CREATIVITY INSPIRED HYOSUNG
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CREATIVITY
INSPIRED

Inspiring Every Creation in the World
I would like to deeply thank all of our customers for your continued interest and support for Hyosung throughout the years.

Since our establishment in 1966, Hyosung has relentlessly strived to contribute to the development of the Korean economy by venturing into world markets. Today, we are opening the doors to the future based on our solid foundation as a global company in such areas as textiles, chemicals, industrial materials, power & industrial systems, construction, trade, and information & communication.

Here at Hyosung we are committed to technological and quality innovation with our firm belief that technological capacities form the very basis of competitiveness. This ideal is behind our dedication to working around the clock worldwide to make all human lives better and more prosperous.

Today, Hyosung operates over 80 production facilities and sales offices around the world, including in Korea, the United States, Southeast Asia, Europe, South America and Africa. This vast network provides specialized products and services that incorporate the various needs of our customers. We continue to strive to become a trusted partner of our customers by using such a vast network and full commitment.

Hyosung further invests in new growth engines for the future that will add greater value to the lives of us all. State-of-the-art advanced materials, the electronic material industry, high-efficiency industrial equipment and next-generation financial infrastructures that enhance the comforts of life - these are just some of the cutting-edge technologies that will enable Hyosung to grow into a leader of innovation.

Hyosung is also actively devoted to making our societies a better place to live in through ethical management and mutual cooperation. Our mission here lies in laying the foundation for creating a better world for all of us. For that, we are actively participating in social contribution activities that create jobs and provide support for vulnerable members of society.

Thank you.

Hyosung is committed to working together with our customers in making a better future.

Chairman    Hyun Joon Cho
CREATIVITY INSPIRED
Presenting Pioneering Valuable Changes

When a new change for the future aims at a better tomorrow everyone dreams and hopes for, the change can have true value.

A change with value breathes inspiration into numerous industries and technologies, and a creative company that leads the change presents a better tomorrow faster than anyone.

This is what Hyosung considers the most valuable kind of “Creativity.”
Lighter, Stronger and Safer,
Imagining the New Possibilities of Automobiles
NEW MATERIALS
TIRE CORD

ADVANCE

Lighter, Stronger and Safer,
Imagining the New Possibilities of
Automobiles

POKETONE™
the new generation engineering plastic polyketone
POKETONE™, the new eco-friendly macromolecular material polyketone
is the world's first successful commercial product of polyketone by
Hyosung. It enables the best performance in various areas including:
automobiles, electric and electronic products, and industrial and fiber
products.

A Stronger-than-steel Dream Fiber Carbon Fiber,
TANSOME ™
Carbon fiber, which is getting more attention as a core material for
weight reduction, is a cutting-edge material with more than 60% carbon
content, and at 10 times stronger than steel, while its density is only a
quarter of that of steel.

TIRE CORD
Establishment of the world's only one-stop production
system for tire reinforcing materials
Largest share in the world's tire cord market

Hyosung Advanced Materials, the first Korean company to develop polyester tire cords,
supplies tire cords to global tire brands, and it is the integrated tire reinforcement
supplier in the world capable of supplying both textile and steel reinforcements.

POKETONE ™
World's first successful commercialization of Polyketone

NEW MATERIALS
Development and commercialization of Korea's first
High-performing carbon fiber
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Reduced Pollution, Sustainable Energy Opening a Low–Carbon, Green Life Era
creora® eco-soft eco-friendly Spandex
creora® eco-soft is an eco-friendly Spandex with reduced CO2 emission. It is made with a newly developed production technology that enables maximum heat preservation in low temperatures.

regen® Recycled Yarn
Regen® recycled yarn made from recycled waste PET bottles and waste fishing nets is an eco-friendly fiber produced to dramatically reduce the amount of CO2 emissions and waste generation.

International certification of eco-friendly fiber
The Netherlands Control Union, Japan Environment Association (JEA)

Development of the world’s first 800kV double-break Gas Insulated Switchgear (GIS)
Hyosung Heavy Industries, which developed the world’s first 800kV double-break GIS, is currently developing the core technologies necessary for the establishment of future power grids such as static compensator (STATCOM), energy storage system (ESS), Smart Grid, etc.

Korea’s first successful commercialization of STATCOM

Reduced Pollution, Sustainable Energy Opening a Low-Carbon, Green Life Era
Linking Home, Industry and Finance together Presenting a Smart Life Style
For convenient and safe financial transactions in different countries with different currencies at all times, Hyosung provides total financial solutions including ATM services to 80 countries around the globe.

**IoT**

Infrastructure
Cloud Computing
CDN
Server Storage
Internet-based Big Data Management
Distributed File System

**Development of distributed file system for big data processing.**

**Establishment of comprehensive Internet of Things (IoT) system.**

**Korea’s first certified best quality provider of U.S. finance industry ATMs.**

No.1 in the United States and Russian, Indonesian ATM markets.

**Total Solution**

Smart Financial Solution

**SMART**

Linking Home, Industry and Finance together Presenting a Smart Life Style

**NETWORK**

ATM

Korea’s first certified best quality provider of U.S. finance industry ATMs.

Hyosung TNS Smart Financial Solutions.
With Customers, With the World
Hyosung is your trusted partner

With its excellent technologies and services, Hyosung is growing as a global leader in different business sectors such as textile, industrial materials, chemicals, power & industrial systems, construction, trading, and information & communication. Guided by our management philosophy of 'Global Excellence', we endeavor to provide better values for our customers all over the world. We will continue challenging ourselves and innovating while securing and maintaining customer loyalty and trust.
By establishing and expanding spandex production lines in Turkey, China, Vietnam and Brazil, Hyosung is becoming more responsive to customer demand as well as enhancing product quality and production reliability.

Hyosung acquired Eco Mark from Control Union (Netherlands) and Japan Environment Association (Japan) for its eco-friendly yarn that will help save energy cost, consume less petrochemical raw materials, and reduce CO₂ emissions.

The mutual benefits of exporting and importing partners are maximized by diversifying the trade structure that explores new markets such as in Central and South America, Africa, and the Commonwealth of Independent States (CIS), and promoting three-party exchanges.
Maximizing customer value with innovative textile technology and a global trade network

Textile business of Hyosung TNC is leading the global chemical fiber industry by supplying fiber, textiles and dye products such as spandex, nylon, and polyester as well as offering excellent technology, quality and customer service. Furthermore, Trading business, based on a network of more than 50 overseas branches around the world, is offering the highest level of marketing services in various fields centered on steel and chemicals, as well as a wide variety of fields including distribution and logistics, and is continuing to grow in the center of global trading by introducing new products and exploring new markets based on the strength of its rich experience.
No. 1 global market share, the world’s No. 1 spandex brand creora®
Selected as a ‘World-class Product of Korea’ by the Korean government

Powered by its proprietary production technologies, R&D and global marketing activities, Hyosung TNC has grown to become the largest spandex manufacturer in the world, and its spandex brand creora® is ranked No. 1 in global market share. With its best quality and value, creora® continuously develops new product lines that meet customers’ needs and creates new prospects in the textile industry. creora® introduces its consumer fabrics to major brands through the creora® Fabric Library located in major fashion cities including Seoul, Hong Kong, Shanghai, New York and Milan. The creora® workshop is held regularly to provide consulting services to help customers enhance their competitiveness through customized one-on-one consultation. It is a part of the differentiated marketing activities under Hyosung’s win-win management, whose goal is to grow with customers. Having built local production facilities in China, Turkey, Vietnam and Brazil to establish a production network that spans the continents, Hyosung provides the best services based on responsive support and stable supply of the products. creora® is striving constantly to develop and supply an innovative product. It offers a wide range of differentiated products such as creora® Color+ to be dyed in blends with nylon, which can reduce grin-through on textile products, and makes the color of fabrics deeper and more vivid; black dope dyed spandex creora® Black, which brings out deeper, more sophisticated colors that conventional spandex is unable to give; the eco-friendly yarn creora® eco-soft, whose soft-touch fabric can be produced at a lower temperature than conventional spandex to save energy; creora® highclo™, which has the highest level of chlorine resistance to offer excellent elasticity in swimsuits, and creora® Fresh, which helps neutralize causes of body odor keep you feeling fresh and comfortable. This is the reason why global business brands have consistently chosen creora®, and why it is the No. 1 market leader globally.

Hyosung TNC is a global chemical fiber manufacturer continuously developing multi-function, high quality Nylon and Polyester yarns to help customers create more value. Its products are strongly preferred by customers around the world.

Nylon Fiber Business Division
Korea’s best nylon fibers / Development of the world’s first microfibers

As the undisputed market leader in Korea, the Nylon Fiber Business Division produces a wide variety of highly functional fibers including TOPLON®, which is our major product line used to manufacture premium lingerie, outdoor sportswear and industrial materials, MIPAN fine & soft, MIPAN aqua-X (Cool-touch, wicking nylon), MIPAN aeroheat (Heat-generating nylon), MIPAN duo (NP melange yarn), MIPAN fit (far-infrared radiation yarn), MIPAN XF (NP compound yarn), MIPAN rexy (flat surfaced yarn with a shiny, metallic luster), MIPAN corona (conductive yarn), MIPAN glurex (bonding yarn), MIPAN robic (highly robust yarn), and MIPAN robic-air (hollow yarn). We also focus on developing cutting-edge materials that include the world’s first microfibers. In particular, MIPAN regen®, our recycled nylon for clothes, helps reduce the consumption of fossil fuel, preserve natural resources and cut down energy and greenhouse gas emissions. This product was recognized by the Global Recycled Standard (GRS) of the Control Union in the Netherlands for its many ecological benefits.

Nylon Polyester Fiber PU

- MIPAN regen®
- MIPAN fine & soft
- MIPAN robic
- MIPAN robic-air
- MIPAN aqua-X
- MIPAN fit
- MIPAN rexy
- MIPAN glurex
- MIPAN XF
- MIPAN aeroheat
- MIPAN duo

Spandex PU

creora®
- creora® Color+
- creora® Black
- creora® Power Fit
- creora® highclo™
- creora® eco-soft
- creora® STEAMSET+
- creora® Soft Fit
- creora® LUMINOUS
- creora® comfort
- creora® Fit™
- creora® Fresh

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Polyester Fiber Business Division

Development of regen®, Korea’s first yarn recycled from PET bottles
m2, aerocool, and askin, selected as the world’s best products

With its own superior technologies in high-performing product lines, the Polyester Fiber Business Division develops and supplies a wide variety of new materials required for the development of high-tech functional products through continuous R&D. The division is contributing to high value creation for customers by constantly developing various differentiated products, such as m2, a microfiber which was recognized by the government of Korea as one of the world’s best products; aerocool, a leading cool-touch wicking yarn; askin, a cool-feeling, UV-blocking, non-see-through yarn; freshgear, which has deodorization function to sweat odor; aerolight, which is heat-generating fiber; aerosilver, an antibacterial yarn with silver elements; aerolight, hollow-core light concept yarn, sweat-absorbing, quick-drying functions; aerocool prizma, which is a multifunctional, sweat-absorbing, quick-drying yarn with an excellent dyeing function and colorfastness; and xanadu, a latent and potential crimped yarn which is highly elastic with a stable shape and durability compared to spandex. In particular, the Polyester Fiber Business Division has made special efforts to develop ecological fiber materials and launched regen®, a recycled polyester yarn made from waste PET bottles, for the first time in Korea. regen® has been GRS-certified by the Control Union, an environmental certification organization, as well as JEA certified in Japan. It has also earned an Eco-Mark.

