

Be the **ONE** *

Outstanding People, Best-in-Class Product, Winning Partnership



Outstanding Company

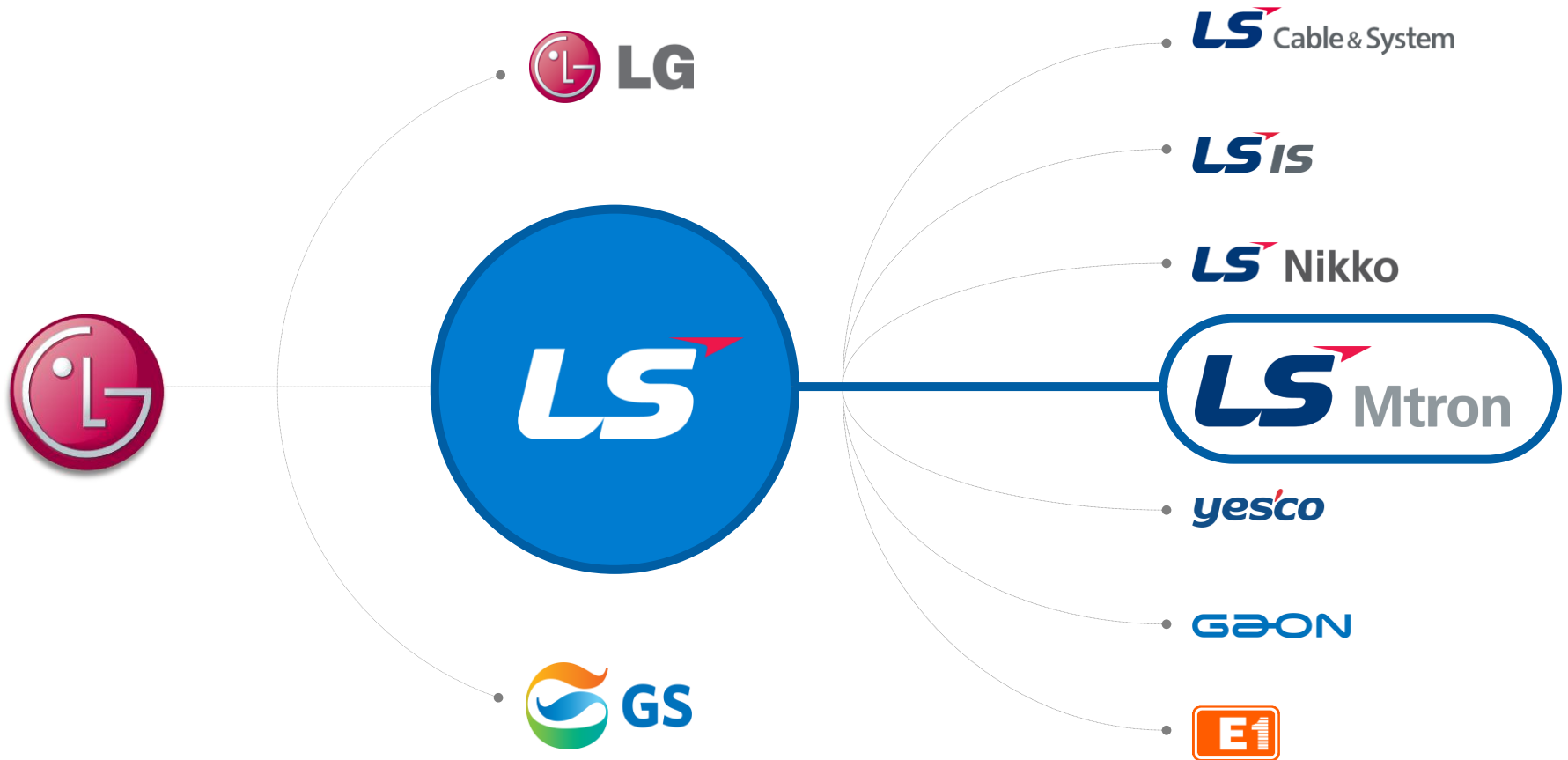


LS GROUP

LS Mtron

Spun off from LG Group in 2003

A leading company in the areas of industrial electricity and electronics, materials, machinery, components, and energy








The 15th largest corporation in South Korea and a leader in many major industries

Management Philosophy

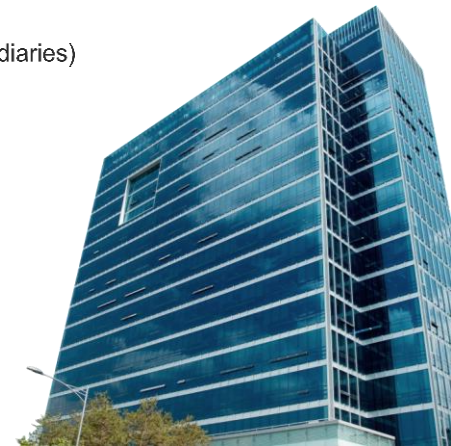


LS is a devoted and **reliable business partner**.
Collaboration with LS leads to **greater success**.

Management Status

| | | |
|--|--------------------------|------------------|
|  | No. of employees | 13,000 |
|  | No. of affiliates | 45 |
|  | Sales | USD 18.3 Billion |
|  | Operating profit | USD 631 Million |
|  | Total assets | USD 18.2 Billion |

(As of 2016, excluding overseas subsidiaries)



Established to enhance global competitiveness and expertise in the industrial machinery and cutting-edge component businesses

