



**FURUKAWA
ELECTRIC**

Communications
infrastructure solutions
to bring people together
and connect the world.

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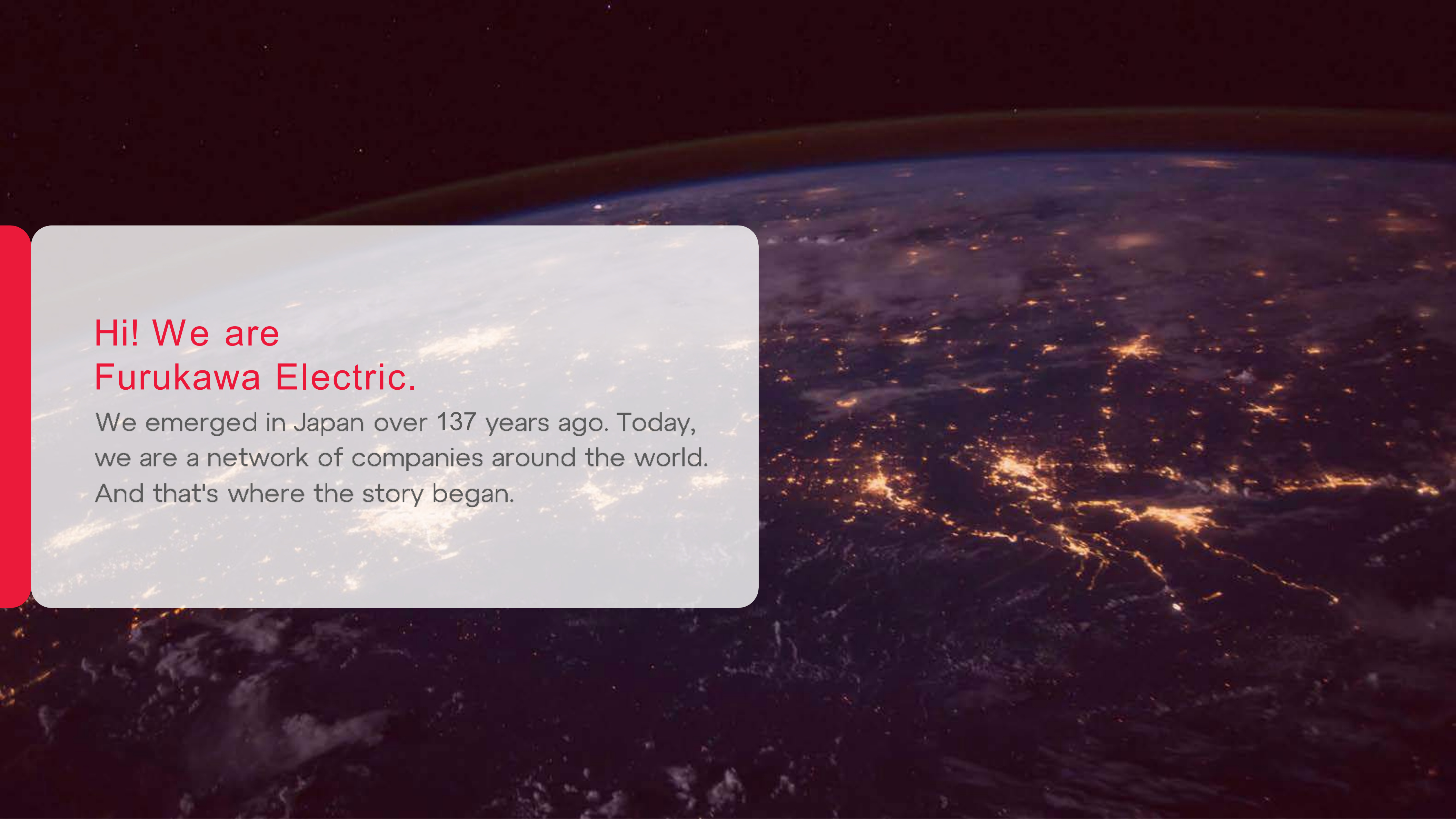
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Purpose



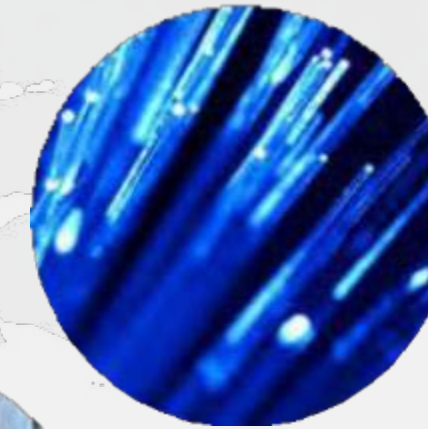


Hi! We are Furukawa Electric.

We emerged in Japan over 137 years ago. Today,
we are a network of companies around the world.
And that's where the story began.

Solutions for the new generation of global infrastructure.

In order to build a sustainable world and make people's life safe, peaceful and rewarding, Furukawa Electric Group will create solutions for the new generation of global infrastructure combining information, energy and mobility.