Fabric Dyeing PU

• Garment fabric
• Workwear fabric
• Non-Garment fabric

• Spandex fabric
• Mixed fabric
• Polyester fabric

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Fabric Unit

Supplying multiple fabrics, including functional and protective wear, and cleaners
Finestar® — a comprehensive brand of cleaning products using microfiber

The Fabric Unit is equipped with an integrated production system that covers yam production, fabric weaving, dyeing and post-processing, and focuses on developing highly functional high-tech products. The unit’s main products include garment fabric, workwear fabric and non-garment fabric. The garment fabric uses a functional fiber to produce waterproof and water-permeable, ultra light, sweat-absorbing and fast-drying, ecological, cooling, light and thermal, elastic tricoat, and fire retardant materials. The workwear fabric includes highly durable and functional work suits, fire retardant materials such as aramid and modacrylic, highly durable dust-free garments worn in clean rooms, highly robust nylon and protective wear and military fabrics made of para-aramid. The fabrics for non-apparel products include Finestar®, a comprehensive lineup of cleaner fabric using microfiber. The unit manufactures and sells lens and display cleaners, clean room wipers for semiconductor and other electronics manufacturing and household cleaners. In addition, the unit develops and supplies its highly robust fabrics using the nylon high-tenacity fiber Robic™ and highly durable and protective case fabrics Hyskin™.

Dyeing Unit

Monthly capacity of 700K yards of nylon 2-Way spandex and 2.5 million yards of dyeing

Hyosung’s Dyeing Unit leads the Korean dyeing and processing industry and has the best integrated dyeing plant in Korea, which dyes 2.5 million yards of fabrics annually. In particular it can also process 700K yards of nylon 2-Way spandex monthly, which is a highly difficult process. In addition to its dyeing process for nylon 2-Way spandex, polyester 2-Way spandex, cotton union cloth, and polyester fabrics, it provides a variety of additional processing steps including buffing, sanforizing, and singeing.
**Steel & Metal Products PU Ⅰ, Ⅱ**

- **Steel & Metal Ⅰ**: Hot-rolled coils, Wire rods, Cold-rolled coils, Galvanized steel coils, Steel plate, Electrical steel, Tin plate, PPGI, Steel raw and subsidiary material, Steel processing machinery / Equipment, etc.
- **Steel & Metal Ⅱ**: Stainless hot-rolled coils, Stainless cold-rolled coils, Stainless wire rods, Steel plate, Bar steel, Section shaped steel

**Leading the steel & metal products trading field by reinforcing export and import partnerships with global customers**

As the exporter of the products manufactured by major Korean steel & metal makers including POSCO, Hyundai Steel, Hyundai Hyisco, Dongbu Steel, SeAH Steel, SeAH Besteel, SeAH CSS, Dongkuk Steel, Union Steel, the Steel & Metal Products PU is cementing its export and import partnerships with customers worldwide with services provided by steel & metal professionals and enhancing mutual profitability and prosperity. The Steel & Metal Products PU handles iron and steel products such as hot rolled coils, wire rods, cold rolled coils, galvanized steel sheets, medium/thick plates, electrical sheets, stainless hot rolled/cold rolled coils, stainless wire rods, bar steel, shape steel, and special steel, iron- and steel-related raw materials and sub materials, and iron & steel material processing facilities. The skilled workers in the Steel & Metal Products PU will make sincere efforts for increases in mutual benefits and prosperity by strengthening export/import partner relationships with customers in various countries around the world through the provision of expert technical information on products and best services.

**Chemical Products PU**

- **Raw Materials for Synthetic Fibers**: TPA, PX, PET Chip, PSF
- **Plastic Resins**: PP, PE, ABS, PS, PVC, etc.
- **Fine Chemicals**: MDI, TDI, ECH, BPA, PIA, NPG, Nitric Acid, Ammonium Nitrate, etc.
- **Mining Chemicals and Concentrates**: Concentrates (Au/Pb/Zn/Cu/Sb), NaCN, Zinc Dust, and Concentrates
- **Fertilizers and Others**: AMSUL, UREA, NPK, TiO2, etc.

**Pioneering new markets with a wide range of chemical products through the global network**

Chemical Products PU makes contributions to customer satisfaction and is diversifying its product range through the global network of Hyosung. It is also committed to developing and fostering chemical products for a future growth industry. In addition to traditional chemicals such as petrochemical products, fine chemicals and agricultural chemicals, Chemical Products PU also trades ore resources such as concentrates and basic materials. By expanding the range of chemicals traded and vitalizing three-party trades, Chemical Products PU continues to aim at achieving its vision of becoming a leading chemical trading company that offers the highest level of customer satisfaction services.

**LED Business Division**

- **LED Application and energy solutions**

**Next-Generation, New Growth Engine: Leading the LED Industry Providing LED lighting-based energy solutions**

The LED Business Division exports uniquely designed high-quality LED lighting and application products for household, industrial and commercial purposes to various parts of the world, providing total solutions that are optimized for a wide range of user environments and needs. It has also contributed to augmenting Hyosung’s future value by carrying out various LED lighting-based energy solutions projects as an eco-friendly, low-carbon growth partner for customers.

**Sebitseom Business Division**

**Sebitseom is Cultural Complex of Hangang River**

We are operating to develop the world’s first waterborne architecture, Sebitseom, as a landmark in Seoul and the Hangang River. Floating Island is composed of buildings on floating bodies that can float on the water and comprises three islands, ‘gavit,’ ‘chavit,’ and ‘solvit,’ along with ‘yevit,’ which is a waterborne stage space. ‘gavit’ is occupied by a convention hall optimized for the hosting of MICE industry events such as international conferences, corporate events, parties, and wedding ceremonies, cafés where people can enjoy drinks while viewing the Hangang River, Italian restaurants and pub restaurants. ‘chavit’ is occupied by chavit cuisine, a buffet restaurant, and various facilities such as an ice cream shop, a bakery, a coffee shop and a tea salon, and a souvenir shop. ‘solvit’ operates an exhibition hall and various culture events which form a unique culture space in the Hangang River. It also has facilities for water-related leisure activities that people can enjoy while viewing the river, such as yachts and Tubesters, offering additional entertainments for tourists who visit Sebitseom. The Sebitseom Business Division is making efforts to make the island become a landmark that represents Seoul.
Reducing customers’ logistics costs and enhancing productivity

Hyosung Transworld Co., Ltd. contributes to logistics cost saving and productivity improvement of customers by providing stable and effective logistics control for all types of freight such as bulk, plant equipment and project freight as well as containers. We are accelerating continuous management innovation and service development to raise customer value and satisfy customer requirements by providing the optimal logistics consulting on the basis of knowhow accumulated through more than 20 year experience and knowledge in logistics. As a part of this effort, we acquired in 2016 the AEO(outstanding company for integrated certification) certification in the area of freight transportation brokerage from the Korea Customs Service and, thus, our safety was acknowledged. Hyosung Transworld Co., Ltd. raises customer value in many places of the Globe on the basis of solid logistics network with about 120 partners in 42 countries. We promise to always provide the highest level integrated logistics services for customers.
In addition to the power transmission and distribution equipment business, Hyosung is focusing on and expanding the IT-based power automation business (such as condition monitoring and preventive diagnosis systems) and the smart grid business.

Hyosung is a leading green technology provider that supplies power systems and premium efficiency motors for the new, environmentally-friendly energy production systems, including wind power turbines.

Hyosung has developed a ternary system composite by mixing cement with blast furnace slag (a byproduct from steelworks) and fly ash (a byproduct from thermal power plants) to reduce the consumption of the raw material—cement. In addition, Hyosung is striving constantly to develop more eco-friendly materials.
Hyosung Heavy Industries Corporation

Future electrical grid and eco-friendly construction lead green growth

Hyosung Heavy Industries is in possession of the world’s best technology in heavy electric equipment, the core of industrial energy. In addition to electric equipment such as transformers and circuit breakers, its motors, generators, gears and industrial pumps receive high regard in the industry, and the company is developing the core technologies necessary for establishing future electrical grids such as energy storage system (ESS), STATCOM and smart grids. Furthermore, the company is actively participating in various construction projects such as housing, business and commercial, civil and environmental, and SOC projects based on its rich history and the trust it has gained.
Power Systems PU

- Transformers (HV Power Transformer, Oil-immersed Distribution Transformer, Cast Resin Transformer, Shunt Reactor, Special Transformer)
- Switchgears (Gas Insulated Switchgear, MV/LV Switchgear, Motor Control Center)
- Intelligent Electronic Devices (Digital Meter, Digital Relay, Data Communication unit)
- IT Solutions (Distributed Control Systems, Substation Automation System, Electrical Equipment Control & Monitoring System)
- Preventive Diagnostic System (PDS)
- Energy Storage System (ESS)
- STATCOM / SVC
- EPC Turn-key Solution (AIS / GIS Substation, Photovoltaic Power Plant)

Supplier of 70% of the core products required in power supply in Korea
Korea’s first, world’s sixth in developing 765kV-class ultra-high voltage transformers in 1992
World’s first developer of 800kV class double-break gas-insulated switchgear (GIS) in 1999
Hyosung Heavy Industries has been leading the power transmission and distribution industry in Korea for the past 50 years with its main products of transformers, switchgears and substation solutions. Based on years of know-how in the local market, it has successfully expanded its business to markets across Europe, the Americas, and Central and East Asia, gaining recognition for its high standards of quality and safety. With its industry-leading technologies, the Power Systems Performance Unit offers a range of key products including transformers, switchgears and provides comprehensive engineering and solutions with its expertise in power systems, i.e., engineering, design, manufacturing, installation, and testing, and maintenance service in power transmission, distribution and generation. To provide the best quality and service, Hyosung implements rigorous quality assurance policies and meets the ISO 9001 requirements. Hyosung is reinforcing its power condition monitoring and preventive diagnosis system, and IT-based power automation. To meet the global demand, the Power Systems Performance Unit is also strengthening global operations via Nantong Hyosung Transformer (established in China, 2006) and Hyosung T&D India Pvt. Ltd. (established in India, 2015).