Vision



Outstanding People, Best-in-Class Product, Winning Partnership

Management Status



Date of establishment

July 1st 2008



No. of employees

6,280



Sales

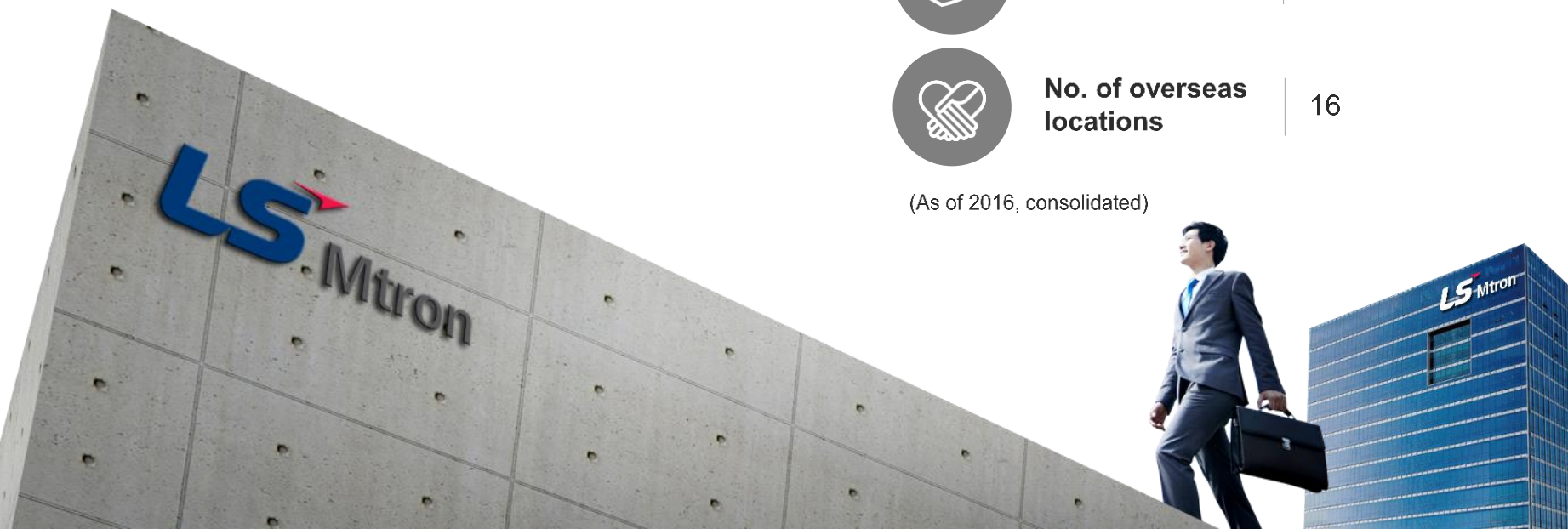
USD 2.89 Billion



No. of overseas locations

16

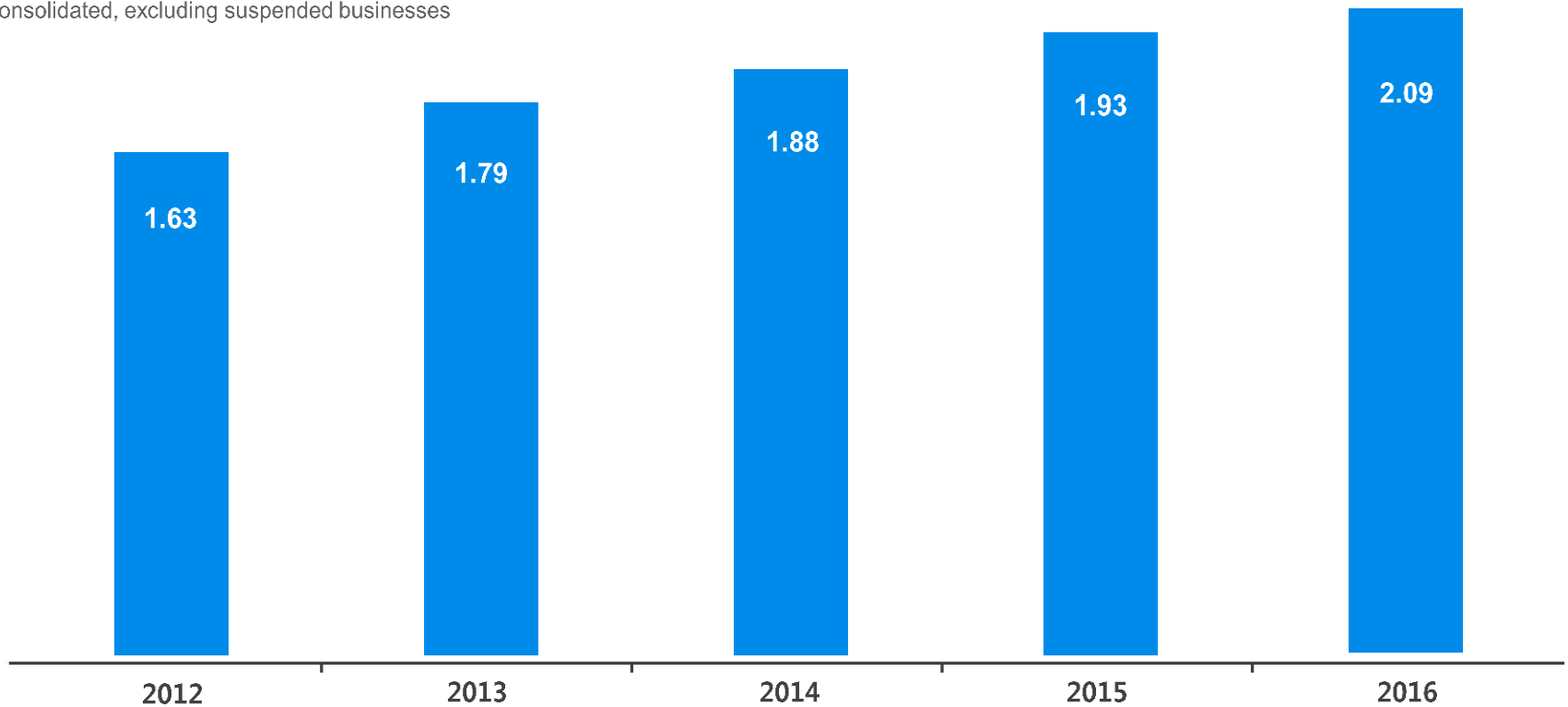
(As of 2016, consolidated)



Sales

■ Sales (Unit: USD in Billion)

Consolidated, excluding suspended businesses



History

Founding and Establishment of Growth Foundations

1962~1994



- May 1962
Established as Korea Cable Industry Co., Ltd.
- June 1969
Launched plastic injection molding systems
- October 1983
Acquired Gunpo plant from Korea Heavy Industry
- May 1986
Entered the connector business

Growth

1995~2002



- February 1995
Renamed as LG Cable Co., Ltd.
- April 1998
Launched an automotive rubber hose business
- September 1998
Secured a USD 100 million contract to supply tractors to the U.S.
- August 2000
Launched the copper foil business

Innovation

2003~2007



- November 2003
Spun off from LG Group
- May 2004
Established an injection molding machine subsidiary in Wuxi, China
- March 2005
Declared CI of LS Group
- March 2005
Relocated the Gunpo plant to Jeonju
- April 2005
Launched the ultracapacitor business
- March 2007
Established an electronic components subsidiary in Qingdao, China
- October 2007
Launched the FCCL business

Going Global

2008~



- July 2008
Launched LS Mtron
- November 2008
Established the Qingdao tractor subsidiary in China
- November 2008
Acquired LS Automotive Co., Ltd.
- January 2009
Established a tractor subsidiary in the U.S.
- April 2013
Completed the Hi-Tech Center
- October 2013
Completed a tractor plant in Brazil
- February 2014
Established an electronic components subsidiary in Vietnam
- June 2014
Completed a tractor engine plant
- July 2015
Declared the company Vision

Domestic Business Locations

LS TOWER, Hi-Tech Center

(Head office, Electronic Components, Ultracapacitors, Sales)



LS Mtron R&D Center



Jeonju Plant, Engine Plant

(Tractors, Injection Molding Systems, Track Shoes, Tractor Engine)



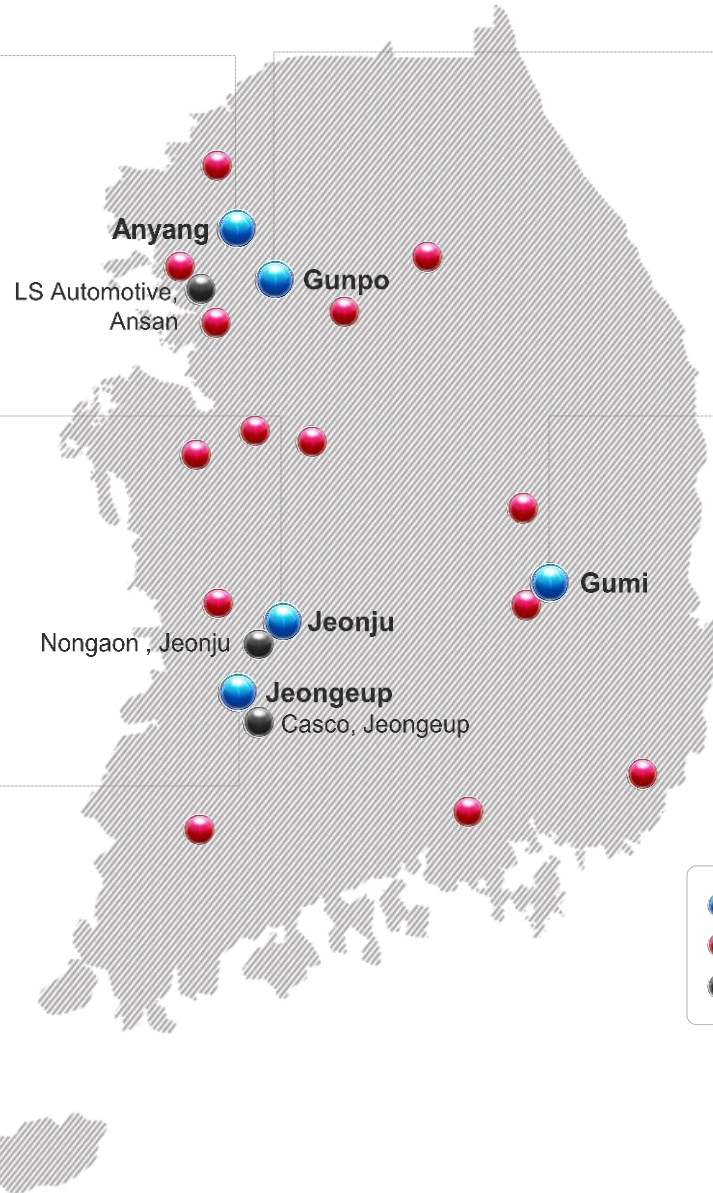
Indong Plant

(Automotive Components)