Telecommunication



Energy



Automobile



Electronics



Construction

WORLDWIDE
EMPLOYEES

55.000+

100+

AFFILIATED
COMPANIES

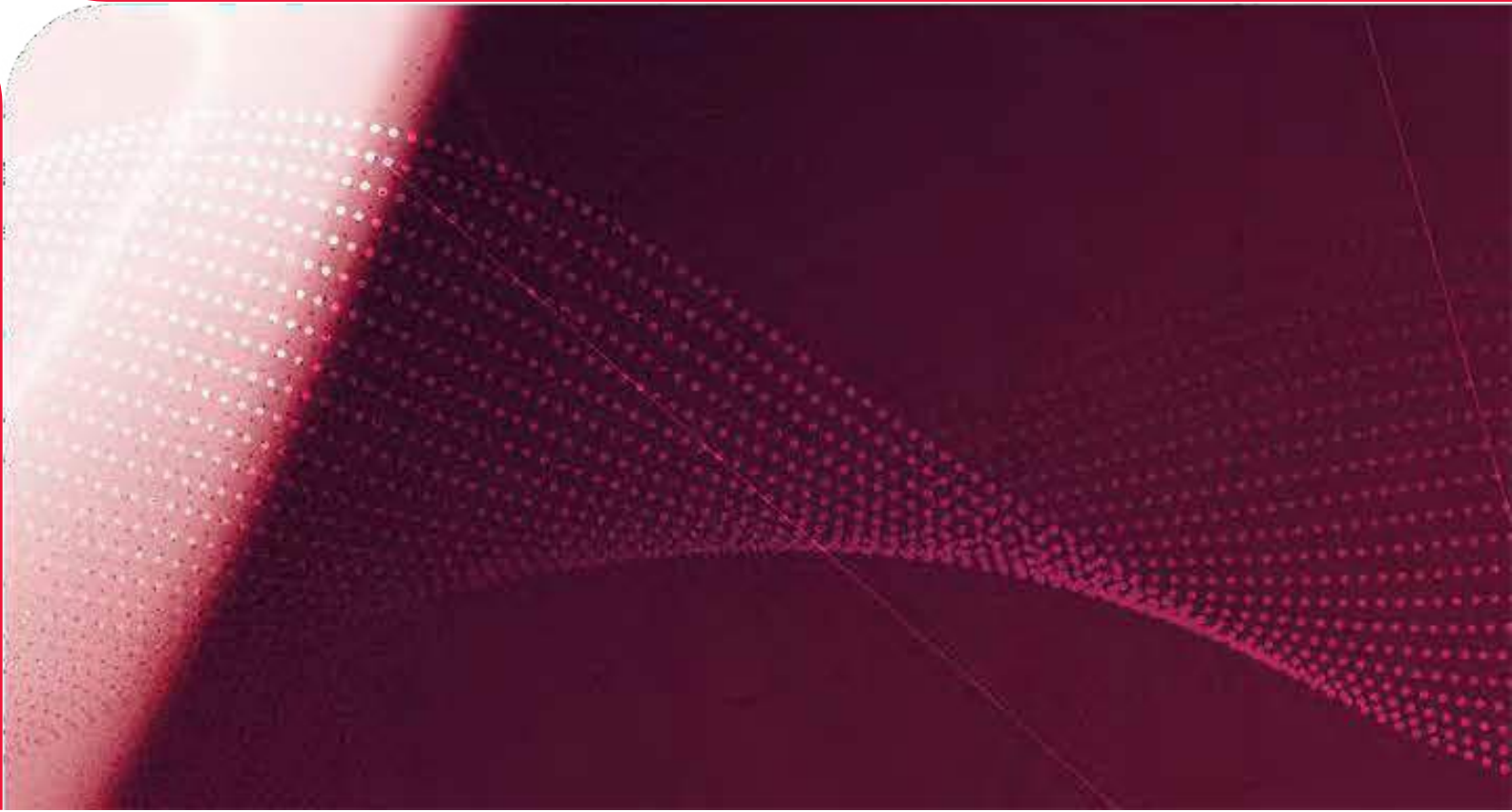




We are part of
people's lives
through
technological
innovation.

After all, we shorten
distances and anticipate
the needs of society.

INTEGRITY | KNOWLEDGE | INNOVATION | EXPERIENCE



Telecommunication Solution

We are supporting the base of the advanced information society and multimedia society with advanced technology centered on optical and information systems.

System products

FTTx products

Optical fiber

Optical components

Wiring materials

Mission & Values





Health and safety.

Quality.

Compliance.

Sustainability.

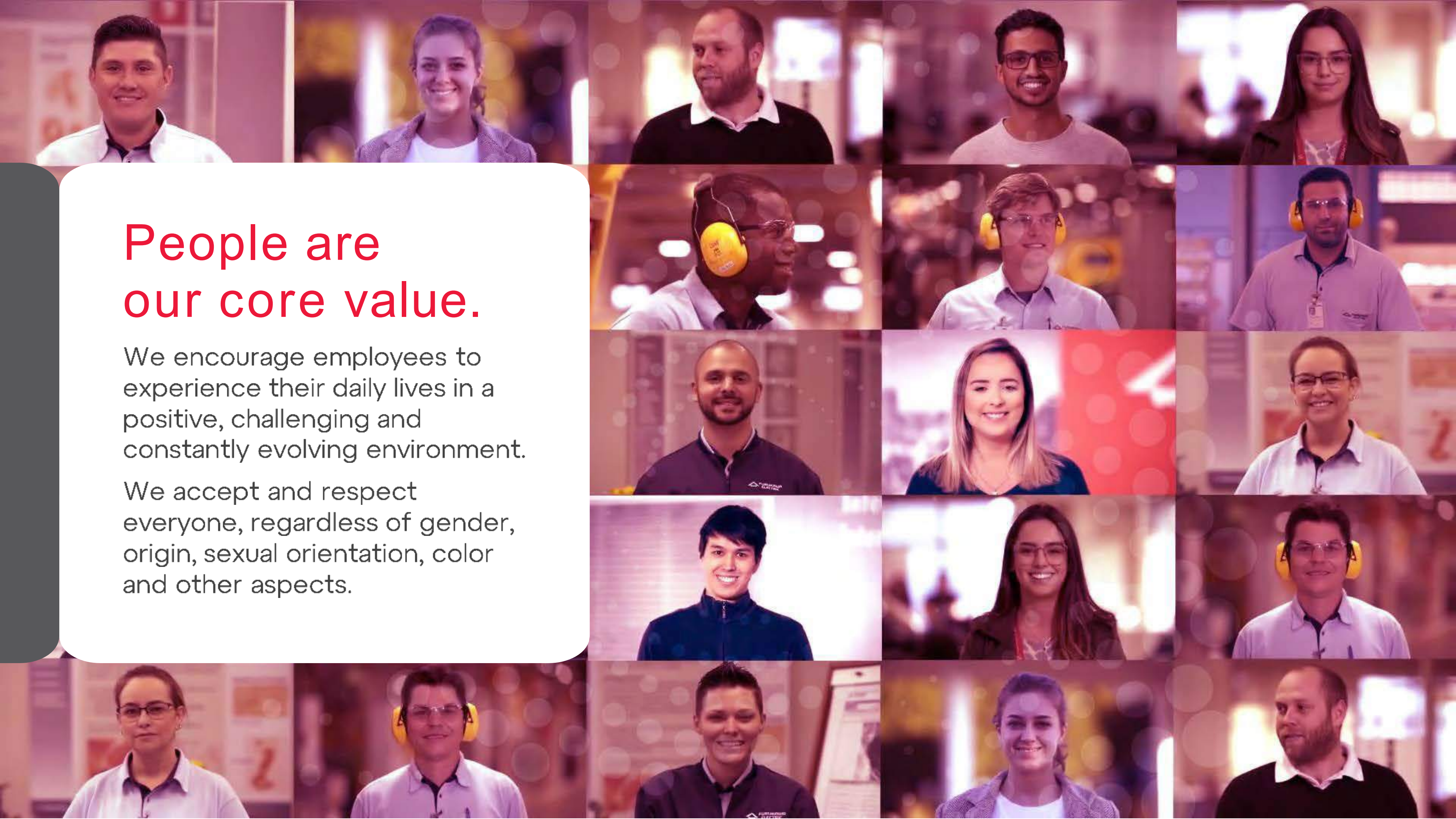
This is
our DNA.

We conduct our business
in harmony with society
and the environment.

People are our core value.

We encourage employees to experience their daily lives in a positive, challenging and constantly evolving environment.

We accept and respect everyone, regardless of gender, origin, sexual orientation, color and other aspects.