Industrial Machinery PU

- Motors
- Gear units
- Generators
- Chemical process equipment
- Generators and gearboxes for wind turbine system

Korea’s No.1 electric motor manufacturer
System engineering business through a wide range of industrial product lineups
The Industrial Machinery Performance Unit is a professional manufacturer of electric motors, generators, chemical process equipment and gear units. It provides optimized, comprehensive solutions to meet the diverse and extensive requirements of its customers, ensures consistent product innovation, and enhances its reliability and efficiency, leading to record cost reductions. In the electric motor sector, meeting KS, IEC, NEMA, and GOST standards with the world as its stage, it has manufacturing facilities to produce more than 40 thousand units of electric motors per month, such as small and medium-sized low-voltage motors, mega-sized high-voltage motors, super-premium efficient motors, military motors, next-generation explosion-proof motors, and permanent magnet motors, which are optimized for various purposes and places. As far as generators are concerned, it provides key generating systems such as middle- and high-speed industrial generation equipment, marine generators, and wind power generators for the next-generation renewable energy sources. It also manufactures general industrial gears, oil rig elevator gears, pulverizer gears, and wind generator gears that must be highly reliable. In the industrial machinery field, it exports towers (columns), reactors, pressurized containers, heat exchangers, and other chemical process equipment that are used in petrochemical, oil, and gas plant processes, all of which are recognized for their technical excellence and quality. It always values its customers’ visions and strictly adheres to applicable international and industrial standards. Hyosung Heavy Industries’ high-quality products are widely used in industries such as steel and metal products, petrochemical, cement, wind generation, hydroelectric power generation, thermal generation, ocean power generation, nuclear power, shipbuilding, mining, and defense.
Wind Energy Business Division

- Wind turbine (5MW / 2MW / 750kW)

For a national project, Hyosung developed a 5MW offshore wind power generation system acquired international certification in 2015

Korea’s first developer of 750kW and 2MW-class wind power generation systems

As a leader of Korea’s wind power industry, the Wind Energy Business Division succeeded in the development and commercialization of the geared-type 750kW wind power turbine. For the first time in Korea, the group was internationally certified by DEWI-OCC, the German wind power generator certifier, for the 750kW and 2MW-class geared-type wind generation systems. Since 2011, Hyosung have started commercial sales of 2MW models and have signed contracts to supply total 35MW of onshore wind turbine to Jeju Island, Gangwon Province (Taebaek and Pyeongchang), and successfully performed EPC service as well. Hyosung is currently developing 100MW onshore windfarm projects in Gangwon and Gyeongsang provinces. In addition, we are targeting to supply our 5MW turbines to Jeolla province and Jeju island offshore windfarm project which will contribute to localization of offshore wind power equipment and strengthening national competitiveness.

Construction PU

- Housing (Apartments, Residential and commercial buildings, Villas, Terrace houses)
- Building (Business, Commercial facilities, Leisure facilities)
- Civil Engineering (Roads, Railways, Site development, Golf courses)
- Industrial (Plant facilities, Power generation facilities, Electric power facilities)

The first company in Korea to introduce villa-type residences

As the first Construction PU that developed a new concept of housing culture by introducing villa type residential buildings in Korea in the 1970s, it is working hard to give customers a surprise beyond customer satisfaction with its differentiated technical competence and construction capability in the residential, construction and industrial sectors. It is creating spaces where nature and technology are in harmony while strictly following all applicable regulations and requirements for the sustainable coexistence of the environment and technology. Construction PU’s representative brand ‘Harrington’ has presented a combined BI with Chinhung International, Inc. (an affiliated company) since 2013.
HYOSUNG GOODSPRINGS Inc.

- Pumps for power plants
- Pumps for petrochemical & refinery plants
- Pumps for buildings industrial uses
- Pumps for RO plant
- Pumps for marine & offshore
- Construction and provision of RO plant

Korea’s No.1 pump manufacturer
Korea’s No.1 RO desalination system solution provider

HYOSUNG GOODSPRINGS Inc. Korea’s largest pump and seawater desalination plant equipment supplier, produces pumps for a wide variety of applications for thermoelectric power plants and combined cycle power plants as well as nuclear plants that put safety first, petrochemical plants that process petroleum, chemicals and gases, shipbuilding, commercial and residential, general, and industrial plants and desalination plants. To develop independent technologies, HYOSUNG GOODSPRINGS Inc. has been concentrating its efforts on developing, producing and supplying large high-pressure pumps for power plants, safety pumps for nuclear power plants, a full series of pumps for petrochemical plants defined by the American Petroleum Institute (API), and high-pressure pumps for seawater desalination plants. Furthermore, the company has verified its quality reliability and safety by acquiring KEPIc certification, which allows pumps with nuclear power plant level safety, for the first time in Korea as well as “N” and “NPT” certifications from ASME, which are only acquired by globally renowned pump companies. In the seawater desalination field, the company has developed a containerized RO system that is exported overseas to plants in countries such as Chile, and it has also been designated as the leading developer in a government-driven recyclable seawater desalination plant supervision company for the development, construction and operation of Korea’s first seawater desalination plant for power plants. The company is aggressively expanding in the Korean market as well as overseas markets, and is offering customers reliable, high-quality solutions that offer a full one-stop process covering everything from ordering to designing, producing and A/S. HYOSUNG GOODSPRINGS Inc. will continue to endeavor in innovation and grow to be a leader in pump production and seawater desalination equipment.

Chinhung International, Inc.

- Civil engineering business (Roads and pavement, Subways and railways, Bridges and tunnels, Security facilities for site organization)
- Housing business (Apartments, Mixed-used development, Villas)
- Construction business (Buildings for commercial use, Offices, Apartment houses, Education, Welfare facilities, Facilities for special purposes)

Becoming the most reliable construction company on the strength of 50 years of know-how in building and construction
A comprehensive construction company focusing on civil engineering, construction, and residential development

Chinhung International participated in development projects in Saudi Arabia, Kuwait, and Guam in the 1970s and won the Steel Tower Industrial Medal and the Construction Tower Award in recognition of its 1 billion dollars’ export revenues. The company has been part of various civil engineering projects for building national infrastructure such as roads and bridges as well as construction projects that bring life to urban areas and residential development that enhances the quality of life. With its specialized residential products, Chinhung International is providing the best residential conditions for customers. As the leader in changing the construction industry’s culture, it has selected ‘Quality Management’ and ‘Environmental Management’ as its business slogans.
INDUSTRIAL MATERIALS

Hyosung Advanced Materials Corporation
Global Safety Textiles (GST)

THE WORLD’S ONLY MAKER
Hyosung is the world’s only manufacturer operating an integrated supply system for tire reinforcements producing and providing all core materials - tire cords, steel cords and bead wires.

GLOBAL PRODUCTION SYSTEM
Having established an optimized global production system in various places, including China, Vietnam, US, and Luxemburg, Hyosung is able to provide stable supply of products and timely customer services.

EXTREME STRENGTH
Hyosung has successfully developed and commercialized ALKEX®, a dream fiber which is stronger than steel, and carbon fiber TANSOME®, which is a cutting edge material having only one-fourth the density but 10 times the strength of steel.
Hyosung Advanced Materials Corporation

We assure customer safety and satisfaction through optimized cutting-edge materials

Hyosung Advanced Materials produces high-strength industrial yarn, textiles and cord materials used in automobiles, civil engineering and construction, agriculture, military, etc. It continues to reinforce its capabilities and competitiveness by developing and commercializing products such as tire cords, seatbelt yarn and airbag fabric which are already ranked No. 1 in the global market, and new materials that can lead to sustainable growth.
**Tire & Industrial Reinforcements PU**

- Tire cord
- Steel cord
- Bead wire

Global No. 1 maker for polyester tire cords / Supplying 45% of the world’s passenger car tires

Tire & Industrial Reinforcements PU is the world’s best tire reinforcements player producing both textile and steel reinforcements to all global major tire makers. In particular, Hyosung’s polyester tire cords represent the largest market share in the world. Through long-term supply agreements with Michelin and Goodyear, it has gained recognition from global tire manufacturers for its excellence in quality. Moreover, in addition to the Ulsan Plant in Korea, Hyosung has established local production sites in many countries, including China, Vietnam, USA, and Luxembourg, which enables a stable product supply and prompt customer services. Hyosung signed a long-term supply agreement on steel cords with Michelin and Goodyear, successfully building a stable sales platform. In addition to the Gyeongju Plant in Korea, Hyosung expanded its overseas production facilities in China and Vietnam. Tire & Industrial Reinforcements PU is consolidating its position as a global tire reinforcements manufacturer through expanding overseas steel cords and bead wire production facilities in 2018.

**Technical Yarn PU**

- PET yarn for seat belts
- NY 66 and PET yarn for airbag
- NY 66 and PET yarn for sewing thread
- PET yarn for broad woven coated fabric
- PET yarn for conveyor belts, rubber hoses, power transmission belts
- PET yarn for sling belt and strap

No. 1 global market share for seatbelt yarn / No. 1 market share for technical yarn in Korea

Technical Yarn PU, which enjoys the biggest share in the world’s automotive seatbelt yarn market and in Korea’s technical yarn market, supplies a variety of optimized yarns used in various industrial fields such as automotive, sewing and various industrial applications. In particular, the unit developed Korea’s first automotive airbag yarns made of polyester material, which has a high market growth potential, and is supplying them to the world’s major airbag fabric makers. In an effort to provide its customers with new value propositions and growth engines, it is striving to develop and launch new products. It is also gradually expanding its local sales and supply structure to provide differentiated services by building yarn manufacturing plants in China and Vietnam.

**Interior PU**

- Automotive carpets : Floor carpet, Option mat
- Commercial carpets : Swan roll carpets, Swan tile carpets, Swan mats
- BCF yarn for carpet : Nylon, PET, PP

No. 1 market share in the Korean roll and tile carpet market

Asia’s only carpet maker with its own production facilities from yarn to finished products

Interior PU has maintained its prominent market position in both the commercial and automotive carpet in Korea. It is also Asia’s only carpet maker with its own fully integrated facilities from yarn to finished products. Among others, Swan Tile Carpet—one of our major products—is leading the commercial market with its unparalleled quality, which has been proven by eco-label certifications (Korea and United States) and the Korea Industrial Standards (KS) certification. Furthermore, Interior PU meets customer needs promptly, as in the case of R&D for square hollow nylon yarn that is highly contaminant-resistant and wear-resistant. As for the automotive carpet, it has offered differentiated, high-end products with a continuous product upgrade and the enhancement of noise, vibration and harshness (NVH) quality, and has acquired ISO 9001, ISO 14001, and ISO/TS 16949 certifications, based on its complete quality control system. Especially with the development of high-quality polyester tufted carpet for automobiles, which is the first production of its kind in the world, Hyosung has been able to expand its business beyond Korea towards overseas carpet markets, including the U.S. and China, and it continues to accelerate its endeavors to carve out a robust market presence abroad.
Aramid Business Division

ALKEX®
• Aramid yarn for bulletproof helmets
• Aramid yarn for optical cables and ropes
• Aramid yarn for MRG (Hose and belt reinforcements and tire reinforcements)
• Aramid yarn for civil construction reinforcements
• Aramid yarn for staple (Protective clothing and gloves)
• Aramid yarn for composite

Successful commercialization of Aramid fibers, aiming to advance as a solution provider
The stronger-than-steel dream fiber ALKEX®, developed by Hyosung with its proprietary technologies, helps customers grow their business and enhance their competitiveness. Boasting five times the strength of steel and fire-retardant quality without the use of a flame retardant, the high-functional super fiber ALKEX® is used as the core material for bulletproof vests, helmets, and vehicles, and is applied for automobile and industrial purposes. Recently, the product has been enjoying the ever-increasing demand as an effective alternative to asbestos previously used to manufacture auto brake pads and linings. To meet such an increase in demand, the division plans to increase its production capacity to 5,000 ton/year by 2021. The Aramid Business Division is committed to satisfying the needs of its customers with a wide range of products (high tenacity yarn, high modulus yarn and staple fiber) as well as differentiated products (fine denier yarn, adhesion activated yarn and hybrid tire cord yarn).