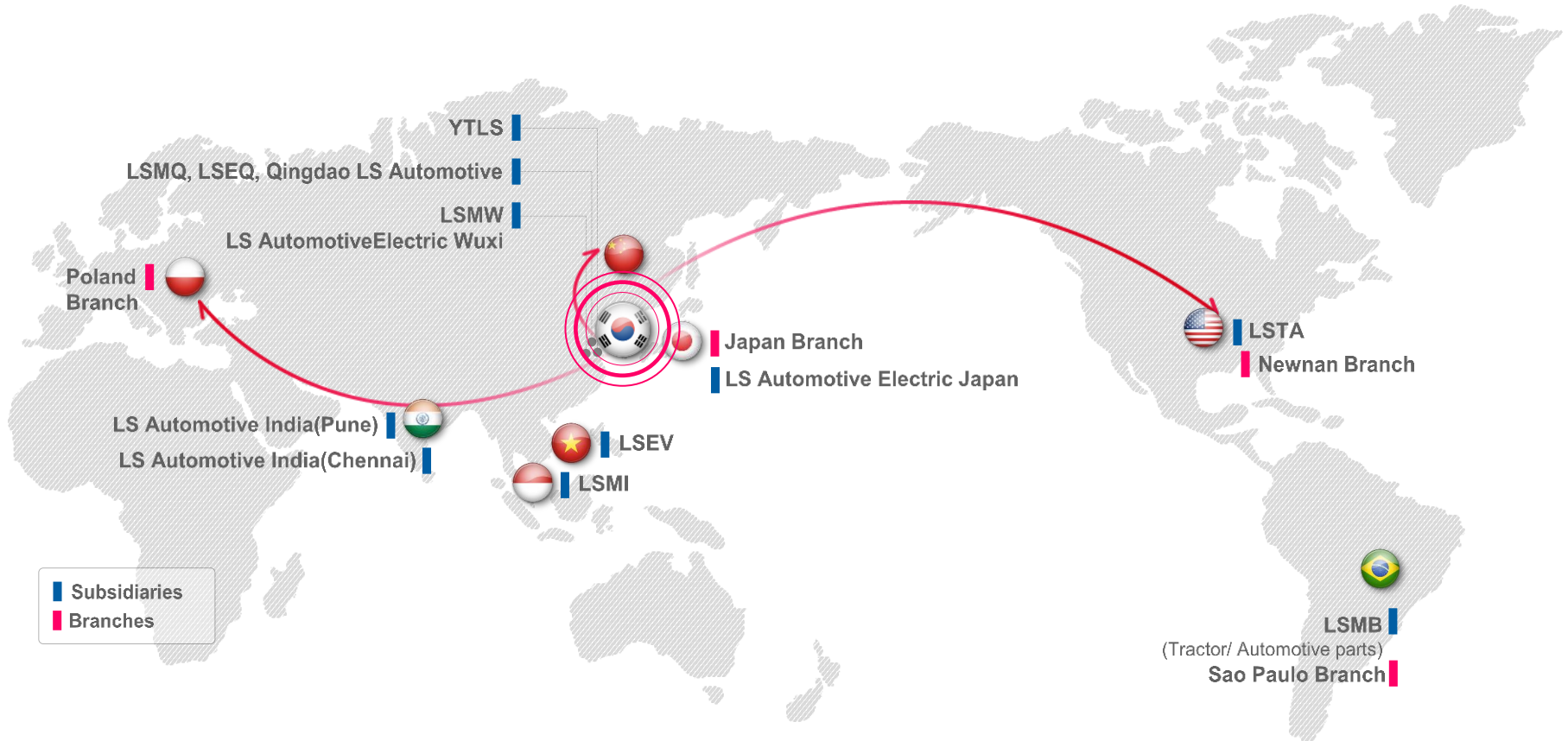
Jeongeup Plant

(CF, FCCL)



- Head Office and Business Locations
- Sales Offices
- Subsidiaries

International Business Locations



Growth of international subsidiaries and foothold

2008

3




2017

17

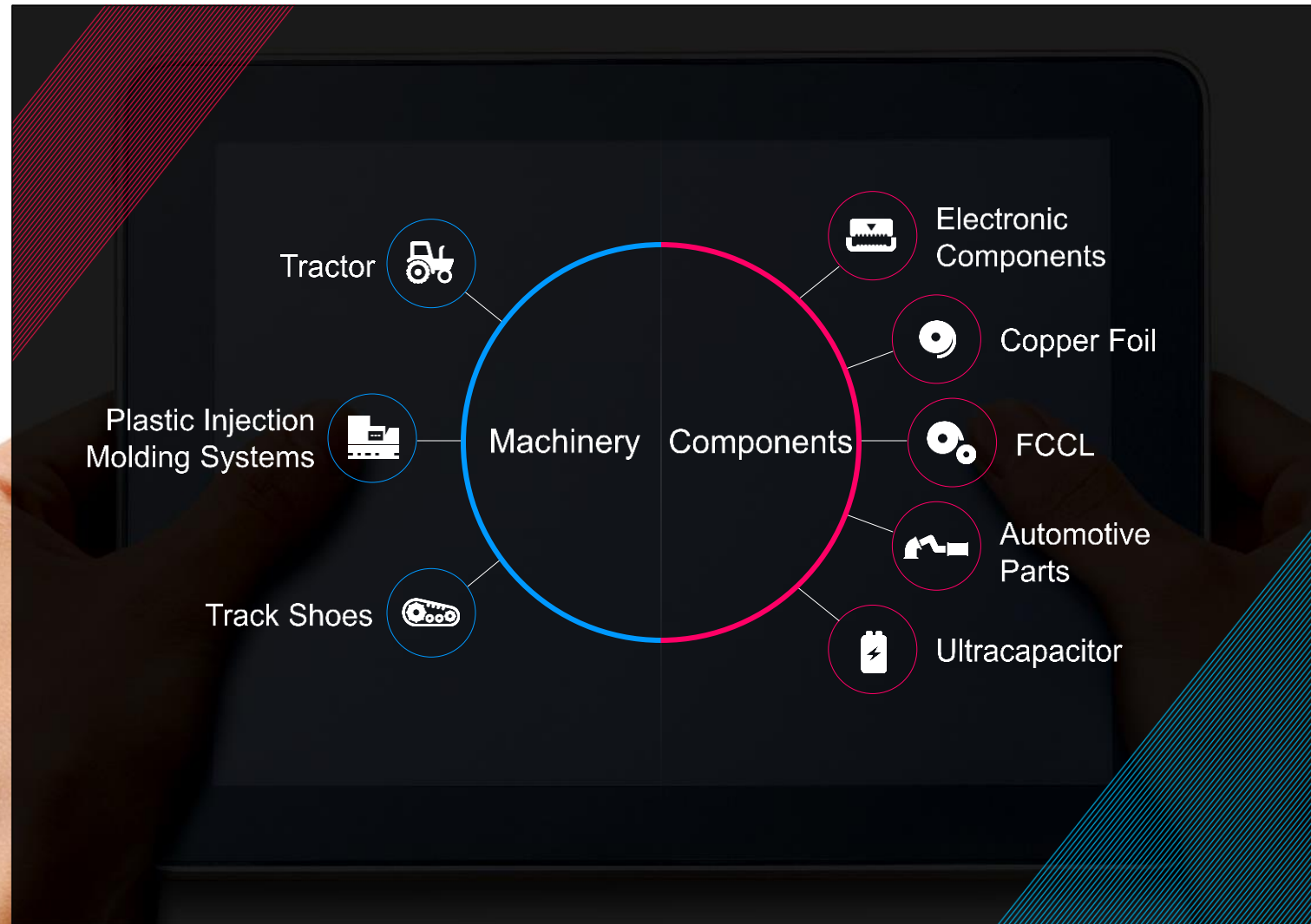
Secured 17 overseas bases

including China, Brazil, USA, and Vietnam

The background of the slide is a close-up, high-contrast photograph of a precision-machined metal component, likely a part of a semiconductor manufacturing machine. The component features a series of gold-colored electrical contacts or pins arranged in a row, with a threaded metal fitting visible on the left. The lighting creates strong highlights and shadows, emphasizing the metallic texture and fine details of the part. A diagonal green line runs across the lower right portion of the image.

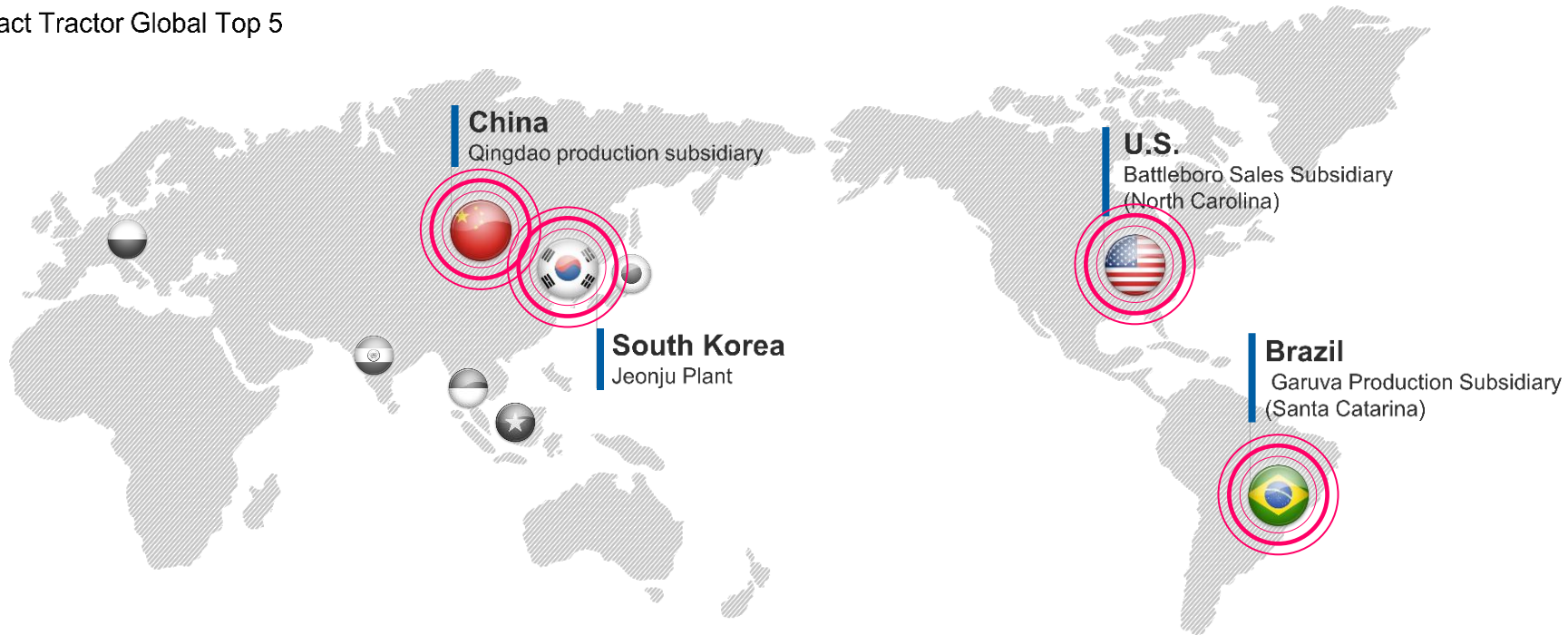
Best-in-Class
Product

Major Businesses



Tractors

Compact Tractor Global Top 5



Performance

- #1 market leader in South Korea
- Supplied to over 40 countries around the world
- Annual production capacity of 50,000 units from plants in South Korea, China, and Brazil