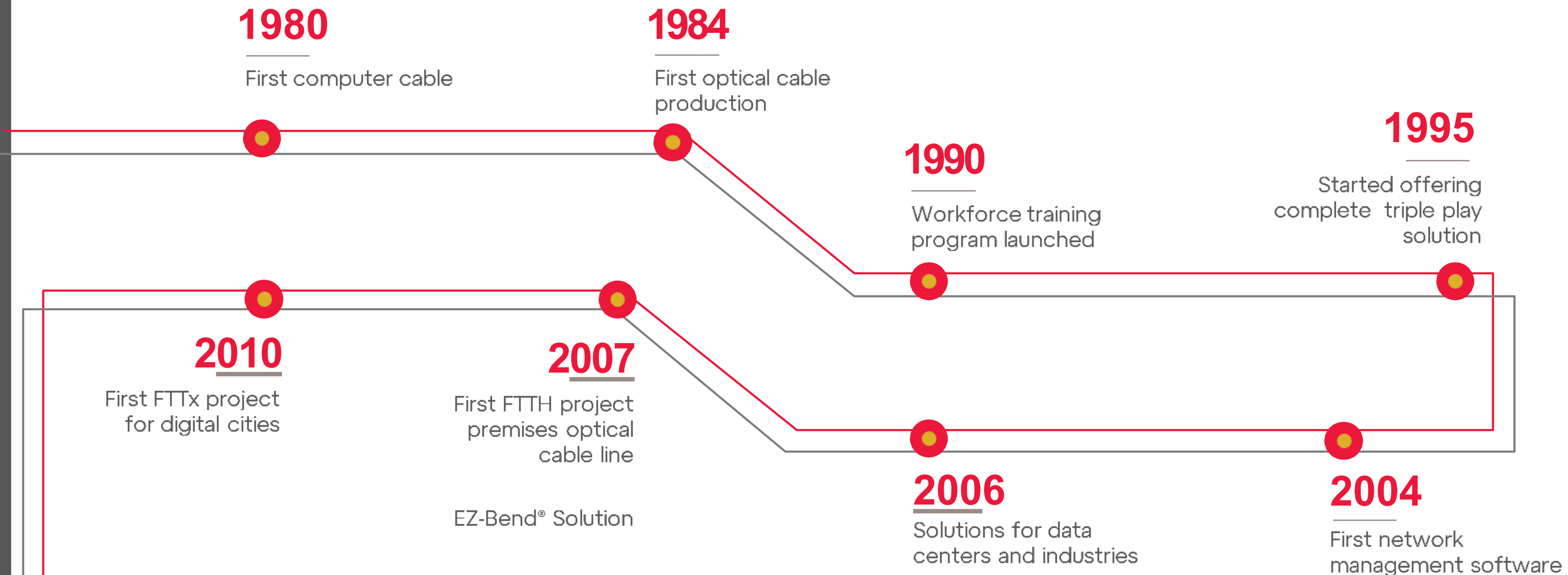




Background and Highlights

Highlights

We started writing our history many years ago, and we are proud to combine the Japanese tradition and quality with the innovation needed to provide infrastructure for life.



**2012**

Launch of fully dry optical
cables and patent registered

2013

Launch of the OPGW cables
production for energy
communication infrastructure

2015

Acquisition of technologies
of Radio and Equipment

2016

First LSZH cable of the world
made with green
polyethylene

2021

Launch of the IoT system
for optical network
monitoring

2017

Launch of the critical
envirolment communication
system

Global Performance

And that's where the story takes place.

Production Centers



1977
Headquarters and
Industrial Unit
BRASIL
CURITIBA



2013
Optical fiber
BRASIL
SOROCABA



2008
Optical Cables
ARGENTINA
BERAZATEGUI



2012
Optical Accessories
BRAZIL
CURITIBA



2013
Optical Cables
COLOMBIA
PALMIRA



2017
Optical Cables
MEXICO
MEXICALI

2015
Radio and Equipment
access
BRASIL
STA RITA DO SAPUCAÍ/ PAULINA

MEXICO
MEXICO CITY

COLOMBIA
BOGOTA

BRASIL
CURITIBA
SÃO PAULO

ARGENTINA
BUENOS AIRES

SPAIN
MADRID

THAILAND
BANGKOK

INDONESIA
JAKARTA



Certified Quality



ISO 9001

Quality Management Systems.



ISO 14001

Environmental Management System.



ISO 45001

Occupational Health and Safety Management by DQS-UL.



Federal Revenue Certification in the AEO Level 2 Program.

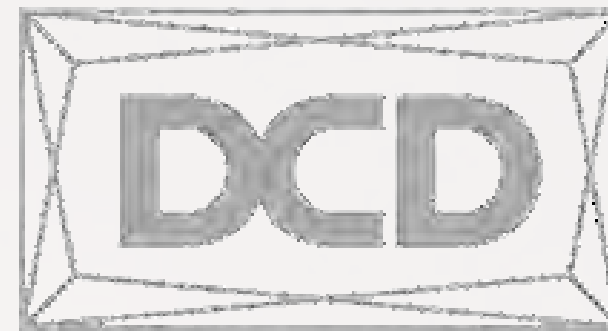
The history of Furukawa Electric is full of achievements and remarkable moments.



- MANUFACTURER OF THE 1ST OPTICAL CABLE IN THE WORLD.
- ESG PRACTICES CONSOLIDATED IN THE MARKET.
- INNOVATION AWARD ON INFRASTRUCTURE.

Market Presence

We are part of the most known medias, conferences and events at the market Where we anually showcase our newest solutions and benefits.

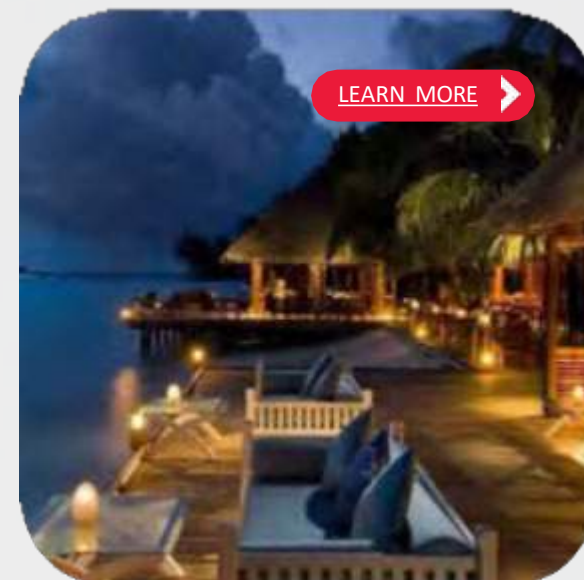


Cases



LEARN MORE >

Sirius Data Center
 Brasil – São Paulo
 The largest and most complex laboratory in Brazil for particle acceleration with Furukawa Data Center Solution



LEARN MORE >

Villa Hotels
 Maldives
 Resort with high-speed comfort and connectivity through the Furukawa Laserway solution.