Carbon Business Division

TANSOME®
• Industrial applications: Pressure vessels, Construction, Automotive parts, Wind blades
• Aerospace applications: Primary & Secondary structures, Interiors, Brake discs
• Sports · Leisure applications: Golf shaft, Fishing rods, Premium bikes, Rackets, Premium boat

The first commercial manufacturer of high performance grade carbon fibers in Korea
Carbon fiber is getting more attention as a core material for weight reduction due to the growing interest in energy efficiency around the world. Consisting of more than 92% of carbon, carbon fiber is a cutting-edge material which is 10 times stronger than steel, while its density is only a quarter that of steel. Korea’s first high-performance grade carbon fiber, TANSOME®, is available in standard modulus grade (tensile strength of 5.5 GPa and tensile modulus above 250 GPa) and intermediate modulus grade (tensile strength of 5.5 GPa and tensile modulus above 290 GPa). These fiber types account for over 70% of the total worldwide market demand, and are widely used as the core grade product lines in various industries, including aerospace, high performance industry and sports/leisure. To satisfy the rapid worldwide growth in demand for carbon fiber, which is more than 12% annually, the current annual production capacity of 2,000 tons will continuously be expanded and the company plans to become a top-tier player in the carbon fiber production by 2020 are in place.
Global No. 1 airbag fabric maker

Global Safety Textile (GST), which produces flat fabric, cushion and one piece woven (OPW) products, is the world’s largest airbag fabric maker with a market share of 22% in the global OPW market, and it achieved this through close relationships with major automotive parts companies such as Autoliv, ZF and JSS. GST delivers the world’s best quality supported by its technical advantage in hi-tech weaving and cutting processes, and patents in the OPW process. In addition, GST covers the total value chain of airbag and cushion manufacturing—warping, weaving, coating, cutting, sewing, and folding, and is able to meet customers’ needs with a full lineup of products. With its head office in Maulburg, Germany, GST has 10 production plants in Germany, Romania, Poland, China, USA, Mexico, and South Africa. In addition, GST Germany also has R&D centers in order to develop high value-added products constantly. Through this efficient global network and R&D activities, GST is able to maximize customer satisfaction.

Global Safety Textiles (GST)

- Airbag flat fabric
  (Coated / Uncoated / High-con)
- Airbag cushion
- Airbag OPW
  (Coated, Laminated, X-tether)
CHEMICALS

Hyosung Chemical Corporation

HIGH PURITY PROPYLENE
By supplying itself with propylene, the main material for polypropylene production, from the propane dehydrogenation (DH) process, Hyosung has successfully secured a stable supply of high purity propylene, covering the entire production processes ranging from raw materials to the finished products.

FILM MARKET EXPANSION
TAC film is a cutting-edge advanced material, which Hyosung developed with its self technology and commercialized for the first time in Korea. It is widely used in LCDs for TVs, computer monitors, laptops, cell phones and other electronic products. Hyosung is taking further steps by developing new films based on TAC film technology and broadening its product portfolio to include a variety of optical films.

THE NEW MATERIAL THAT WILL LEAD THE PARTS INDUSTRY
Polyketone (POKETONE™) is a next-generation engineering plastic successfully commercialized by Hyosung Chemical for the first time in the world, and it is an eco-friendly polymer material produced by using the air pollutant CO as a raw material.
The chemical material technology of Hyosung always supports convenient daily lives

Hyosung Chemical produces TPA that is exported to Asia, Europe, and the Middle East, and a wide range of chemical products such as various types of films and fluorine gas, as well as polypropylene (PP) with the highest market share in Korea; polyketone successfully commercialized for the first time in the world, is a new polymer material that will lead the global parts industry as a core material with its superior physical properties and competitive edge.
PP/DH PU

• PP (Polypropylene)

Internationally competitive polypropylene resin TOPILENE® / Global No.1 - PP-R pipe grade
TOPILENE® is manufactured and sold by Hyosung Chemical it represents PP, which is the most widely used among the five major general-use resins. TOPILENE® is manufactured through Japan’s MITSUI CHEMICAL HYPOL process and US’s DOW UNIPOL process. TOPILENE® has gained recognition for its high quality in a range of products for special purposes as well as general-use. The random copolymer products for pipes are exported widely as one of the world’s best products. To secure a stable supply of the main material for polypropylene production, Hyosung supplies itself with high purity propylene from the propane dehydrogenation (DH) process where it has adapted cutting edge technology methods. From raw materials to the finished products, it has successfully established vertical integration of its supply chain.

Film PU

• Nylon film (Food packaging, Medicine, Secondary cells)
• Polyester film (Packaging, Optics, and Industrial)

Independent manufacturing system from polymerization of raw materials to production
Korea’s largest supplier of nylon films / Enhance the foundation for growth in polyester film by entering into electronic materials and high value-added films
The Film PU began producing nylon films in 1996 and polyester films in 1997 based on domestic know-how and world-class expertise in nylon and polyester fiber business. The unit is independently developing nylon and polyester copolymers, which are materials for film products. In 2004, the unit set up a nylon film plant based on uni-axially drawn film production that delivers the largest capacity in Korea. In addition, the unit has set up optical and industrial polyester film production facilities in its Yongyeon Plant in Ulsan, and has already started mass production and sales. The unit’s efforts and research resulted in ISO 9001 certification in 2000 and ISO 14001 certification in 2008, ensuring that the unit has the biggest market share in the Korean nylon film market through excellent quality and stable supply. The unit’s polyester film sector produces a variety of industrial films including optical films used for FPD LCD production, solar cell films, motor insulator films, and processing to secure competitive edge in the electronic film industry.

TPA PU

• TPA (Purified Terephthalic Acid)

The unit produces the highest-quality, purified TPA with advanced chemical technologies and experience
The TPA PU produces and sells 420K M/T of high-purity TPA as an element of highly functional polyester textile, tire cords, PET bottles, polyester films, and other industrial and materials for daily use. Based on its chemical expertise and experience, Hyosung produces the highest-quality and stable TPA through advanced methods and equipment that enhances the competitiveness of polyester-related manufacturers throughout Asia and Europe.
Neochem PU

- NF3 (Nitrogen Trifluoride)
- 20% F2 / N2 mixture gas

Producer of NF3 which are used to manufacture semiconductor, display, and solar products and other advanced products
Having developed high-quality Nitrogen Trifluoride (NF3 gas) used in semiconductor, display and solar industry, the Neochem PU manufactures and sales it by using professional knowhow and technical competence. The unit has consistently expanded production lines to keep pace with the growth of the semiconductor and display markets to ensure stable supply chain. The unit has promoted production of a variety of products as a special gas professional.

Optical Film PU

- TAC films

Self development and production of TAC films for polarizing plates
Current annual production capacity : a total of 110 million m², with 50 million m² for the 1st TAC Plant, and 60 million m² for the 2nd TAC Plant combined
Hyosung is producing triacetyl cellulose (TAC), which protects the PVA polarizing films used within LCD polarizing plates for TV sets, monitors, laptops, and cell phones, using self developed technology. In 2009, the Optical Film PU set up a TAC film factory for LCDs in Ulsan as the only Korean company with an annual mass production capacity of 50 million m² of TAC films. With the operation of the 2nd TAC production line completed in Oksan in 2013, the annual capacity was increased to 110 million m². And it has recently advanced into the Chinese market, which is emerging as the largest display market, and is expanding sales there. Also, as technologies progress in the electronic material industry, Hyosung is developing new films based on TAC film technology and broadening its product portfolio to include a variety of optical films.

POK Business Division

- Polyketone (POKETONETM)

The only eco-friendly engineering plastic with all polymer main chains consisting of carbon
Excellent impact resistance, abrasion resistance, chemical resistance, fuel resistance, and gas barrier properties
Polyketone, developed and successfully commercialized by Hyosung Chemical for the first time in the world, is an eco-friendly new polymer material composed of CO, which is the main culprit of air pollution, and olefin (ethylene, propylene), which is a petrochemical raw material. It has two times the impact strength of nylon, with a chemical resistance 30% higher than nylon; its abrasion resistance is also 10 times higher than polyacetal (POM) with the highest level, and its level of gas barrier properties is equal to ethylene vinyl alcohol (EVOH), which is superior to any other currently existing materials. Hyosung completed the construction of a commercial production plant in 2015 and it is aggressively expanding into the engineering plastic market, which is continuously achieving more than 5% annual growth.
Based on its advanced technologies, Hyosung is consolidating its position as a global leader across financial automation sectors, including development, manufacturing, maintenance, financial VAN and outsourcing services.

Only Hyosung has built a full lineup of cloud computing services in Korea that provides virtual servers, storage, and the network.

We provide enterprise network solutions (Wi-Fi AP) that can be applied to various areas, such as smart city and smart tourism business, based on the differentiated functions of the smart zone platform that offers wireless infrastructure management and flexible expandability.
Hyosung TNS Inc.

- Branch transformation solution
- Banknote Recycling Machine
- Cash dispenser
- Video Banking Solution
- ATM total outsourcing
- SmileEDI

Hyosung Information Systems Co., Ltd.

- Automated teller machines
- Teller cash recycler
- Multi function kiosks
- MoniManager
- MyCashZone

Korea’s No. 1 ATM market leader, exporting to more than 30 countries / No.1 in the United States and Indonesian, Russian ATM markets

Hyosung TNS, established in 1979, is aiming to be an innovative financial service automation total solution provider, and is advancing to a global financial IT leader by providing convenience and trust for users and profitability and competitiveness for clients. Having established Korea’s first computer factory in 1980 and Korea’s largest financial automation device laboratory in 1983, the company has contributed to the progress of the financial industry with its diverse solutions and advanced financial automation systems through continuous R&D and investment in technology. Hyosung TNS has been an undisputed No. 1 in the Korean ATM market. The company began exporting products in 1998 and now has the biggest share of the ATM market in the United States and Indonesia. This achievement has positioned us as a global player in over 30 countries where we export self-developed ATMs.