Major Plans

- Enhance global competitiveness of models from all plants including in China and Brazil
- Secure growth potential through global partnerships
- Bolster product lineups, including tractor implements, combines, and heavy construction equipment

Tractors

Key Products

XP Series (84~101Hp)



Comfortable interior and good fuel efficiency

Convenient user-oriented features and economy

MT5 Series (63~73Hp)



Clear & wide view with 4-pillar cabin

Superior performance and comforts with fully functioned cabin

MT1 Series (22~25Hp)



Stylish and easy to operate

Sub compact tractor with high performance and superb agility

Product Line-up

Sub Compact Tractor

- LS MINI(18Hp)
- MT1 Series(22~25Hp)
- J Series(23~27Hp)
- XJ Series(25Hp)

Compact Tractor

- I Series(28~38Hp)
- G Series(33~38Hp)
- XG Series(32~37Hp)
- R Series(41~56Hp)
- XR Series(32~56Hp)

Utility Tractor

- U Series(50~60Hp)
- XU Series(45~68Hp)
- MT5 Series(63~73Hp)
- V Series(70~80Hp)
- PLUS Series(70~95Hp)
- XP Series(84~101Hp)

Row-Crop Tractor

- H Series(110~140Hp)

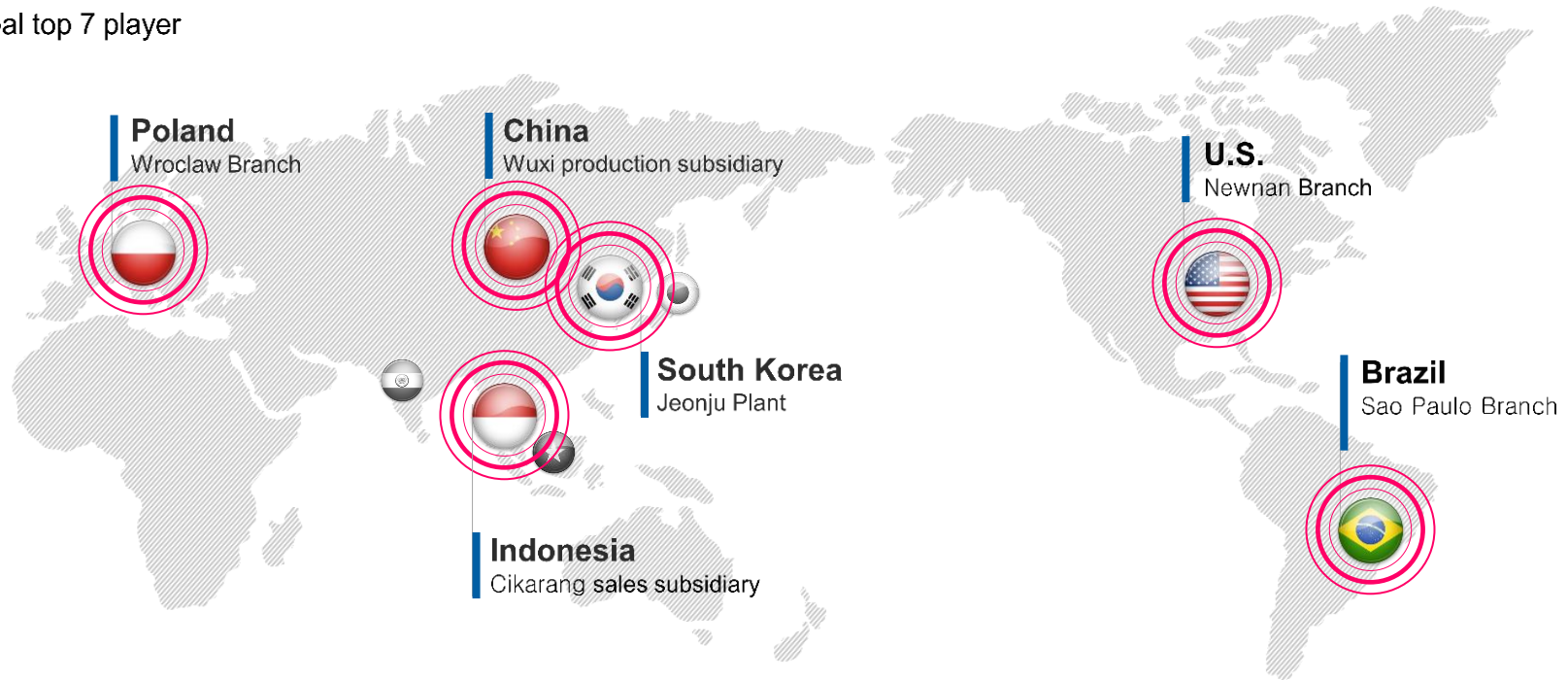
Others

- Combine harvesters
- Rice transplanters
- Cultivator
- Implements



Injection Molding Systems

A global top 7 player



Performance

- No.1 market leader of injection molding machine industry in South Korea
- A comprehensive injection molding machine maker
- Exported 60% of production to over 50 countries around the world



Major Plans

- Strengthen the capabilities of international operations, including Indonesia, Brazil, and Poland
- Develop new products
 - New brand launching of premium injection molding machine with the ONE* series.
 - Line up electric machines with Global specifications.
 - Develop large-electric injection molding machine (650ton & 850ton)

Injection Molding Systems

Key Products

Electric (18-850 tons)



Clean molding

Extremely responsive, high-speed injection molding

Hydraulic (80-4,500 tons)



Maximum productivity

High efficiency, low operating costs

Toggle-type (90 tons-380 tons)



Excellent reproducibility

Outstanding power-saving efficiency

Application

Injection molding of various parts for smart phones, automobiles, air conditioners, washing machines, and TVs

Strengths

High-speed injection

Energy saving

Low-noise

Clean molding

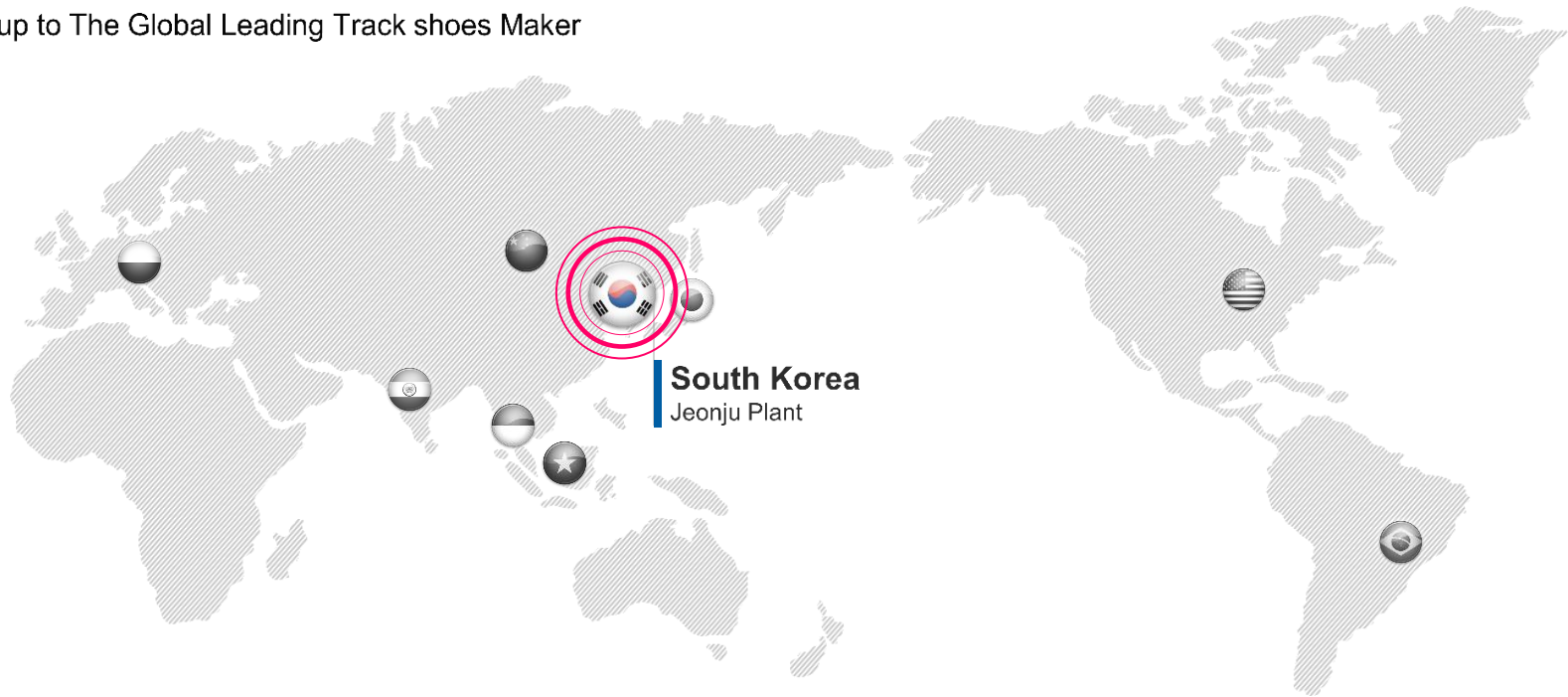
Customers

Samsung Electronics, LG Electronics, Hyundai Motors, Hyundai MOBIS, Seoyon E-Hwa, PT.YASUNLI