LEARN MORE >

Royal Palm Hall Convention Center
 Brasil – Campinas
 Location with high data transmission rate in a short period of time perfect for spaces that hold events with thousands of people.



LEARN MORE >

Deep Water Port
 Ecuador – Posorja
 One of the best optical Infrastructures on the west coast of South America.



LEARN MORE >

Salesiana University
 Ecuador – Quito
 Technological communication infrastructure and managed to provide 710 points of Category 6A F/UTP copper structured cabling prepared for transmissions up to 40Gb/s.



LEARN MORE >

IBCC Oncology Hospital
 Brasil – São Paulo
 20 kilometers of Furukawa cables with a green polyethylene coating were installed, based on ethanol extracted from sugar cane.

We Are Full Service

We deliver an integrated system of solutions that continually evolve and improve over time.



A transversal collaboration at all stages of a project:

CREDIT | LOGISTICS | TRAINING | SUPPORT | GUARANTEE





Pre-project

Consultative sales,
tailored and preliminary
budget to support the
business plan.

FREE SERVICE.

Guarantee extended

PASSIVE NETWORK



EQUIPMENT




SERVICE PURCHASED
SEPARATELY, THROUGH ONE OF
OUR ACCREDITED PARTNERS.



Support 24x7

24 hours a day and
7 days a week.

SERVICE PURCHASED SEPARATELY.

The background of the slide features a close-up photograph of a hand holding a small, green plant with several leaves. The plant is growing out of a dark, textured substrate, possibly soil or moss, inside a clear container. A semi-transparent red overlay covers the entire image, with thin, glowing red lines and circular patterns that suggest a digital or technological theme. On the left side, there is a white rectangular box with rounded corners containing the text 'Social Responsibility'.

Social Responsibility

We have social-sustainable initiatives and commitments that **allow technological innovation** to make a difference to society and the environment.



Well-established and transparent environmental, social and governance practices are part of our culture that impact from the employee, the environment and everyone around us.



Electronics Reverse Logistics

Disposal and correct disposal of obsolete active equipment or electronics.



RoHS directive

We seek to use as many recyclable materials as possible and with less impact on the environment.



Green Solutions

Why we develop our green solutions: innovation, performance and sustainability all together. This way you can responsibly choose the technology solution that will meet your company's demand today and tomorrow.



もったいない

Mottainai

Mottainai philosophy

Philosophy of life that reflects and integrates concepts such as: Reduce, Reuse, Recycle, Repair and Rethink.

Solutions

The background image shows a man in a blue shirt and glasses standing in a server room, looking at a laptop. The room is filled with server racks and has a blue and red color scheme. A large white box with rounded corners is overlaid on the left side of the image, containing the word 'Solutions' in a dark, sans-serif font.



We understand that each project has its own needs and challenges and that's why we believe in **specific solutions for each business vertical.**

Data Centers

Hotels

Hospitals

Companies

Educational Institutions

Financial Sectors

Carriers and Logistics

Industries

Governments

Operators ISP

Energy Concessionaires



Data Centers

Ready for tomorrow!

Be ready for market demands,
reducing owning and operating costs
and increasing business possibilities.



In addition to the
entire range of
products for Data
Centers, we offer:

- PRE-DESIGN SERVICES
- INSTALLATION SUPPORT WITH INSPECTION FOLLOW-UP
- SOFTWARE FOR NETWORK MANAGEMENT
- TRAINING
- OPTIMIZED LOGISTICS
- EXTENDED WARRANTY OF UP TO 25 YEARS



Sirius Data Center

Furukawa supports implementation of Sirius' advanced data center

Brazil's new synchrotron light source, in addition to being the largest and most complex laboratory in the country.

- **Furukawa's 400G-Ready Data Center program**
- **Extended warranty of 25 years**

[LEARN MORE](#)





Hotels

Invest in a good
guest experience.

Your hotel needs to be a hub for
instant security and entertainment.

The lives of today's consumers are
becoming increasingly intertwined with
technology and leading them to expect
the same high level of personalization and
convenience wherever they are.



- FAST, RELIABLE, ANYWHERE INTERNET
- VIDEO CONFERENCING / HDTV / IPTV
- VIDEO STREAMING
- TOUCHLESS / CONTACTLESS TECHNOLOGY
- CHECK-OUT IN THE ROOM
- FACE AND TEMPERATURE CONTROL
- CONTROL OF ALL PROCESSES
- SUSTAINABILITY
- SOFTWARE FOR NETWORK MANAGEMENT

Villa Hotels Maldives

The implementation of Furukawa's Laserway optical technology – with high-speed connectivity – was important to ensure two fundamental pillars for Villa Hotels: customer experience and cost reduction.

- **Laserway GPON solution**
- **Furukawa's 24x7 Premium support service**

[LEARN MORE](#)





Hospitals

Technology that saves lives.

The impacts of an unscheduled stop are increasing.

That's why the importance of a reliable system and the use of tools that allow a quick diagnosis and help in solving the problem in a precise way.



- SAFETY
- CONNECTIVITY
- SUSTAINABILITY
- ADVISORY SERVICE
- PRE-PROJECT
- TRAINING PROGRAM
- WIDE NETWORK OF DISTRIBUTORS AND INTEGRATORS
- SPECIALIZED ENGINEERING
- START UP SERVICES
- MONITORING OF THE WORK
- 25 YEAR WARRANTY
- SOFTWARE FOR NETWORK MANAGEMENT.

IBCC Oncology Hospital

Hospital bets on Furukawa's Green solution in the new unit in São Paulo.

The communication network supports data applications, mainly medical imaging, voice transmission and CCTV.

- **515 points**
- **+ 20 km of green cables**

[LEARN MORE](#)





Companies

More agile and connected businesses with the world.

Increasingly, companies use several applications that require a good communication infrastructure to work with excellence.



Having an efficient and quality Furukawa communication network guarantees your company to keep its foot on the accelerator and an eye on the future.

- CONSULTING & DESIGN
- CONNECTIVITY, NETWORKS, DATACENTERS AND RADIO SOLUTIONS
- SUPPORT AND SUSTAINABILITY THROUGHOUT THE OPERATION



Educational Institutions

Connected schools, students prepared for life.

Preparing students for the future requires the best technology.



The exchange of information is the essence of organizations working in the educational sector and with the constant evolution in the way of teaching, network infrastructure challenges have been increasingly common.

- HIGH-TECH OPTICAL SOLUTIONS THAT ALLOW THE SERVICE OF SEVERAL USERS THROUGH A SINGLE FIBER.
- EQUIPMENT WITH LOW ENERGY CONSUMPTION AND PREPARED TO RECEIVE FUTURE TECHNOLOGIES.