A comprehensive ICT service provider covering both hardware and software / Establishment of efficient ICT environment that supports successful business innovation of clients

Hyosung Information Systems Co., Ltd. which was founded in 1985 and was the very first specialized IT company in Korea to supply mainframes and disks to public and financial organizations, currently provides IT solutions and services to companies in all industries spanning from finance, manufacturing and public service to communication fields and also to nearly 1,700 SI companies. Based on its technological support capabilities, with reliability proven in the field and global service network linked with the United States, Japan and Australia, we lead the growth of clients’ business by providing major enterprise datacenter infrastructure such as storages, servers and solutions including services for business innovation such as cloud, big data and industry 4.0.
Hyosung ITX Co., Ltd.

- Contact center
- CDN (Content Delivery Network)
- SI (System Integration)
- SM (System Management)
- Display solution

Galaxia Electronics Co., Ltd.

Having Big data technology and large-scale IT Infrastructure
Provides total business solution from IT Service to Contact Center

Hyosung ITX is an IT service company that provides customer-optimized business environments. With a contact center business that strategically manages communication channels, IT service business that provides a variety of network infrastructures by designing and establishing IT systems, and display solution business that provides image equipment sales and installation services, Hyosung ITX offers the comprehensive services needed by corporate businesses. The company is combining artificial intelligence (AI), big data and IoT technologies to establish efficient, intelligent services in accordance with the trends of the Fourth Industrial Revolution and making contributions to the strengthening of customer competitiveness and creating new added value.

Professional manufacturer of LED display systems, construction landscape lighting and LED lighting equipment

Galaxia Electronics Co., Ltd. is a professional manufacturer of LED applications that develops and manufactures LED displays and LED lighting systems. The company’s main business activities involve the production of LED displays used as imaging devices, the design and installation of lighting for building landscapes and media façades, and household LED lighting. Its LED displays are earning raves in the global entertainment market for their clear, deep color implementation, first-in-history super-large 3D screen through new technology and reliable products. The company boasts unrivaled technical prowess, particularly in media façade design, a new area of visual and spatial art that transforms buildings into huge works of art after sunset, producing spectacular images. In addition, Galaxia Electronics produces a highly reliable full lineup of white LED lighting systems based on its strict quality control and development competence, and provides customized lighting solutions best suited to the needs of various customers through control solutions that can maximize energy reduction.
Galaxia Communications Co., Ltd.

A leading company in the comprehensive financial platform service sector of the FinTech market

As the only Korean company with its original technology for integrated electronic payment solutions, Galaxia Communications Co., Ltd. leads both the online and offline payment markets with electronic payment service, convenience store pre-payment service, mobile commerce and financial platform services, based on its advanced technology and service competitiveness. The company has built its expertise by issuing and distributing mobile department store gift cards for the first time in Korea. It has also maintained its global competitiveness by securing the No. 1 domestic market share in the convenience store pre-payment service sectors. Based on these competitive edges, Galaxia Communications is currently offering the Money Tree service—Korea’s only mobile platform through which gift cards and coupons can be freely exchanged—and growing as a comprehensive financial platform service company.

Galaxia Device Co., Ltd.

Mobile device parts-based ATM roller and Unit manufacturing

Galaxia Device Co., Ltd. is an IT parts and materials supplier of mobile phone keypads, ATM rollers and units, and special rubber for TV sets and touch screen panels. The company manufactures key components required in various OA devices and terminals such as mobile phones, PDAs, key phones and remote controllers. In particular, for design, development, mold manufacture (internalization of core processes) and quality assurance, the company is gaining international competitiveness and has also partnered with Samsung Electronics in the wireless, printer and imaging businesses for more than 30 years. In addition, it focuses its capacity on developing competitive products, including the localization of the cash sorting and guiding unit in an ATM, pick up roller, and core ATM parts F-roller and G-roller, and it also has the capacity of manufacturing competitive products, and developing and manufacturing the units and modules of various automated systems including ATM machines and check processors.
OTHER AFFILIATED COMPANIES

Hyosung Capital Co., Ltd.
Hyosung Toyota Corporation
Forza Motors Korea Corporation
A-seung Automotive Group Co., Ltd.
Shinwha Intertek Corporation

The Class Hyosung Corporation
The Premium Hyosung Co., Ltd.
Hyosung Premier Motors Corporation
Galaxia Corporation Co., Ltd.

DIFFERENTIATED, ADVANCED FINANCING TECHNIQUES
Specializing in equipment leasing and installment financing, Hyosung Capital meets customer needs, while offering differentiated, advanced financing techniques such as installment financing, project finance, corporate loans and factoring.

TOTAL SERVICE FOR GLOBAL AUTOMOBILE
Providing total services from initial consultation, purchasing, financing, after-sales service, to used car sales for customers purchasing prestige cars such as Mercedes-Benz, Toyota, Lexus, Maserati, Ferrari, Jaguar, and Land Rover.

FIRST SPORTSWEAR FOR ATHLETES
Under Armour is the world’s first functional sportswear for athletes and also the most preferred brand among athletes around the world, and it offers the most ideal conditions with innovative materials and designs.
Hyosung Capital Co., Ltd. provides financial services to individuals and companies that need equipment lease, installment financing, mortgage loan, and equity investment through a variety of financial solutions. In particular, since the merger in 2009 with Star Lease Co., using its top leader’s core capability and know-how in machinery and medical equipment leasing market, it has built up a wide range of personal financial products such as imported and domestic auto lease, installment loan for used cars and durable goods, retail financing including housing loan and stock loan. In addition, by providing various financial solutions to local small businesses for working capital loans and investment banking services, the company now has been recognized as a very competitive total credit financial company in Korean financing market. Through the hard work of its industry-leading professional man power, developing a joint venture with Hyundai Heavy Industries Co., Ltd. in China leasing market, expanding local business in domestic market, obtaining a new IT system and an industry’s highest level of customer service center, providing differentiated customer service and executing advanced risk management systems, Hyosung Capital has gained its assets of more than 2.6 trillion won in 2013. Also, in order to transfer its vision for sustainable growth into reality with the slogan ‘Total Credit Solution Provider’, the company is doing its best every moment.

As an authorized Mercedes-Benz dealer, The Class Hyosung Corporation is guided by its philosophy of being ‘The best or nothing’ (‘Das best oder nicht’). The Class Hyosung Corporation provides stable, unique services that can only come from a large company that has the trust of and investment by Mercedes-Benz. The Class Hyosung proudly presents its dedicated automobile showroom on Gangam-daero. With additional showrooms in Bundang Jeongja, Songpa, Pyeongchon, Cheonan, Cheongju, Guri, Yongin Suji and Starfield Hanam the company sells the prestigious Mercedes-Benz brand from Germany. Its service centers in Gangnam-daero, Dogok, Seocho, Songpa, Jukjeon, Pyeongchon, Cheonan and Cheongju provide differentiated premium services that ‘make Benz like Benz.’ It also operates a showroom for StarClass, Mercedes-Benz certified preowned cars, in Jukjeon. A Premium Lifestyle Provider that offers total service from initial consultation to purchasing, financing, and after-sales service - that’s The Class Hyosung.
The Premium Hyosung Co., Ltd. is an official dealer of Toyota Motor Korea, selling Lexus and Toyota cars in the southwestern region of Korea. Lexus provides ‘the pleasure of ownership’ following its mission ‘to make premium cars comparable only to the best in the world.’ Guided by the slogan ‘Experience Amazing,’ it is taking the lead in continuous brand value improvement and customer satisfaction. Toyota, a world-class automobile providing optimized value based on the motto of Customer First, is helping customers enjoy pleasant, rich lives. The Premium Hyosung Co., Ltd. runs Gwangju, Jeonju showrooms, general repair (GR) centers, and Gwangsan (BP) service center, the largest in the Honam region, to deliver high-class, differentiated services to its customers through its one-stop total service.

Hyosung Premier Motors Corporation is the official dealer for Jaguar and Land Rover in Busan, Ulsan, Pohang and Suncheon area. Founded in 2016, Hyosung Premier Motors Corporation provides "British luxury" values to customers through its differentiated services based on trust, which is possible with its showroom and service center equipped with the newest facilities.

Forza Motors Korea Corporation is the official importer of Ferrari and Maserati vehicles in Korea. Since its foundation in November 2007, FMK has achieved continuous growth through its endeavors to lead the Korean automotive industry based on its deep understanding of and experience with high-end brands. FMK is engaged in a wide range of activities, including the establishment of infrastructure for various high quality services, differentiated VVIP marketing activities and customer service programs. By implementing culture marketing activities that embody history of these luxury car brands, the craftsmanship, the cutting-edge technologies accumulated based on racing DNA, and Italian sensitivity, FMK promises to offer true Italian luxury brand value and experiences to Korean customers.
A-seung Automotive Group Co., Ltd.

A-seung Automotive Group Co., Ltd. is the sole importer in Korea for world renown tuning brands such as Brabus, ABT, Tech Art, and AC Schnitzer delivering both complete cars and tuning parts to the Korean market. A-seung is pioneering the tuning culture in Korea through the "one-stop" showroom and service center established in Banpo, Seoul where customers can directly experience world-class high performance vehicles.

Galaxia Corporation Co., Ltd.

Galaxia Corporation is the official distributor of the American sports performance clothing brand Under Armour in Korea. By focusing on sports marketing targeting athletes befitting Under Armour’s brand mission, “To Make All Athletes Better,” it has now become the most popular brand among sports enthusiasts who like sports and are also good at them and athletes alike in Korea. Starting with the opening of a direct-managed store in Cheongdam in 2011, it is currently operating fifteen direct-managed stores, sixty department stores, and three outlet stores, and looking to continuously expand its distribution channels.