Track Shoes

Jump up to The Global Leading Track shoes Maker



South Korea
Jeonju Plant



Performance

- The only tank-track shoes manufacturer in South Korea
- Supplied to the ROK Army for over 40 years
- Selected as Excellent Defense Contractor in 2013



Major Plans

- Begin full-fledged mass production of track shoes for the next-generation South Korean Main Battle Tank (MBT), K2 Black Panther
- Develop track shoes for the Turkish MBT, Altay
- Secure future leading technologies (high durability, lightweight)

Track Shoes

Key Products

K1A1 Track Shoes

Enhanced stability of Strengths by component

- Sharply improved durability
- Outstanding economy



K9 Track Shoes

Low-vibration driving surface

- Manufactured specifically for Korean topography and operational characteristics
- Guaranteed durable wear life of stable tank-track shoes and pads



K21 Track Shoes

Lightweight and high durability

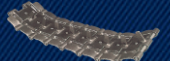
- Designed for heavy loads
- Upgraded high-speed capability
- Optimized for water-surface operability



K200(M113) Track Shoes(export)

Contributing to foreign currency savings by replacing imports

- A leading model that is applicable to all series vehicles
- Excellent economic feasibility and quality



Application

Track shoes :

Play a vital role for the movement, rotation, and braking of the major lower components of combat and other types of vehicles

Strengths

Tank-track shoes designs in various grades

Cuts Costs

Built with a stable quality system

Secured facilities for all work processes

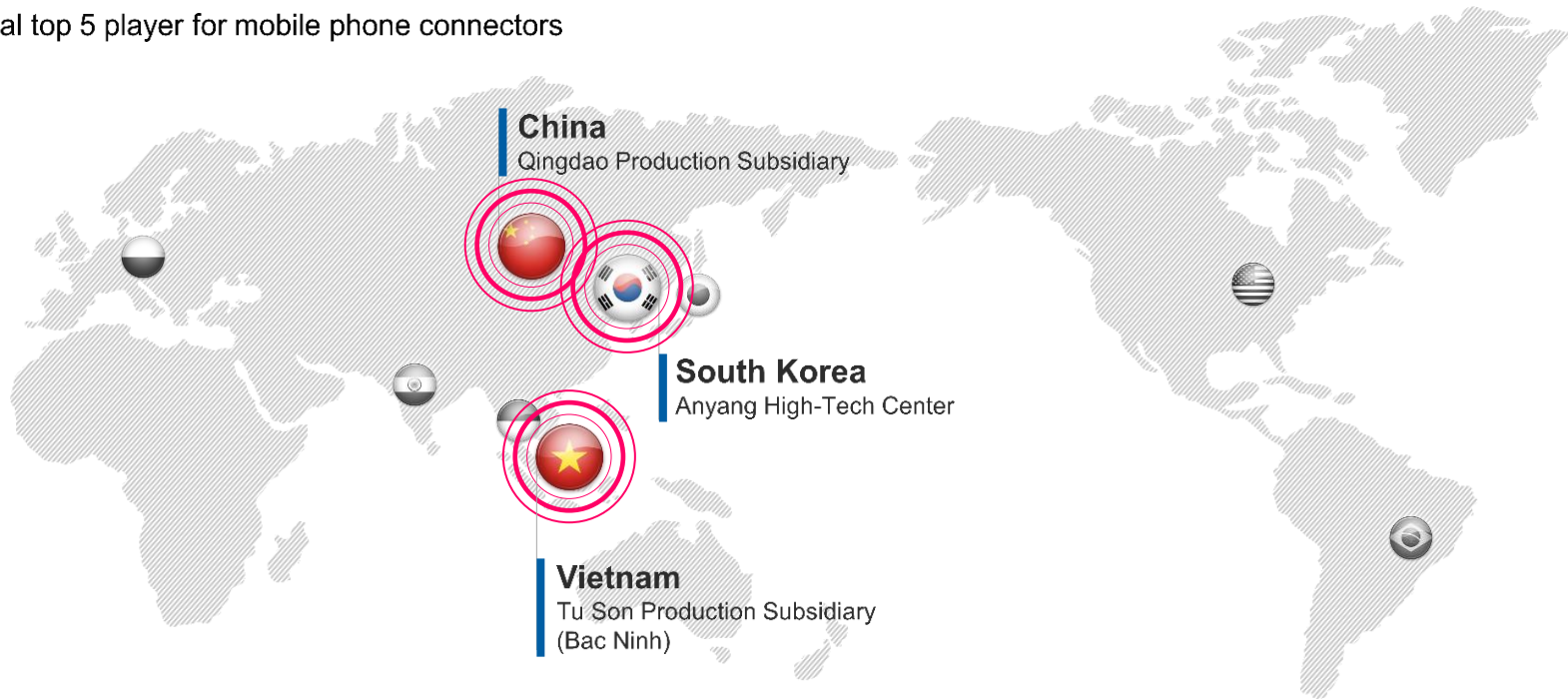
Customers

Defense Acquisition Program Administration, Hyundai Rotem, Hanwha Techwin, Hanwha Defense, overseas defense companies



Electronic Components

A global top 5 player for mobile phone connectors



Performance

- Supplying customized electronic components for flagship models of the major customers such as Samsung Electronics and LG Electronics
- Increase the pool of customers Chinese and worldwide
- Lay global business foundations by establishing a Vietnamese subsidiary



Major Plans

- Maximizing the domestic market share and expanding performances in the global market
- Developing market-leading products and securing core-technologies of manufacturing process
- Taking opportunities of growth through discovering and developing new growth engines

Electronic Components

Key Products

B2B connector for cell phones

**Minimize its chief area/
Enhancement**
Excellent fastening workability



I/O connector For mobile phones M-USB/ Type-C connector

micro USB/Type-C
Waterproof/Multi Finn /Slimization



Connector for FPDs

**Applied high-speed
transmission technology**
Excellent contact reliability



Antenna for cell phones

Antenna integrated with case
Slim multi-band antennas



Application

Smart phones, tablet PCs, digital cameras, smart TVs,
OLED/LCD TVs, monitors, notebooks, wearable devices