Salesiana University

An example of innovation, security and economy for the education sector in Ecuador, the place has over 800 teachers and 10,000 students.

- **CAT 6A F/UTP structured cabling**
- **Fiber optic links with OM4 technology** prepared for transmissions up to 40 Gb/s.
- **Extended warranty**

[LEARN MORE](#)





Financial Sectors

Availability and security
where you need it most.

One of the segments that invests the most in technological upgrades needs to ensure good data traffic management, ease and savings in future upgrades.



With this, we develop solutions that guarantee:

- NETWORK PREPARED FOR THE INCORPORATION OF NEW TECHNOLOGIES IN A FLEXIBLE WAY AND AVOIDING HIGH MAINTENANCE COSTS.
- CENTRALIZED ADMINISTRATION OF SECURITY POLICIES.
- UNINTERRUPTED HIGH-PERFORMANCE CONNECTIVITY AND A NETWORK DESIGNED TO AVOID DOWNTIME.



Carriers and Logistics

More security and agility in processes.



AIRPORTS

Uninterrupted and safe operation.

PORTS

Well-structured logistics and high performance of the networks communication.

HIGHWAYS

Integration of all your services and applications.

RAILROADS

Intelligent automation systems to optimize train traffic control, barriers, people and connectivity for data centers.

DP World Posorja

Deep World posorja's port in Ecuador has one of the best optical infrastructures on the west coast of South America. Posorja now has the most cutting-edge technology in **fiber optic communications** infrastructure to optimize its administrative and logistical processes and thus provide 100% optimal connections to its personnel.

[LEARN MORE](#)





Industry

Technology solutions
you can trust.



MANUFACTURING

Network productivity and efficiency always on the rise with certified solutions. From consultancy to maintenance, from the ideal solution to the software.

AGROINDUSTRY

High availability and reach connection that allows communication, process monitoring and equipment control in each m² of the crop.

STEELWORKS

Developed to withstand high temperatures, also eliminating problems with oxidation, fatigue and vibration, without neglecting the high performance that optical fiber provides.

A person wearing a red plaid shirt is holding a smartphone in their hands, looking at the screen. The background is a blurred field of green plants, possibly corn, with a warm, golden light in the upper left corner. A white text box with rounded corners is overlaid on the left side of the image.

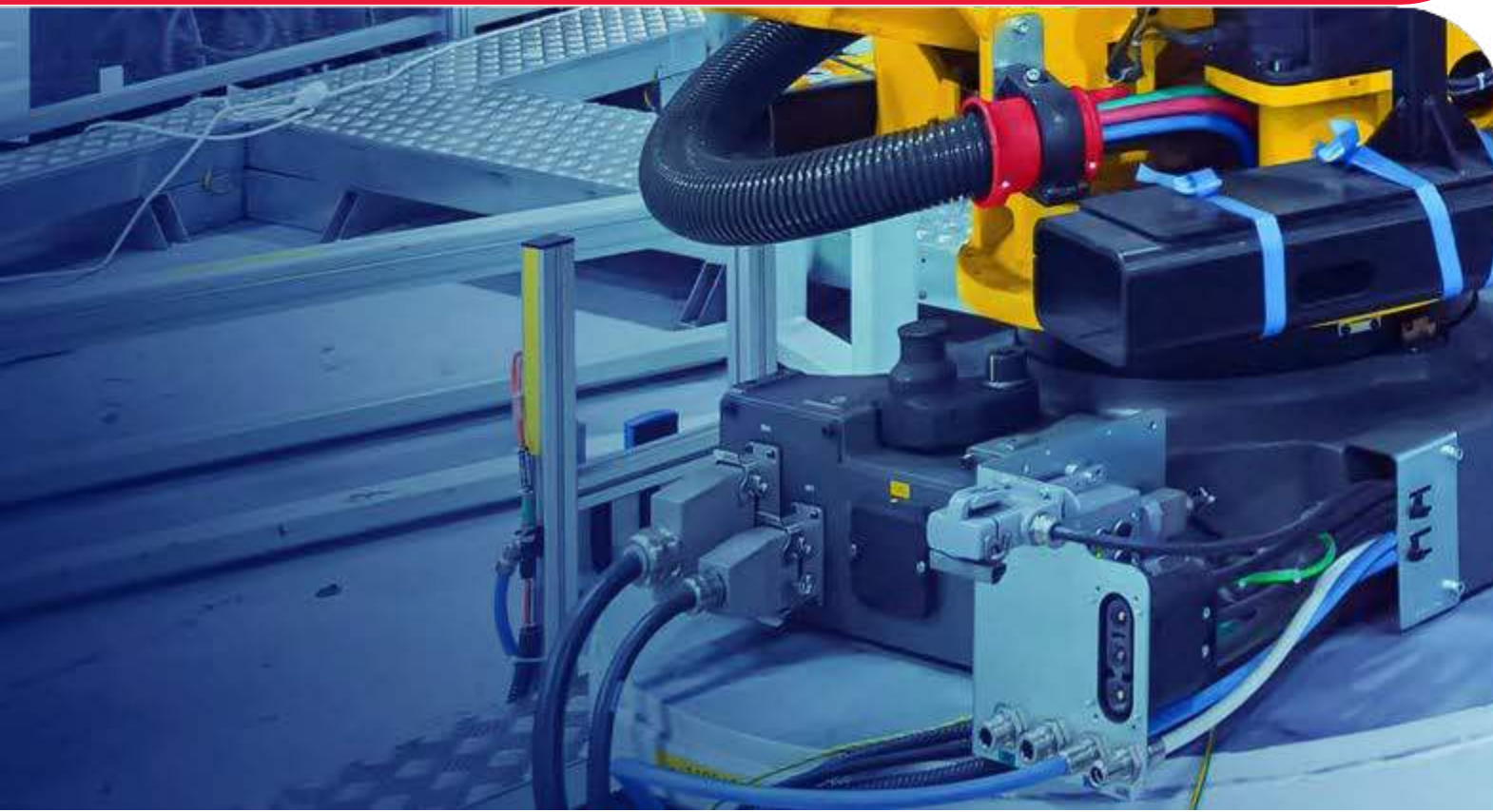
Coruripe Power Plant Connectivity in the field

55,000 hectares - three towers with
Furukawa LTE Solution that includes an
antenna and eNodeB, supplying 180 jobs.



Industry

Technology solutions
you can trust.



MINING

Ability to meet the current and future demands of the most diverse applications for long distances in mining companies. Adapt your network to the harsh environments of your mining complex.

AUTOMOBILE

Car manufacturers more connected to their devices with differentiated products of the highest quality.



Government

Smart cities start with the best choices.