Shinwha Intertek Corporation

Market leader in LCD TV BLU optical films and functional tape

Shinwha Intertek, the world’s No. 1 company in optical films, began its display material business in 1983 with the first mass-produced CRT TV tape, and with the start of LCD TV BLU (Back Light Unit) optical film business in 2004, the company began to grow into a display material specialist. At present, it is regarded as the world’s leading LCD BLU optical film maker, supplying film to TV and LCD panel makers throughout the world including Samsung Electronics and LG Electronics in Korea, Taiwanese LCD panel makers, Japanese SET makers, six major Chinese SET makers, and Vestel in Europe. Shinwha Intertek also excels in launching various products in the optical film field with its high level of technology, and it is also solidifying its position as the leader in technological trends with customer-tailored research and development. Shinwha Intertek has quickly adapted to market and customer changes by expanding its global supply capacity and technology localization solutions with four overseas plants while continuously developing innovative and advanced new products to meet its customers’ needs. Furthermore, it began to supply high-performing film/tape solutions for OLED as well as LCD film to Samsung Electronics starting in February 2014 and expanded its business portfolio, and the company is now preparing for new growth with next-generation products such as high color reproduction film, flexible OLED film and OCA.
RESEARCH & DEVELOPMENT
Technology makes dreams come true, Hyosung’s technology opens up a new world

Since Hyosung established Korea’s first private R&D center affiliated with a corporation in 1971, the company has developed five of the world’s best products and many other world-class products and brands in textiles, industrial materials, chemicals, power & industrial systems, and information & communication fields, wielding a profound effect on the lives of people. Globally competitive technical competence, experience in and passion for R&D, and an unquenchable thirst for challenges will enable Hyosung to open up a new world of technology with the spirit of a pioneer.
Established as Korea’s first R&D Center affiliated with a corporation in 1971, Hyosung R&DB Labs has expanded its research scope to raw materials and products of chemical, and new materials based on R&D capacities in synthetic fiber research, the driving force behind Korea’s industrialization. Hyosung’s ‘Central laboratory’ and ‘Production Technology Center’ have been integrated to ‘Hyosung R&DB Labs’ for a greater synergy in September 2006. Hyosung reorganized its structure into five major research groups based on 10 core basic technologies, in order to create new business opportunities in 2011. In addition to research technologies for future business areas, which are going to provide the basis for future growth, Hyosung R&DB Labs are developing new products and processes and help them widely utilized as rapidly as possible.
Research Areas

- Textile research group (New industrial textile, Functional apparel textile)
- Polymerism research group (Engineering plastics, Polymers, and catalysts)
- Film research group (Optical films and industrial films)
- Functional materials research group (Carbon fiber and compound materials, Membranes)
- Electronics materials research group (LED materials and nano materials)

Research Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Developed</th>
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<tbody>
<tr>
<td>2017</td>
<td>Developed recycled flame retardant PET fiber, dope dyed PET fiber for automotive application, high impact strength &amp; transparent PP grade, acquired certification of a new environmental technology for pressurized-type hollow fiber membrane, Developed green dope dyed NY fiber with high tenacity, POK membrane module manufacturing technique, NY/PET conjugated fiber with melt-entrapped effect, PK Grade for pipe fitting parts, PK wear-resistant gear grade, PET film for LCD multi-layer sheet</td>
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<tr>
<td>2016</td>
<td>PET White dope dyed fiber, Developed highest LTHS (long term hydrostatic strength) PPR material, Developed CD (conjugated conduit) grade for cold weather application, Developed high elongational spandex, Developed POK grade for industrial pneumatic tube, Acquired KIWA P106 certification for AMI hollow fiber membrane</td>
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<tr>
<td>2015</td>
<td>Developed deodorant PET fiber, 3H normal anti-glare film, anti-ballistic aramid solution, high flexibility &amp; high impact strength Polyketone compound, large tow carbon fiber, YAG and LuAG LED phosphors, heat generating fiber, high tenacity PET hollow fiber</td>
</tr>
<tr>
<td>2014</td>
<td>Developed specialty conjugated yarn (dope dyed, DC PCD), Developed dope dyed Robic, Medical PP grade for high speed ISBM process, Developed high strength flame retardant Polyketone compound, Developed carbon fiber for pressure vessel, Development of high temperature filtration process using POK membrane</td>
</tr>
<tr>
<td>2013</td>
<td>Developed solvent-free spandex, heat storage fiber, PET water repellent yarn, NY66 air-textured yarn (ATY), GF-PPR, grade for extrusion coating, the world's first successfully developed and commercialized new material polyketone(POK), retardation film for VA mode, ultra-wide TAC film, PET film development for LCD light diffusers, transparent conductive film for touch screen panels, high-tenacity intermediate modulus carbon fiber, and acquired certification for pressurized-type hollow fiber membrane module</td>
</tr>
<tr>
<td>2012</td>
<td>Developed heavy-denier spandex yarn for diaper OETO, health-care far-infrared emitting fiber, rayon-like PET for UHPT, seat belt yarn for high-quality dyeing, aramid fine denier yarn, high gloss &amp; high stiffness PP, TAC films for 3D FPR, nylon films for secondary-cell pouches, low-haze anti-glare film for TV's, high heatresistant prepreg, intermediate-diameter CNT, and acquired certification for a new environmental technology process for submerged-type hollow fiber membrane</td>
</tr>
<tr>
<td>2011</td>
<td>Developed protective film technology for eco-friendly polarizing plates, antireflective films for TV sets, high modulus carbon fibers, high heat resistance and high elongation spandex, highly functional PET multi-tubular yarns, and ultra-low shrinkage yarns for broad woven fabrics</td>
</tr>
<tr>
<td>2010</td>
<td>Developed highly chlorine-resistant spandex, highly functional nylon shaped yarns (Aqua-X), highly sensitive nylon shaped yarns (Rexy), high value-added electronic material with PP grade, and laptop thin films</td>
</tr>
<tr>
<td>2009</td>
<td>Developed highly colorful sportswear PET yarns (Prizma), transparent PP grade for LCD protective films, high-density catalysts for propane dehydration, anisotropic conductive films (ACF), normal grade for small LCDs and heat-resistant and detaching NY films</td>
</tr>
<tr>
<td>2008</td>
<td>Developed thermo-keeping polyester fiber (Aerowarm), recycled polyester long fibers (Regen), para-aramid fibers, solution-dyed yarns for ARS, 300ml vending machine water bottles, and 200ml 43g light spring water bottles</td>
</tr>
<tr>
<td>2007</td>
<td>Developed anisotropic conductive films (ACF), flame-retardant Prizma yarns, ultra-high-strength PET yarns for ARS, and ILC PET films for windows</td>
</tr>
<tr>
<td>2006</td>
<td>Developed polyester Askin yarns, polyester low-shrinkage yarns, polyester conductive yarns, water-repellent yarns for C&amp;L fabric, and nylon bonding yarns</td>
</tr>
<tr>
<td>2005</td>
<td>Developed high-purity fluorne gas, polyester latent and potential cramped yarns (Xanadu S5), industrial polyester inflammable yarns, alkali-resistant spandex, and solution-dyed spandex</td>
</tr>
<tr>
<td>2004</td>
<td>Developed ‘Micron Nano Magic Silver’, a silver nano fiber, PVA fiber, high tenacity PET/PET multi-layer navy yarns, micro-polyester process yarns, and polypropylene polymer catalysts</td>
</tr>
<tr>
<td>2003</td>
<td>Developed PEN tire cords, Lyocell tire cords, Zn-free Spandex, medical PP chips, and multi-layer PET beer bottles</td>
</tr>
<tr>
<td>2002</td>
<td>Developed fluorescent spandex, heat-resistant spandex, chlorine-resistant spandex, antibacterial nylon textile, polyester films, and nano compound films</td>
</tr>
<tr>
<td>2001</td>
<td>Developed polyester ultrathin fibers (0.2 Denier), PTT BCF carpets, and nylon film resins</td>
</tr>
<tr>
<td>2000</td>
<td>Developed sheath-core nylon luminous yarns, DH catalysts, HIPP, and butene random PP</td>
</tr>
<tr>
<td>1999</td>
<td>Developed polyester ultra-fine fiber, ultraviolet nylon yarns</td>
</tr>
<tr>
<td>1998</td>
<td>Developed HTS special yarns, bottle CoPEN resins, and water-soluble Chitosan</td>
</tr>
<tr>
<td>1996</td>
<td>Developed airbag yarns and synthetic yarns</td>
</tr>
<tr>
<td>1994</td>
<td>Developed antibacterial, anti-odor carpets, hollow yarn film filter for water Purifiers</td>
</tr>
<tr>
<td>1993</td>
<td>Developed nylon hollow yarns, wastewater treating microorganisms ‘PREMCY’</td>
</tr>
<tr>
<td>1992</td>
<td>Developed nylon ultra-fine yarns, dry Spandex</td>
</tr>
<tr>
<td>1989</td>
<td>Developed Full-Dull polyester fiber</td>
</tr>
<tr>
<td>1987</td>
<td>Developed nylon 66 resins</td>
</tr>
<tr>
<td>1986</td>
<td>Developed polyester hollow yarns</td>
</tr>
<tr>
<td>1984</td>
<td>Developed PP resins and epoxy resins</td>
</tr>
<tr>
<td>1983</td>
<td>Developed nylon/polyester microfiber, nylon conductive yarns, artificial suede, artificial grass</td>
</tr>
<tr>
<td>1980</td>
<td>Developed nylon 6 resins</td>
</tr>
<tr>
<td>1978</td>
<td>Developed BCF yarns for carpets</td>
</tr>
</tbody>
</table>
Hyosung has been recognized for its world-class technology in the field of high-voltage power systems as it developed Korea’s first 765kV high-voltage transformer and 800kV gas insulated switchgear. Since its establishment in 1978, Power & Industrial Systems R&D Center has taken the initiatives in technical development in the field of heavy electric machine. More recently, to respond to the new paradigm of the power industry represented by DC grid, it is spurring the development of new technologies, including ESS, STATCOM and voltage HVDC. In addition, the company strives to build and develop asset management solutions that provide systematic management services of facility assets combined with the fourth industry technology-based products service systems.
## Research Areas

- Development of Interpretation Programs for Electric Power Systems
- STATCOM (STATic synchronous COMpensator)
- ESS (Energy Storage System)
- AhMS (Asset Health Management Solution)
- Voltage Type HVDC