Strengths

Ultra compact

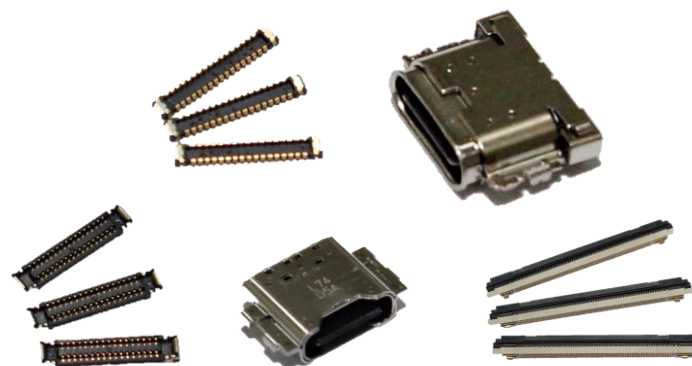
High Speed

Custom-tailored

High Quality

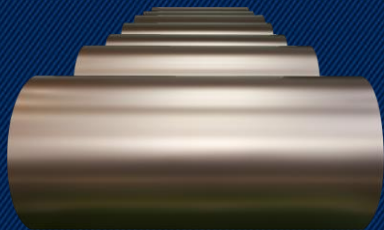
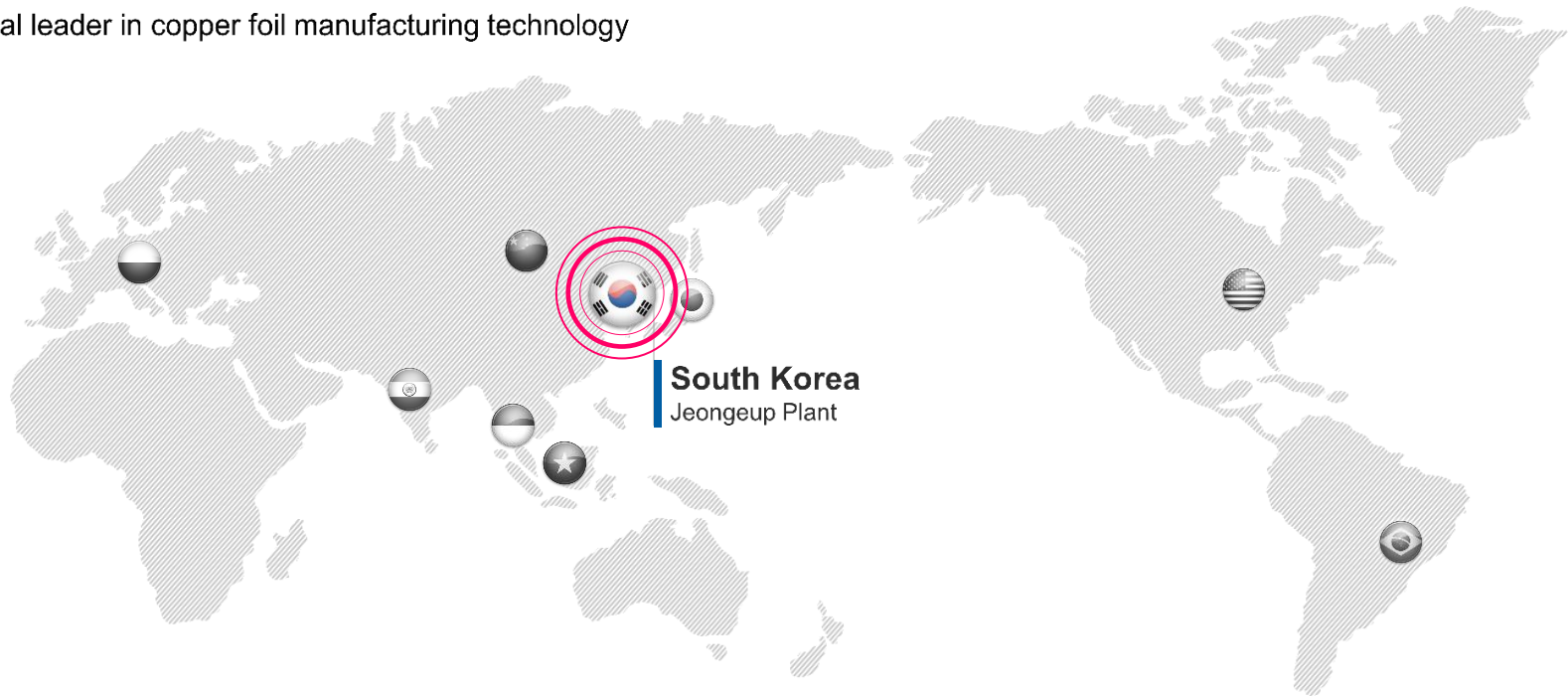
Customers

LG Electronics, LG Display, LG Innotek, Samsung Electronics,
Samsung Display, Samsung Electro-Mechanics, ZTE, Lenovo,
BOE, HTC, Sharp, Nikon, LAVA



Copper Foil

A global leader in copper foil manufacturing technology



Performance



Major Plans

- **A top supplier of copper foils to global IT/EV battery makers**
- **Established new copper foil product development and mass production system**
: First in the world to mass-produce 6 μ m copper foils, and high-strength, high-elongation copper foils for high-capacity batteries
- **Secured the world's first wide-width, long-winding and anticorrosion technologies**
- **Developed ultra-thin, low light level products for Fine Pitch FCCLs**
- **Develop cutting-edge copper foils for high-capacity batteries**
: including ultra-high strength 4 μ m copper foils and high-adhesion copper foils
- **Develop ultra-thin copper foils, including 6 μ m copper foils for FCCLs**

Copper Foil

Key Products

LSB-STN

Standard copper foil used in batteries

- Standard copper foil for cathode
- Current collectors used in lithium ion batteries

Tensile Strength (High Temperature): 28~33kgf/mm²
Elongation (High Temperature): 4~8%



LSE-HEN

High-elongation copper foil used in batteries

- High strength at room temperature, high elongation at higher temperatures, high reliability

Tensile Strength (High Temperature): 55~60kgf/mm²
Elongation (High Temperature): 18~22%



LSS-HSN

High-strength copper foil used in batteries

- Copper foil for high-capacity
- Metal-based cathode current collectors due to its high strength

Tensile Strength (High Temperature): 55~65kgf/mm²
Elongation (High Temperature): 3~5%



LSU-FXR/LSB-FXC/LSE-FXN

Copper foil for FCCLs

- Built copper foil lineup for three types of FCCLs, suitable for customer processes
- Excellent traversability and flexibility

Normal Treatment,
Reverse Treatment,
Fine Nodule Treatment



Application

- For batteries: Mobile phones, cathode current collectors of secondary batteries for electric vehicles
- For FCCLs : Flexible PCBs used in portable devices

Strengths

Uniform quality
(properties, appearance)

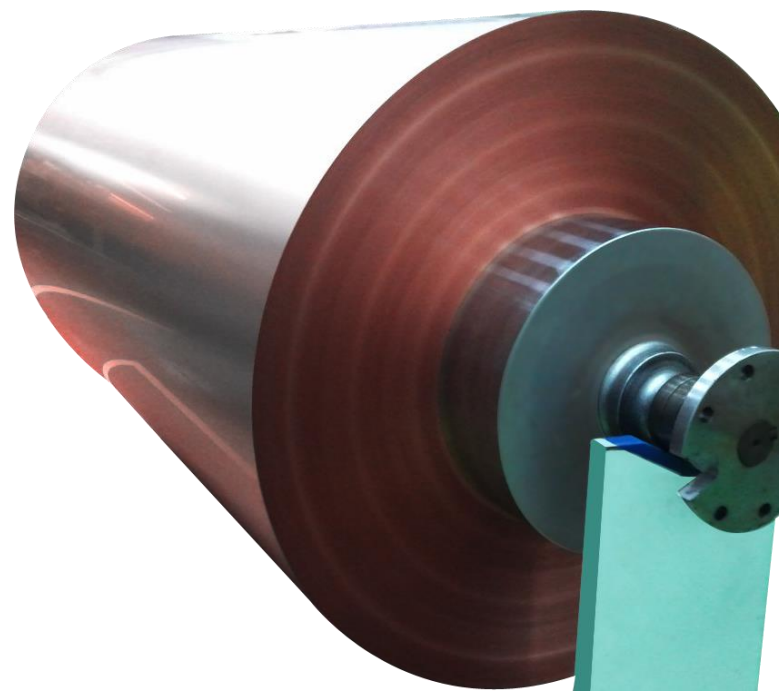
Stable supply
(wide width, long length)

High reliability
(anticorrosion, chemical resistance)

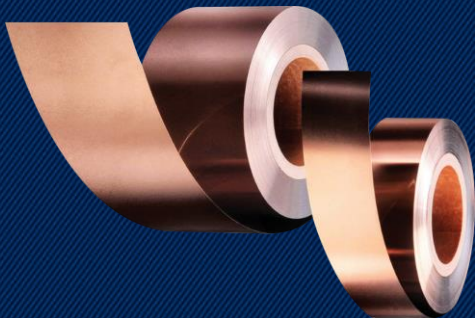
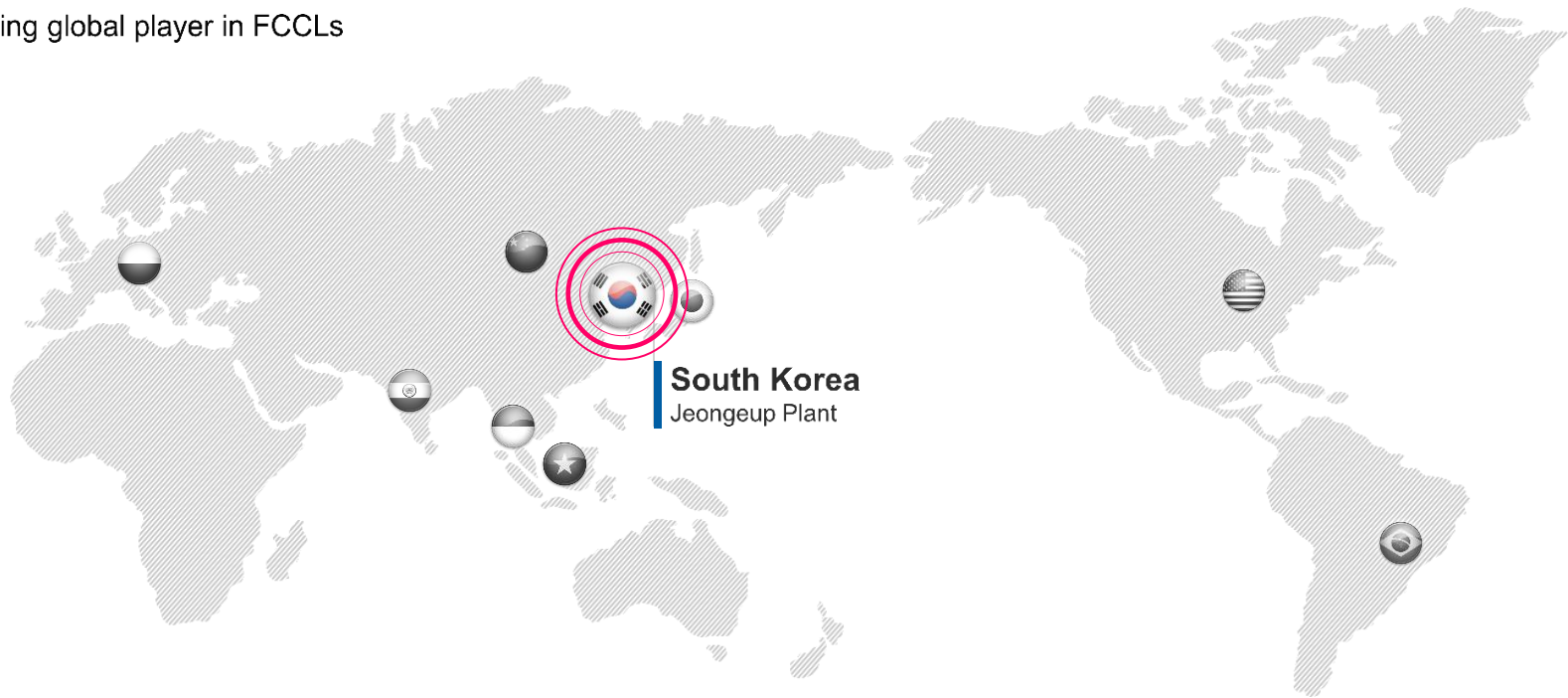
Customized development