- SMART CITIES.
- CONNECTIVITY THAT MAXIMIZES THE USE OF INFRASTRUCTURE AND BANDWIDTH AVAILABLE IN CITIES.
- INNOVATIVE SOLUTIONS TO SOLVE THE PROBLEMS OF URBAN MOBILITY, HOUSING, HEALTH, SECURITY, ENERGY EFFICIENCY, AMONG OTHERS.



Operators ISP

Connected we live better.
Innovative communication
solutions.



- BROAD PORTFOLIO OF CONNECTION PRODUCTS.
- REDUCTION OF INSTALLATION AND MAINTENANCE TIME AND COSTS.
- GUARANTEE OF TRIPLE PLAY SERVICES (DATA, VOICE AND VIDEO) APPROPRIATE FOR EACH CUSTOMER PROFILE.

Our systems

Complete portfolio
of Communication
Infrastructure Solutions
for internal and external
networks, developed with
sustainable innovations.





Communication networks that anticipate technologies applied to the most modern solutions for communication infrastructure, meeting market trends with a diversified portfolio.

- AVAILABILITY OF EQUIPMENT, CABLES, ACCESSORIES AND DIGITAL RADIOS.
- HIGHEST TECHNOLOGY IN TRANSPORT, DISTRIBUTION AND DATA PROCESSING TO IMPLEMENT SERVICES OVER OPTICAL NETWORKS IN DWDM AND PON TECHNOLOGIES.
- BEST VALUE FOR MONEY ON ANY NETWORK ARCHITECTURE.



FTTH

EZ!**Access**

EZ!**Grow**

EZ!**Star**

In 100% fiber optic FTTH (Fiber To The Home) networks, the optical network reaches the user's home, thus ensuring the necessary bandwidth for the growing demand generated by the huge data and video traffic via the internet.

MDU

MDU!**Core**

MDU!**Riser**

MDU!**Click**

Normally, when we talk about FTTx, we assume that we are going to install fiber up to a "house".

But it is possible that the end user lives in multi-dwelling units or in apartment buildings, where the challenges can be very different and require different architectures and installation practices.

One hundred percent fiber optic networks FTTA corresponds to products and infrastructures suitable for optical broadband service for this type of access point.



Complete products and solutions for meeting connectivity projects in corporate networks, from the equipment room to the work area, providing cables and internal accessories, including passive optical networks.

- FLEXIBILITY FOR LAYOUT CHANGES
- POSSIBILITY OF ADDING NEW SYSTEMS ON DEMAND
- CABLING STANDARDIZATION AND PERFORMANCE GUARANTEE
- INTERCOMMUNICATION BETWEEN DIFFERENT SYSTEMS
- REMOTE MANAGEMENT
- SUSTAINABLE PROJECTS
- 25-YEAR WARRANTY



Complete structured cabling products and solutions to service connectivity projects in fast, innovative and sustainable corporate networks.

Main benefits for companies with Laserway Furukawa:

- 100% OPTICAL PON LAN SOLUTION WITH APPLICATION FOR ENTERPRISE ENVIRONMENTS.
- INFRASTRUCTURE OPTIMIZATION: REDUCTION OF SPACE AND TECHNICAL ROOMS.
- REDUCED INSTALLATION AND LABOR COSTS.
- FLEXIBILITY: ALLOWING FOR FUTURE LAYOUT CHANGES QUICKLY AND EASILY.
- CONTROL CENTRALIZATION.



GigaLAN

Connect companies to
a better world.

Green products made from sugarcane bagasse, with a strict process in waste control to avoid the emission of toxic gases.

All this combined with a high performance that guarantees data traffic without interference for large corporate networks.



Thus, everyone
wins: companies
and the planet.

- 100GB IN 100 METERS, NO INTERFERENCE.
- THE FIRST SUSTAINABLE CABLE WITH LEED CERTIFICATION.
- INNOVATIVE AND INTEGRATED SOLUTIONS FOR HIGH PERFORMANCE CABLING SYSTEMS.
- FAST AND SECURE CONNECTION TO CORPORATE NETWORKS.



Main benefits for companies with DataWave Furukawa:

- REAL-TIME CONNECTIVITY TRACKING AND CHANGE HISTORY.
- MAPPING OF CONNECTIONS AND INSTANT IDENTIFICATION IN CASE OF MANEUVERS.
- REMOTE ACCESS FOR IT TEAM MANAGEMENT.
- INVENTORY CONTROL AND OCCUPATION OF RACK AND EQUIPMENT.
- CENTRALIZED CONTROL OF INFORMATION.
- FASTER WORK ORDER PROCESS, ACTIVITY REPORTS AND SCHEDULE

DataWave

More organization and agility
in data center management.

The AIM concept is based on monitoring the physical connections in order to quickly identify the position of doors and offer higher reliability of connections documentation. By doing so, it significantly reduces the outage time that causes severe loss in Data Centers worldwide.





ITMAX

Innovation for high performance connectivity.

From design to troubleshooting.

From infrastructure to cabling.

From installation to management.

Infrastructure solutions for different deployments.

Main benefits for companies with ITMAX Furukawa:

- High availability: minimizes downtime risks.
- High density and operational efficiency: lower energetic cost.
- Performance and high transmission rates.
- BIM architecture within management software.
- Future-proof: modular solutions enabling growth and migration.
- Support and services: project follow-up and 25-years extended warranty.





It aims to meet the specific characteristics related to critical environments, following the strictest performance standards.

- Robustness : robust products that offer high reliability and long service life, reducing installation and maintenance costs.
- Reduction of operating and investment cost :
 - unscheduled network maintenance minimized or even eliminated
 - expansions and scheduled maintenance made easy
 - infrastructure optimization.
- Better innovation capability : smart products and advanced technologies that increase added value.





- Flexible infrastructure and information transparency
- Easy expansions and maintenance : improves visibility and control of network infrastructure.
- Gain competitive advantage : digital technologies with a significant impact on growth, offering better services.
- Integration with field devices : extending and integrating the scope of the cabling infrastructure for all devices.



Being connected is synonymous with efficient and uninterrupted production!

Adapting the network to aggressive environments, makes possible to guarantee safety, precision and speed in the results.