## Research Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>Development of integrated ESS Control Solution, Gimje Substation 48MW ESS Station for Indoor FR Commercial Operation, PV Connection type ESS (Yeongheung 7MW / 18MWh, Haenam Green 8MW / 33MWh, Samcheonpo 12.5kW / 32MWh, Totally 50.3MW / 160MWh installed)</td>
</tr>
<tr>
<td>2016</td>
<td>2MW ES PCS for KEPCO Frequency Regulation (KEPCO 3rd Project, Gimje Substation 48MW), Independent Island MG System (Gapado Island 3.25MW / 3MWh, Geochado Island 250kW / 500kWh), Outdoor Type 1MW PV PCS (UL Certification Achieved, CEC Efficiency 98%), 154kV Transformer / GIS Asset Management Solution (First in Korea), 315~400Fr. Induction motor (315Fr. 4P IE3 certificate), IE4 LS-SynRM 3.7kW</td>
</tr>
<tr>
<td>2015</td>
<td>Energy Storage System for Wind Farm Integration (First in Korea, Yeongheung, 4MW PCS &amp; 16MWh Battery), Energy Storage System for Energy Savings (Geongu, 1MW PCS &amp; 2MWh Battery), 150MW class MMC STATCOM (KEMA type test certificate), IE4 Super Premium Synchronous Reluctance Motor Line uuptless than 45kW</td>
</tr>
<tr>
<td>2014</td>
<td>Renewable energy Integrated MW-class Li-Battery Energy Storage System, 20MW class Voltage Source Converter HVDC system, 150MW class Multi-Modular type STATCOM</td>
</tr>
<tr>
<td>2013</td>
<td>Battery Energy Storage System and Micro Grid for Off-Grid island IE 4 Super Premium Synchronous Reluctance Motor</td>
</tr>
<tr>
<td>2012</td>
<td>1MW Li-Battery Energy Storage System, 250kW/500kW PV PCS, 80kW Permanent Magnetics Synchronous Motor and Drive for Electric Vehicles (EV), EV Charging System, Power transformer Partial Discharge detection Diagnostic System</td>
</tr>
<tr>
<td>2011</td>
<td>20kW-80kW PCS for Li-B Energy Storage System, Navy’s Next-Generation mid-sized torpedo propulsion motor, 50kW class EV motors (Commercially applied in HMC’s EV Model ‘RAY’), Dissolved Gas Analysis and Diagnostic System for Power Transformer, IEC 61850 based 154kV M Tr IED / 170kV GIS IED</td>
</tr>
<tr>
<td>2010</td>
<td>60kW class EV motors (applied HMC’s EV test Model ‘Blue-On’), Submarine Large-sized Propulsion Motor, 750kW-class DFIG type Wind Turbine PCS</td>
</tr>
<tr>
<td>2009</td>
<td>100MVA STATCOM</td>
</tr>
<tr>
<td>2008</td>
<td>System-connected solar inverters (3kW, 50kW, 250kW), 1kW class PEMFC home generation systems, ecological 25.8kV 25kA Dry Air-Insulated Switchgear (DAIS) (first in Korea), 245kV 40kA Motor Direct Drive Mechanism (MDDM) GIS</td>
</tr>
<tr>
<td>2007</td>
<td>154kV gas transformers, 2MW-class wind power system</td>
</tr>
<tr>
<td>2006</td>
<td>10MVA STATCOM, GIS partial discharge diagnosis system, Power transmitter class FACTS device core parts domesticized (first in Korea)</td>
</tr>
<tr>
<td>2005</td>
<td>750kW class wind power generation systems, 100kW class fuel cell PCS, 36kV 31.5kA GIS</td>
</tr>
<tr>
<td>2004</td>
<td>245kV 50kA class GIS (first in Korea), 25.8kV 25kA GIS (applicable size changed, first in Korea), 24kV 40kA 3000A GIS (first in Korea)</td>
</tr>
<tr>
<td>2003</td>
<td>362kV 50kA GIS (first in Korea), 154kV 80MVA UPFC (FACTS) pilot plant (first in Korea)</td>
</tr>
<tr>
<td>2002</td>
<td>Substation automation system, 300kV 40kA GIS</td>
</tr>
<tr>
<td>2001</td>
<td>154kV 40MVA FACTS transformers, Interpolar condenser without capacitor, 170kV gas circuit breaker</td>
</tr>
<tr>
<td>2000</td>
<td>Distribution digital protection meters</td>
</tr>
<tr>
<td>1999</td>
<td>800kV ultra-high voltage circuit breakers, 765kV transformer device preventive and diagnosis system, 200kW gas engine heatcombination systems, Package-type CNG filling systems, Nuclear power plant Q-class large-capacity motors, 362kV 63kA 8000A GIS (first in the world)</td>
</tr>
<tr>
<td>1995</td>
<td>Gas turbine co-generator, railcar towing motors</td>
</tr>
<tr>
<td>1992</td>
<td>765kV transformers (first in Korea)</td>
</tr>
<tr>
<td>1991</td>
<td>170kV 31.5kA 1200A GIS</td>
</tr>
<tr>
<td>1987</td>
<td>Amorphous transformer (first in Korea)</td>
</tr>
<tr>
<td>1984</td>
<td>154kV phase-separation transformers (3ph 154kV 386MVA)</td>
</tr>
<tr>
<td>1982</td>
<td>Nuclear power plant 345kV transformers (1ph 345kV 1187MVA/ Bank)</td>
</tr>
</tbody>
</table>
The Steel Wire Technical Center, established in 1986 for the development of steel cord and bead wire as well as their production processes, has grown into a research center specializing in steel material. Having accumulated technology and R&D competency, the Center has recently developed 'Wafer cutting wire' used in recyclable energy (solar energy) and IT (semiconductor, LED) industries. To strengthen R&D in basic technology and core competencies, the Center built a new R&D facility in 2007 followed by the establishment of an overseas technical center in our major production sites in China and Vietnam to manage the needs of global customers’ promptly and eventually to secure technology for ‘Global Excellence.’ The Center has been writing a history of achieving the highest grades of customer satisfaction. The Steel Wire Technical Center is focused on developing the world’s best technology that customers recognize through creating a stable infrastructure for R&D and securing the newest R&D facilities and skilled researchers. The Center is also investing in developing base technology for new businesses that will be future growth engines.
Research Areas

Steel processing technique development
• Heat treating technology for steel
• Plating and surface treatment
• Design & optimization of wet drawing condition
• Optimized drawing process design
• Stranding mechanism

Tire specialized development
• Eco-friendly tire reinforcements
• Hybrid tire reinforcements
• Research properties of future tires
• Development of Hyosung’s only specification

Field of application development
• Wafer cutting wire
• Ultra-fine wire development
• Special material wire development

Research Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>Development of Zinc Coated Steel Cord for Eco-Friendly Tire, Ultra-Fine Steel Wire for Diamond Coated Wire</td>
</tr>
<tr>
<td>2016</td>
<td>Development of Ultra-Fine Filament Steel Cord for LTR Carcass</td>
</tr>
<tr>
<td>2015</td>
<td>Developed the innovative cord (Hybrid Cord)</td>
</tr>
<tr>
<td>2013</td>
<td>Established China Technological Center, Developed high performance stranding machine</td>
</tr>
<tr>
<td>2012</td>
<td>Developed fine-diameter saw wire, Developed diamond wire</td>
</tr>
<tr>
<td>2011</td>
<td>Established Vietnam Technological Center designed and optimized the saw wire production process in Qingdao (China) plant</td>
</tr>
<tr>
<td>2010</td>
<td>Designed and optimized the steel cord production process in Vietnam</td>
</tr>
<tr>
<td>2009</td>
<td>Developed mono wire</td>
</tr>
<tr>
<td>2008</td>
<td>Optimization &amp; designing of the steel cord production process in Nanjing (China) plant</td>
</tr>
<tr>
<td>2007</td>
<td>Designed and optimized the saw wire production process</td>
</tr>
<tr>
<td>2006</td>
<td>Developed UT (Ultra Tensile, 4000 Mpa) steel cord</td>
</tr>
<tr>
<td>2005</td>
<td>Developed recycling process of lubricants used in wet drawing</td>
</tr>
<tr>
<td>2004</td>
<td>Optimization &amp; designing of the steel cord production process in Qingdao (China) plant</td>
</tr>
<tr>
<td>2003</td>
<td>Developed a new steel cord production process improved brass plating</td>
</tr>
<tr>
<td>1999</td>
<td>Development of NT (Normal Tensile, 2850 Mpa), HT (High tensile, 3300Mpa), ST (Super Tensile, 3650 Mpa) steel cord with good fuel efficiency</td>
</tr>
<tr>
<td>1998</td>
<td>Developed a new bead wire production process</td>
</tr>
<tr>
<td>1996</td>
<td>Developed technology that enhances the plating efficiency of brass</td>
</tr>
<tr>
<td>1987</td>
<td>Designed and optimized the tire reinforcement production process</td>
</tr>
</tbody>
</table>
As Korea’s largest financial automation device R&D Center, the center boasts independent hardware and software development technologies for creating automated devices, terminals, and core modules. Since its establishment in 1983, the Center has succeeded in implementing different countries’ currency-identifying technologies and acquired standard certifications required by EMV, EPP, CEN, and UL in the international market, thereby contributing to the advancement of financial IT technology. The goal of the center is to contribute to the safety and development of the financial service industry with the world’s best financial automation device technology.
### Research Areas

- ATM development (Mechanism / Electronics / Software)
- Mechatronics, new robotics technology development
- Element technical development (Control technology, Device technology, Circuit technique)

### Research Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>Developed a new middle and high priced ATM 'MX2800SE' to expand the retail market, Developed Kbank Multi-ATM for the domestic market, Developed WARP UX/UI of the next generation ATM S/W platform based on Omni-Channel, Developed an algorithm to detect soiled banknotes, Developed Dual CPU control technology, Developed Linux OS-based Linux ATM S/W supporting CIFS specification</td>
</tr>
<tr>
<td>2016</td>
<td>Developed standard ATM ‘MX8600S, MX5600S’ with improved security and performance, Developed an optimized branch solution ‘Mini-NBS’, Developed ‘Micro ATM’ to reduce customers TCO, Developed new high end ATM ‘MX7800 Series’, Development of ‘MoniMobile’ Retail ATM management mobile solution</td>
</tr>
<tr>
<td>2015</td>
<td>Developed Full Function New Branch Solution (ShinHan Bank Digital Kiosk) for domestic market, new ATM line up for global market (MX7800 Series), New Branch Solution with Teller Cash Recycler (MS500SE), Mobile ATM Solution (MARS)</td>
</tr>
<tr>
<td>2014</td>
<td>Developed Cash &amp; Check Recycler Machine (CCRM), Teller ATM (TCR) Line of Products (Under/High Counter Types), New ATM for Retail Banking (NH2600SE, MX5200), Bitcoin ATM, Banknote Validation Using Multispectral Imagery, Metal Detection Mechanism, Video Banking Solution</td>
</tr>
<tr>
<td>2013</td>
<td>Developed Standard Hybrid ATM, Full Function New Branch Solution (Self Service Banking, Video Banking), Halo ATM, ATM with Global BRM (MX8200CL, MX8600), ATM specified for blind people, ATM software ‘MuniPlus ZS’ for ATMs Multi-vendor usage</td>
</tr>
<tr>
<td>2012</td>
<td>Developed New Branch Solution (Self Service Banking, Video Banking), teller ATM (TCR), cash/check mixed media recycling module (BRM11), passbook issue module, banknote fitness sorting technology, OCR technology for banknote serial numbers, CEN safe series (Grade L, I, III, IV), ATM Software ‘MuniPlus’ - global security standard certification</td>
</tr>
<tr>
<td>2011</td>
<td>Developed export-type check/cash deposit integrated module (ECCM), New Branch Solution (Hybrid ATM), circulating ATM with Global BRM (8000A, 8000TA), CEN Grade III-certified in the safe security sector, trial-operated the kiosk robots for Korea Racing Authority (KRA)</td>
</tr>
<tr>
<td>2010</td>
<td>Developed Island (Bunker Type) ATM, new-generation High-End CDU, selected as pilot business operator for financial service robot business (by the Ministry of Knowledge and Economy), I-PBM (inkjet bankbook printer), and industry’s first Windows CE-based embedded system NDC application</td>
</tr>
<tr>
<td>2009</td>
<td>Developed the new-generation circulating ATM with Korea’s first BRM (Ubitus 8100), currency identification certification by European Central Bank</td>
</tr>
<tr>
<td>2008</td>
<td>Developed the export-type cash deposit module (BNA), export-type check deposit module (BCA), kiosks, and circulating coin and banknote ATM</td>
</tr>
<tr>
<td>2007</td>
<td>Developed a new type of cash and check ATM (SCDP2), export-type, financially high-performing ATM (MX 7600 series), cash scanner sensing deposit machine (CSM)</td>
</tr>
<tr>
<td>2006</td>
<td>Developed high-performing drive-up ATM for the US financial industry, New Lobby ATM for Chinese ISO market (NH 5050) and new banknote multifunctional ATM (T2 ATM)</td>
</tr>
<tr>
<td>2005</td>
<td>Developed bill payment systems for export to Mexico and automatic cash dispenser for export to China (MX 5600)</td>
</tr>
<tr>
<td>2004</td>
<td>Developed bank statement printer (A4 Size) and wall-mountable type ATM</td>
</tr>
<tr>
<td>2003</td>
<td>Developed wall-mountable-type and drive-up automatic cash dispenser and giro bill payer</td>
</tr>
<tr>
<td>2002</td>
<td>Developed high-performing automatic teller machine (T1 ATM) and automatic cash dispenser for export to the US (MB 1500)</td>
</tr>
<tr>
<td>2001</td>
<td>Developed desk-type automatic cash dispenser (NanoCash-3000)</td>
</tr>
<tr>
<td>2000</td>
<td>Developed desk automatic cash dispenser (NanoCash-2000), VAN CD</td>
</tr>
<tr>
<td>1999</td>
<td>Developed automatic cash dispenser for export to the US (MB-3000)</td>
</tr>
<tr>
<td>1998</td>
<td>Developed automatic cash dispenser for export to the US (Mini Bank)</td>
</tr>
<tr>
<td>1997</td>
<td>Developed export-type cash dispensing unit (CDU-M)</td>
</tr>
<tr>
<td>1996</td>
<td>Developed circulating automatic cash deposit and dispensing machine (RATM) and branch server (Branch Processor)</td>
</tr>
<tr>
<td>1995</td>
<td>Developed non-circulating automatic cash deposit and dispensing machine (ATM)</td>
</tr>
<tr>
<td>1994</td>
<td>Developed cash and check dispenser (CD) and bankbook printer</td>
</tr>
</tbody>
</table>
CREATING SOCIAL ECO-SYSTEM
Founding and leading in new Corporate Social Responsibility