Customers

LG Chem, Samsung SDI, Panasonic, Sony, ATL, BYD, Coslight, LG Innotek, Doosan Corporation Electro-Materials, Daeduck GDS, Innox, SK Innovation



A leading global player in FCCLs



Performance

- Ranked second in the world market share
- Secured the nation's sole independent technologies
- Secured the world's highest productivity



Major Plans

- Secure over 30% of the global market share
- Develop new products for displays
- Achieve the world's highest productivity
- Grow to rank first in market shares

Key Products

FCCL for display products (Chip On Film)



Materials for high-definition image connection

- Materials for high-definition signal and image connection, including TVs, notebooks, and monitors

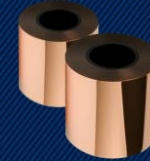
FCCL for FPCs



Materials for slim circuits

- Fine and slim circuits in smart phones and medical devices

Metal materials for TSPs



Materials for small- and medium-sized touch screen films

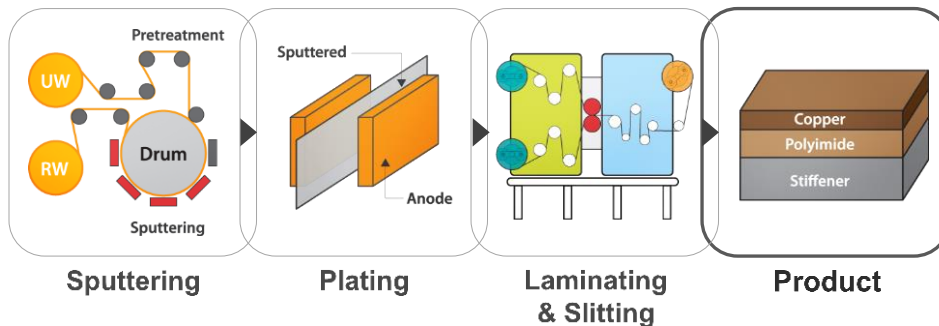
Application

COF for LCDs, COF for mobile phones, Optical Pickup, FPCB for HDDs, FPCB for medical devices (including ultrasonic detectors)

Customers

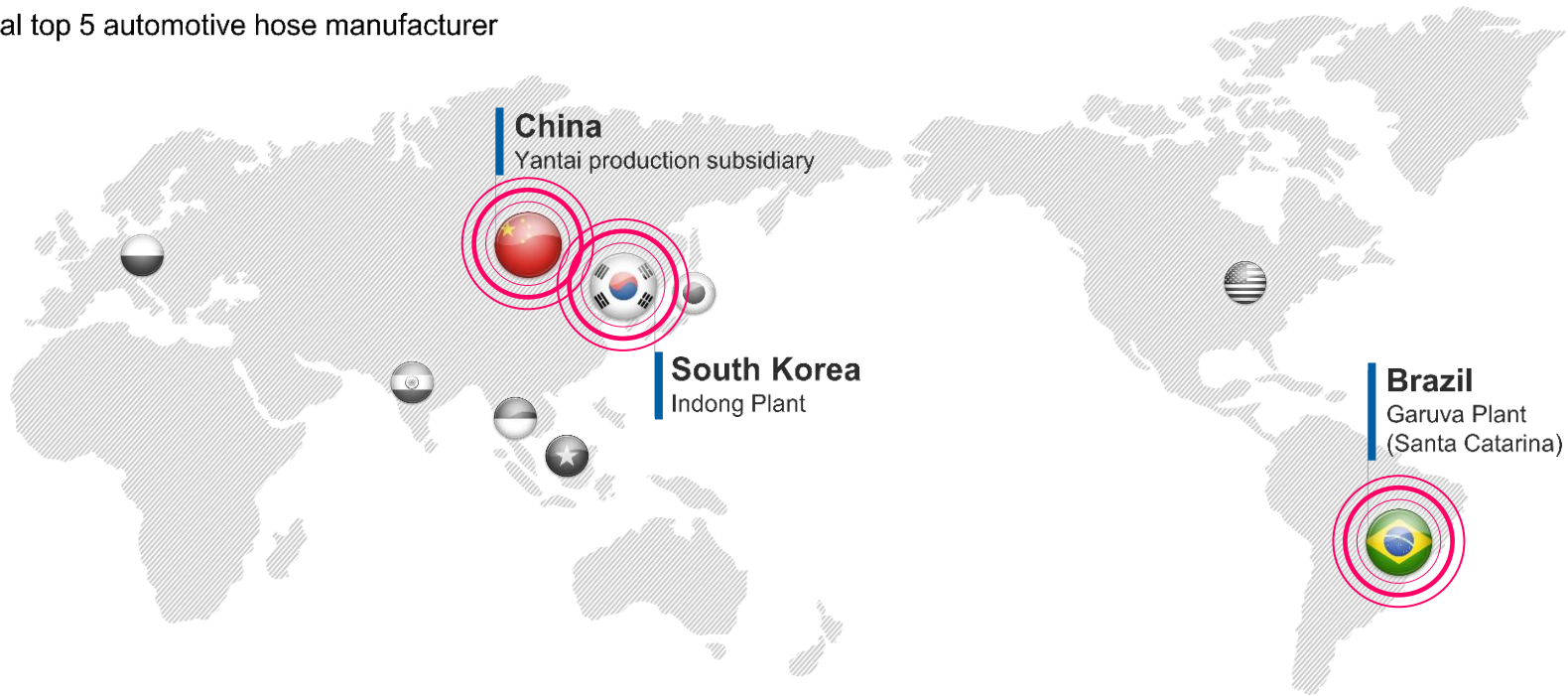
LG Innotek, STEMCO (a Samsung affiliate)

Manufacturing Process



Automotive Components

| A global top 5 automotive hose manufacturer



Performance

- Built a brake hose assembly
- Secured global price competitiveness
- Expanded eco-friendly CAC hose line



Major Plans

- Develop overseas production bases in full scale
- Build an automated brake hose assembly line
- Enter the 3D Blow molding plastic duct business model market

Automotive Components

Key Products

CAC hose

Enhances fuel efficiency and engine output

- A core component that reduces exhaust gas emissions



Brake hose

A product with the highest-grade security

- Meets the needs of customers



3D Blow molding plastic duct

For lightweight vehicles

- Reduced noise



Power steering hose

Developed as a custom-tailored product

- Maximizes driving convenience



Application

- Used in braking and steering systems
- Enables drivers to change vehicle direction with ease

Strengths

Excellent
heat
resistance

Verified
stability

Customized
product
development

Customers

GM, Hyundai/Kia Motor, Renault-Nissan, Chrysler, Avtovaz



Ultracapacitor

A global top player for Ultracapacitors



Performance



Major Plans

- Entered mass production for global industrial AGV
- Increased cylindrical large-cell automated production capacity
- Secured new electrode coating technology and specialized module design technology
- Carried out joint product development with global companies
- Target 12% of the global market share for mid- to large-sized UCs
- Increase shares in key global markets and open new markets
- Develop high-voltage, ultra-low resistance products, and new technology-applied modules

Ultracapacitor

Key Products

LSUC



Easy module composition for various purposes including voltage and capacity

-Usable for a variety of applications due to its strong durability

LSUM



Standard and customized modules

-Standard module lineup with various forms and features
-Offers optimal solutions through customized modules

Application

Hybrid buses, Automobiles, UPS, AGV, Wind power, Railways and trams, Heavy equipment