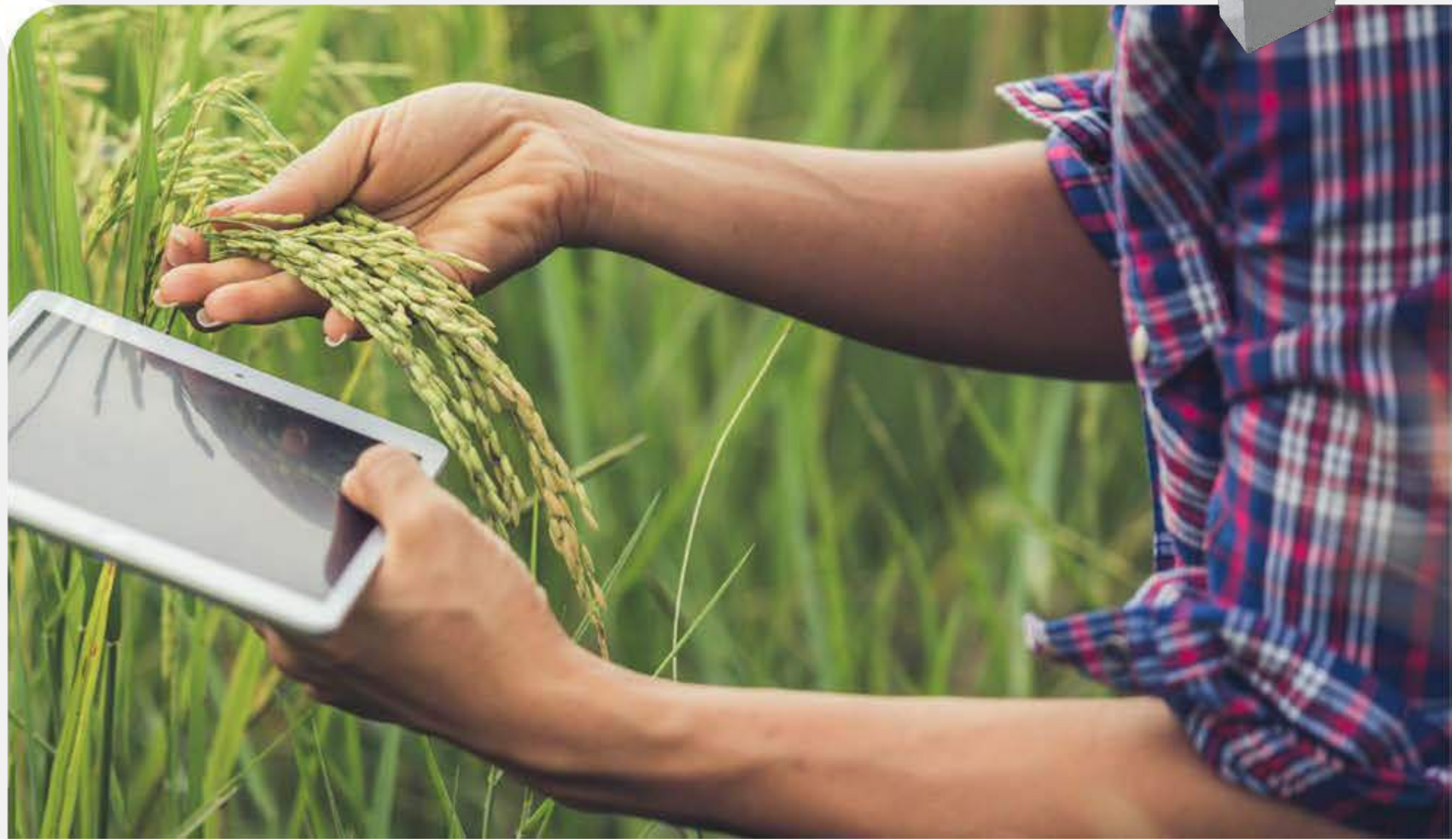
LTE Solution + Productivity and Precision = + Yield

- Up to 100 km range – up to 15 Mbps, handover.
- Scalable expansion.
- Up to 3 sectors (15 Mbps per sector/tower).
- High availability.
- Reading of geographic coordinates of the UEs via GPS



LIMITLESS CONNECTION

Long-range connection that enables innovation in remote areas.





- Quick identification of faults or network manipulation.
- Reduction in the number of field technicians.
- Centralized management and more accurate information.
- Stock management.



IoT Solution

Process automation through network sensing.

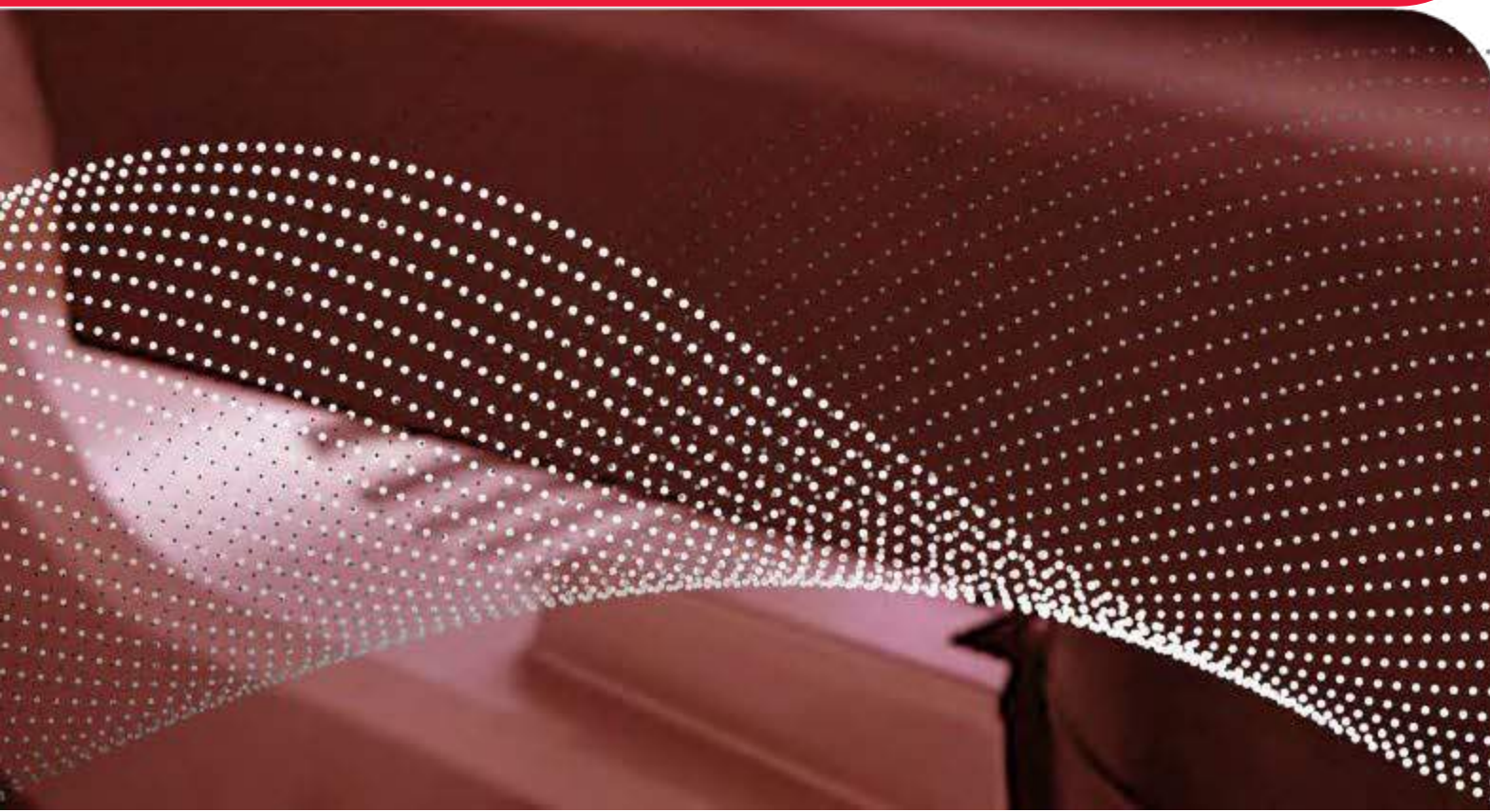




Our services
and initiatives

Research and Development

We are a center of excellence capable of offering complete solutions, adapted to the most diverse needs.



