in the Annual General Meeting. A shareholder who wants to participate in the meeting shall register no later than 4 April 2024 at 10 a.m.

More information www.teleste.com/AGM or by e-mail investor.relations@teleste.com

PROPOSAL FOR DISTRIBUTION OF DIVIDEND

The Board of Directors proposes to the AGM that no dividend be distributed on the basis of the balance sheet to be adopted for the financial period that ended on 31 December 2023.

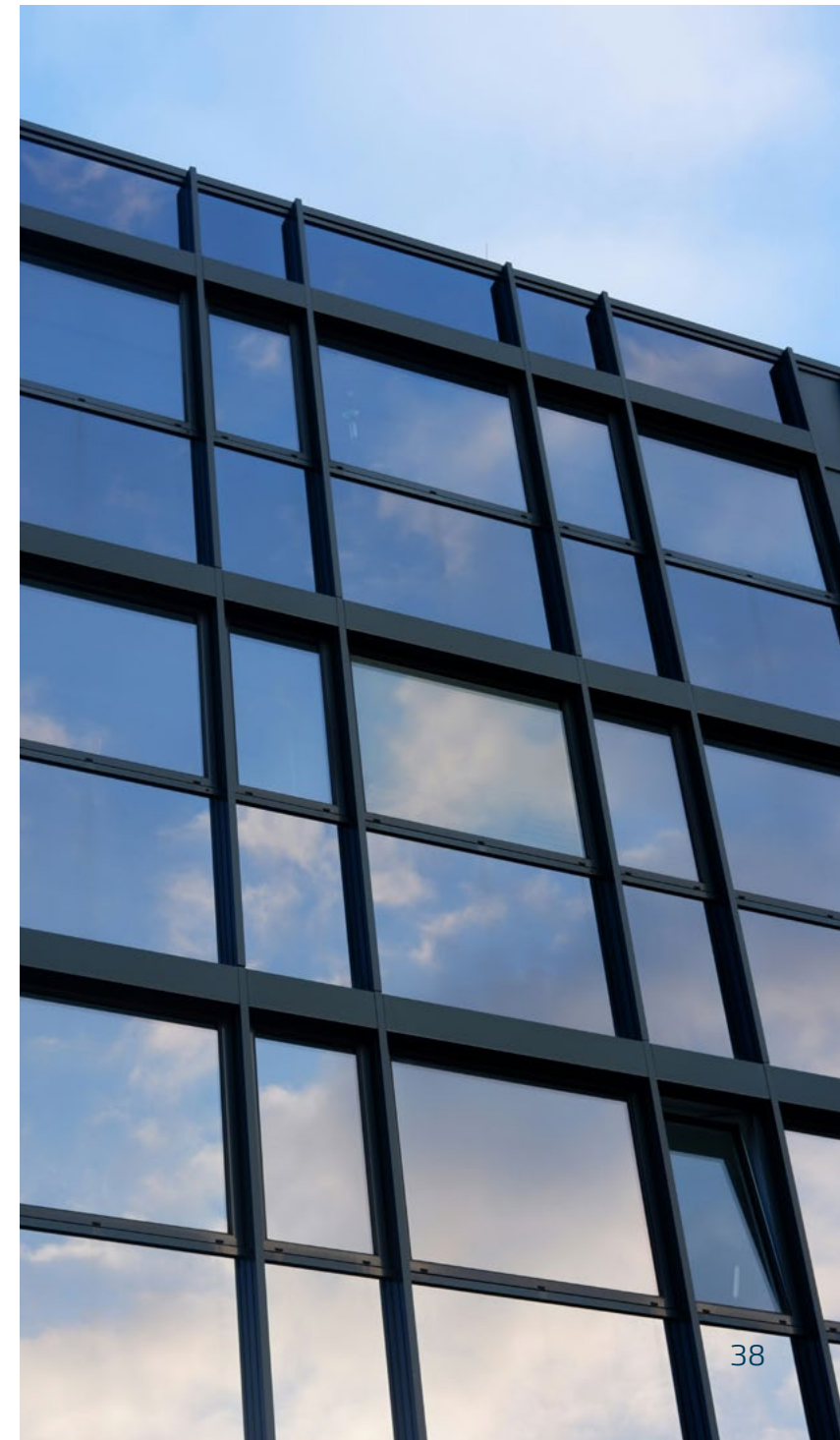
More information: www.teleste.com/AGM

CHANGES IN SHAREHOLDERS' CONTACT INFORMATION

The shareholder register is maintained by Euroclear Finland Oy. Shareholders are kindly requested to inform the custodian of their book-entry account of any changes in contact details.

For more information:
www.teleste.com/investors

Teleste Corporation was listed on Nasdaq Helsinki 30 March 1999. Listing price was 8.20 EUR



TELESTE CORPORATION

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