Strengths

High
output

High
efficiency

Low
resistance

Strong
durability

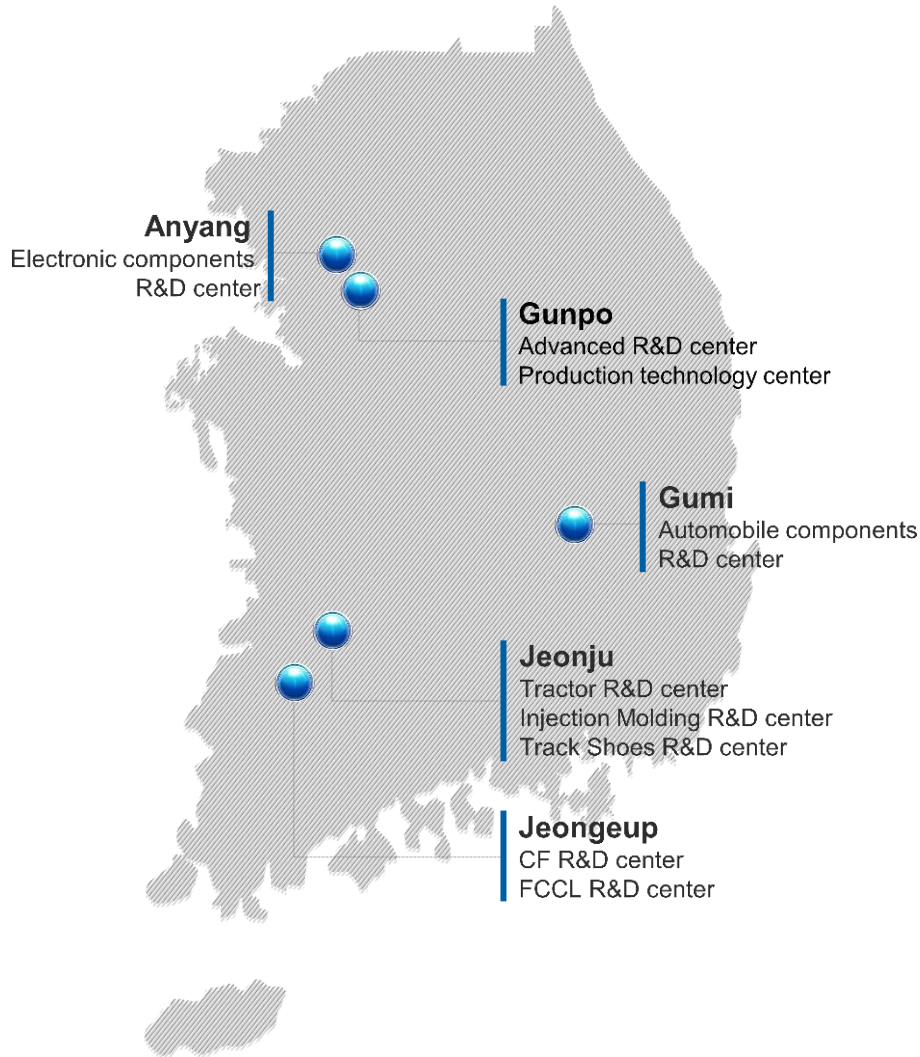
Customers

ABB, Siemens, Eaton, Wind World, Daifuku, CRRC



R&D

Be the one in “Digital transformation” R&D

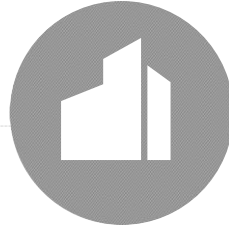


- **Advanced R&D center:**
Pursued an omni-directional R&D that aligns with the roles of the research centers at business divisions
- **Established R&D process and advanced project management system**
- **Built production technology center**
(for companywide technology support)



- **Develop industry-leading products**
- **Enhance open innovation**
- **Upgrade a product lifecycle management system for efficient R&D activities**

Committed to improving products and services through the highest-level technology development



R&D Institute

Advanced R&D Center



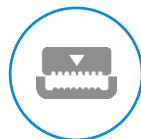
Tractors

- Development of automatic transmissions
- Development of Automated
- Operating & Convenience function
- Development of Autonomous Driving Technology



Injection Molding

- Precision control and molding technology
- New mechanism
- Software Platform Development



Electronic Components

- High-speed connectivity technology
- 5G antenna & RF technology



CF

- Development of copper foils for batteries
- Development of additive and plating recipes



Automotive Components

- CAC structure, vibration analysis
- Design of resonators



FCCL

- Development of next-generation double-sided products for mobile

Production Technology Center



Companywide Technology Support

- Support CAE technology for the stages of development and mass production
- Innovate productivity through the development of automation and testing technologies
- Polymer product design and process technology development



Development of new processes and engineering methods

- Digital manufacturing
- Virtual durability test



Enhancement of Reliability System

- Develop precision analysis and test and evaluation methods
- Establish reliability process management

A close-up photograph of two hands shaking in a firm grip, symbolizing partnership. The hands are positioned on the left side of the frame, with one hand slightly above the other. The background is a blurred, light-colored surface. The image is framed by a dark, textured border on the top and bottom, and a diagonal red line runs across the bottom right corner.

Winning Partnership

Sustainability Management

Shaping the future with diverse stakeholders

Corporate Vision

Be the **ONE***

Outstanding People, Best-in-Class Product, Winning Partnership

2015 Goal

The growth toward respected global company through enhancing trusts from stakeholders

Strategies



Activity areas

| | | | | | | |
|---------------------------|-----------------------------------|---------------|---------------------|------------------|--------------------------------|-------------------------|
| Initiatives in innovation | Quality and customer satisfaction | Shared growth | Social contribution | Green management | Competitive edge in technology | Enhanced employee value |
|---------------------------|-----------------------------------|---------------|---------------------|------------------|--------------------------------|-------------------------|

Basis of practice

Ethics Management

Creating Greater Value Together!

LSpartnership®

Ethics Management

■ A standard for all directions and decision-making in sustainable management



Cyber Ombudsman

A program through which stakeholders feel free to make suggestions on overall management activities



Ethics Counseling Office

Open to stakeholders who are faced with ethical problems (conflicts and dilemmas) or have inquiries regarding corporate ethics



Clean Company

A system that allows employees to voluntarily report and return any bribes that were inevitably accepted



Ethical Culture


Carry out ongoing ethics training, in addition to internal and external publicity activities



Ethics Performance Survey

Assess our ethics levels through annual surveys on our business partners

Win-Win Partnership

 Growing together by working together

M-Partner

Excellent business partner
certification system



Improvement of supply chain transparency and the environment

Bolster fair trade relationships and
practice green carbon partnerships



Support for strengthened capabilities

Support to upgrade quality
and productivity,
while ensuring safety



Enhancement of R&D competitiveness

Support the projects of business
partners that are related to
technology development



Six major activities for shared growth

Financial assistance programs for business partners

Create win-win funds



Increased communications

Develop together with business
partners through consistent
communications and feedback



Green Management

A leading global green company in industrial machinery and components

Targeting zero environmental and safety negligent accidents

- Building a system to better cope with environmental and safety negligent
- Strengthening the prevention accidents with precautionary system construction through assess the risk of environmental safety



Leading green management in South Korea

- Received Global Green Management Excellence Award in 2014
- Seeking shared growth with our parent company and business partners through green partnership activities



Leading by addressing global issues and climate change

- To actively respond to climate change through building management systems of greenhouse gas/energy and sustained reduction efforts
- Acquired Carbon Footprint Label Certification for Mtron tractors



Green^{leaf}
management

Social Contributions

Reaching out through employee volunteers around the world



We Love Farming Village Volunteer Group

- LS Mtron's representative social contribution program
- Volunteer work includes improvement of the residential environment, tractor inspection, taking photographs for the elderly, hairdressing services
- Help to solve low-income and aging issues in the rural regions



Employee volunteer clubs

- Employees run volunteer clubs in local communities that are located near their business locations
- An open volunteer system joined by employees, their families, and business partners

Social Contributions (international)

Reaching out through employee volunteers around the world

Employee Volunteer Group and Talent Development

- Carry out outreach activities by employee volunteer groups
- Activities include school construction and educational services (art, music, sports, etc.)
- Volunteer labor, education in hygiene, village and environmental improvement campaigns
- Support for scholarships and school supplies



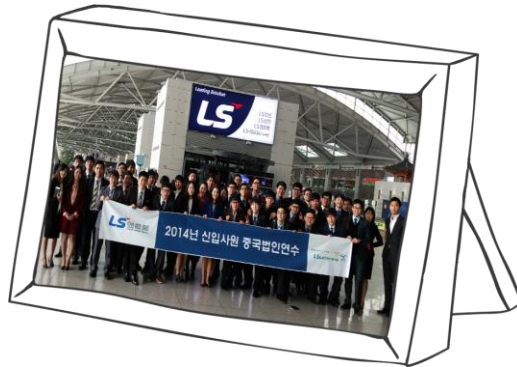
Employee Value Enhancement

Fostering high-caliber, dedicated LS Mtron members by imparting a sense of ownership and strengthened expertise

Jump programs for new recruits

Introductory training

- Overseas training
- Work smart
- Future Camp



Mentorship program

Establishment of mentor-mentee relationships for new recruits, 3-month activities, Helpers for organizational adaptation, Sharing experience and knowledge



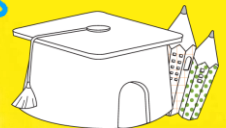
Professional job training

A variety of training programs including R&D, sales, and support



Talent nurturing programs

LS MBA, master's degree programs, overseas doctoral degree programs in R&D, foreign language training



A Great Workplace

Received the Great Work Place in Korea Award for three consecutive years

"It is not like a company
but a university."

[Club activities]

Support club activities including baseball, soccer, fishing, photography, leisure sports, and volunteer opportunities



"Families are avid
fans of our company."

[Employee family events]

Carry out a variety of family events for employees, including children sketch contests and parties for parents



"Enjoy holidays in
a variety of creative ways"

[Vacation programs]

Operate programs to refresh members twice a year, aside from summer vacation



"The best facilities
in South Korea."

[Convenient facilities and welfare]

Complete with all kinds of facilities such as swimming pools, fitness clubs, driving



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