Our laboratories
allow tests such as:

- MECHANICS
- CLIMATIC
- HARDWARE AND SOFTWARE DEVELOPMENT
- OPTICAL FIBER AND RADIO
- EVIDENCE OF CABLE APPLICATION AND EXTERNAL NETWORK CONNECTIVITY

Laboratories

UNITED STATES

- OFS laboratories (New Jersey)

JAPAN

- Metal Research Center (Nikka)
- Ecology and Energy Laboratory (Hiratsuka and Chiba)
- Yokohama R&D Laboratory (Yokohama)
- FTEL Photonics Laboratory (Chiba)
- R&D Center for Automotive Systems and Devices (Hiratsuka)

HUNGARY

- FETI - Furukawa Electric Institute of Technology Limited

BRASIL

- FEL Laboratories – Cabling (Curitiba)

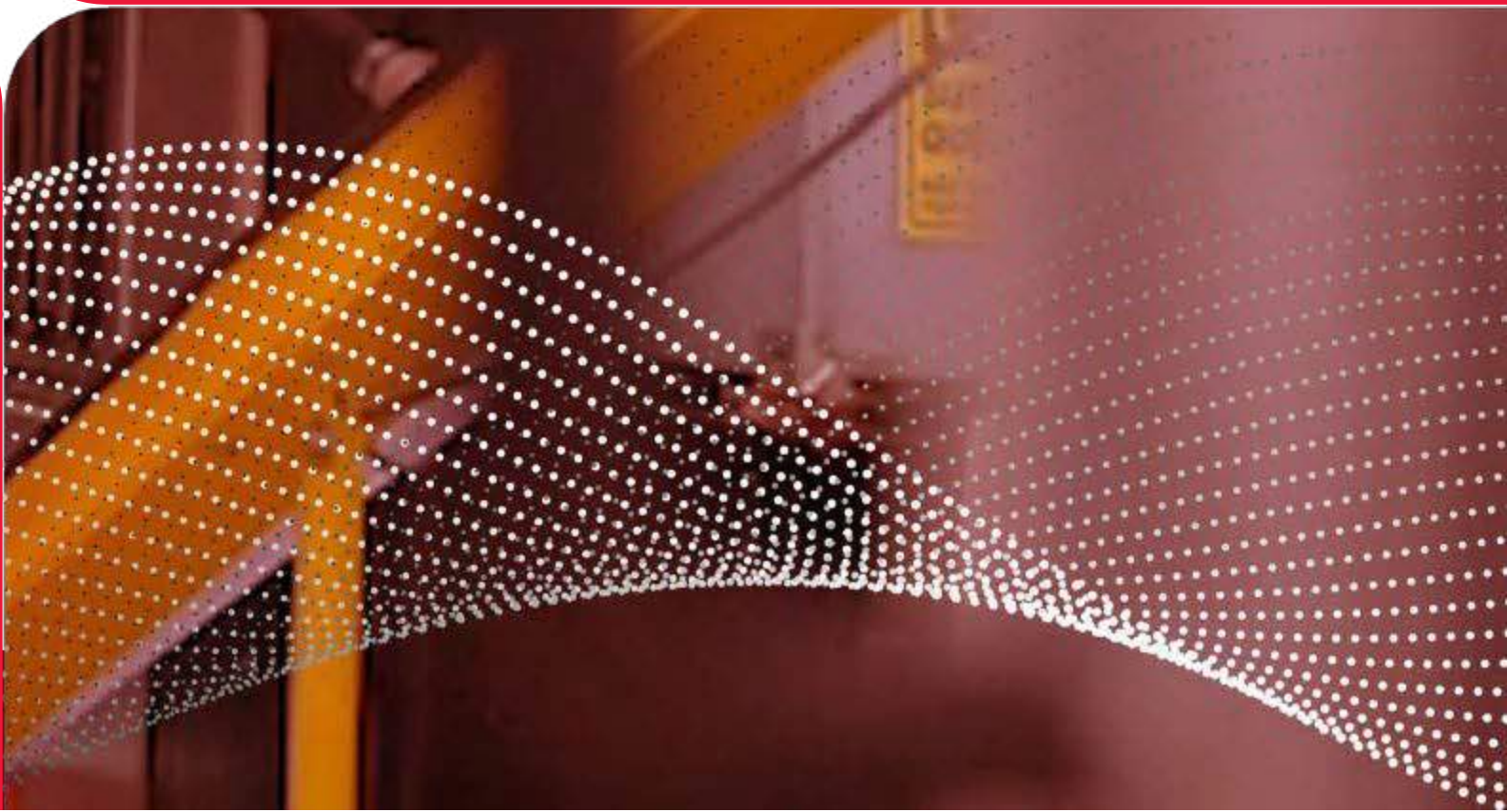


Proven Quality

The Furukawa Electric Group is committed to quality in every stage of its production processes.

This commitment is evidenced by important international certificates the company has earned.

Such awareness is confirmed by periodic updates regarding new standards and norms. Example of it is our compliance with CENELEC (European Committee for Electrotechnical Standardization) standards and CPR (Construction Products Regulation) certificated cables, in accordance with Regulation (European Union) No 305/2011.



We dedicate permanent attention to quality in all stages of the production process.

This concern ensured international product certificates.



Affiliations

We have active participation in the main bodies and committees related to our technology and telecom market:

BSI - British Standards Institution

EURCAB - Europacable

FBB - Fachverband Fernmeldebau eV

FTTH Europe

FIA - Futures Industry Association

ZVEI Association

HITA. Id - Hotel Information Technology Association

ASLAN Association

AOTEC - Asociación de Operadores de Telecomunicaciones y Servicios de Internet

IEEE - Instituto de Engenheiros Eletricistas e Eletrônicos

ITU-T – International Telecommunication Union

IAF - International Accreditation Forum

DAkks - Die Deutsche Akkreditierungsstelle GmbH

DIN - German Institute for Standardization

IEC – International Electrotechnical Commission

CENELEC - Comité Européen de Normalização Electrotécnica



Infrastructure for life 



Contact us

Ready to build a solid
network with Furukawa?