Hyosung is actively participating in social contribution activities to share profits with the community and consequently enrich society. It endeavors to fulfill corporate social responsibility by “Creating a Social Ecosystem” (CSE), which tries to build a harmonious partnership with its stakeholders.

**HYOSUNG CSE (Creating Social Eco-system)**

Hyosung is shifting from Corporate Social Responsibility (CSR), which focuses on monetary donations, to Creating a Social Ecosystem (CSE) that leads changes in the social ecosystem. By introducing the CSE concept to traditional CSR, the company is taking the lead in establishing an effective and sustainable social model based on close collaboration among companies, citizens, and government.
ECO-CONSCIOUS MANAGEMENT

Hyosung pursues a clean environment and a healthy future

The blue sky, warm sunshine, clean water, and refreshing wind... Our life is richer and healthier with the benefits we receive from the environment. Hyosung is committed to fulfilling its social responsibility of preserving our precious environment and living up to our belief in environmental sustainability for a cleaner tomorrow.
The increasing level of pollution is continuously threatening life on Earth. Hyosung is leading the field in developing core technologies that reduce waste energy and carbon dioxide generation for a low-carbon, green growth era including high-efficiency electronic pumps, energy storage devices, H2 / CNG filler equipment, LEDs, low-temperature processed yarn, etc.

In addition, it provides environmentally friendly technologies that purify polluted environments and recycle waste resources and, thereby, contributes to revitalizing the Earth’s health and restoring clean living environments. Hyosung continues to develop environmentally friendly technologies, such as wastewater processing, methane gas recycling, environment-friendly yarn, etc.

- Energy Storage System
- Smart Grid (Intelligent Power Network System)
- Eco-Friendly Cubicle-Type Gas Insulated Switchgear (C-GIS)
- Low Heat Settable Spandex Yarn
- Premium Efficiency Motors
- High-efficiency Pump
- H2 / CNG Filling Facilities
- LED
- Wastewater Treatment Facilities
- Recycled Yarn Regen
- Environment-friendly Yarns
SHARING-BASED MANAGEMENT

Happiness doubles when shared

With the slogan "Be Together through Sharing," endeavors to fulfill social responsibilities as a corporate citizen are made with mid- and long-term strategies with a vision of becoming “a company that supports beneficiaries to explore their future on their own through education and sharing.” Hyosung’s corporate social responsibility (CSR) activities are based on three main pillars: support for the disadvantaged; culture and art sponsorships; and support for veterans and patriots. The continuous, varied efforts are not limited to national boundaries — we are reaching further out to various parts of the world as well.
Sharing-based Management

Support for the Socially Vulnerable Class

Regional Sharing
- Sharing Rice of Love
- Sharing Kimchi of Love
- Sponsorship of Mapo-gu Hope Sharing Festival
- Support for the disadvantaged in Mapo-gu
- Sharing Daily Necessity of Love (Company Relay Sponsorship)
- Sponsorship of Mapo Scholarship Foundation For Fostering the Talent

Support for Handicapped Children / Low Income Class
- Operation of Volunteer Teams designated by Hyosung Volunteer Work Group
- Sharing Side Dishes of Love
- Support for Rehabilitation Treatment and Family Healing Camp for Children with Disability
- Westart Sponsorship of Westart Movement HQ
- Support for Disadvantaged Women Employment Vitalization Program

Social Enterprise Support
- Support for Eunpyeong and Sebitseom Branches of Goodwill Store
- Support for Together Foundation’s businesses
- Support for social enterprises creating new jobs (Com-Bridge with Eden Welfare Foundation)
- Support for the “Happiness Factory” Program of the EDEN Welfare Foundation

Global Sharing
- Free Treatment Project in Vietnam (Miso Expedition Group)
- Global Meal Sharing of Love
- Joint Global Volunteering Program with the Export-Import Bank of Korea

Miscellaneous
- Volunteer work by new recruits (Sharing coal briquettes of love / Volunteer work to support senior citizens who live alone)
- Donation of sponsorship funds and blood donation cards to Korean Association for Children with Leukemia and Cancer
- Sponsorship of for the ‘Forest Conservation’ Project for Noeul Park
- Sponsorship of Red Cross
- Support for the Federation of Korean Industries daycare project
- Employee blood donation
- Donation Drive for Victims of Typhoon Chaba
- Donation Drive for Victims of the Seomun Market Fire in Daegu

Culture and Art Sponsorships
- Music Education for Handicapped Children
- Sponsorship of ACSI Youth Orchestra Music Camp
- Sponsorship of Daehangno troupes
- Support for young performance organizers’ establishment of companies
- Cultural heritage protection activities (Changdeokgung Palace preservation)
- Sponsorship of Yo Yo Ma & Silk Road Ensemble performance
- Sponsorship of Violence Prevention Musical
- Sponsorship of Korea-Japan Culture Festival
- Sponsorship of National Museum of Korea music performances

Support for Patriots and Veterans
- Sponsorship of Korean War Veterans (Houses for patriots)
- One company to one grave volunteer work (Seoul, Daejeon, Yeongcheon)
- Sponsorship of 1-company, 1-army barracks (Army 1st Corp)
- Donation of book cafés to military bases
- Sponsorship of the establishment of a memorial park for war heroes and of commemorative event (Foot of Peace)
ETHICS MANAGEMENT

Integrity and trust are our primary management principles

To ensure that we manage our business with integrity and transparency, we at Hyosung established a code of ethics that presents a wholesome standard based on which all our staff can make upright and ethically sound decisions at all times. We keep our corporate culture sound and upright and fulfill its social responsibility to play the role of a respected global corporation.
I. Compliance with Laws and Regulations

“We thoroughly comply with laws and company regulations.”
1. We respect national policies and comply with all laws and social and ethical norms.
2. We thoroughly comply with the company’s management policy and all rules and fulfill our duties and responsibilities.
3. We are committed to continuously creating jobs with the sound profit generation and fulfill our basic duties and responsibilities faithfully as members of society.

II. Respect for Customers

“The company exists to provide the values with which customers can be satisfied.”
1. We prioritize the customer’s trust.
2. We provide differentiated quality and services that can satisfy customers.
3. We make efforts to establish a culture of transparent and fair trade with customers and are committed to developing sound partnerships.

III. Respect for Shareholders

“Shareholders are the owners of the company, and the trust of shareholders is its absolute foundation.”
1. We increase the profits of shareholders and investors by improving management performance through value creation.
2. We practice reasonable and transparent management to be a trustworthy company for our shareholders and investors.
3. We respect the rights of shareholders and investors and provide information necessary for profit realization in a timely manner.

IV. Respect for Employees

“Employees are the most important asset of the company.”
1. We are committed to respecting one another and establishing a rational and sound corporate culture based on mutual trust and understanding.
2. We create a workplace where each individual can freely demonstrate his or her creativity and promote a pleasant working environment.
3. We do not discriminate against employees for reasons of educational background, place of origin, gender, age and religion.

V. Socially Responsible Management

“A company should grow in harmony with society as one of its important members.”
1. We endeavor to fulfill the duties and responsibilities expected from society and strive for co-prosperity and development with corporate social responsibility (CSR) activities.
2. We are committed to becoming an eco-friendly company and to garnering respect from society.
The company committed to customer value stands out in the global competition

Hyosung exports over 70% of its products overseas and boasts a global manufacturing system consisting of 34 production entities in 12 countries worldwide. The company will continue to strengthen its global management abilities in marketing, production technology, and service across all business areas and stay ahead in the fierce global competition.
BRIEF HISTORY

We are progressing with the spirit of a pioneer

Hyosung has played the role of a dynamic locomotive behind the Korean economy. Having been an important part of the Korean infrastructure industry, Hyosung has overcome numerous trials and difficulties and has always served as Korea’s partner during the country’s economic growth.
**Brief History**

2018
Commencement of India Spandex Plant Construction / Commencement of PP/PE Plant Construction in Ba-Ria-Vung Tau Province, Vietnam / Division into Hyosung, holding company and four business companies

2017
Built an additional tire cord plant in Vietnam, signed MOU with Vietnam to build a propane dehydrogenation plant, a PP plant, and a LPG storage facility

2016
Completed GIS plant construction in India began Quzhou NF3 plant construction in China, and completed the construction of an automotive floor carpet factory in Qingdao, China

2015
Completed Yongyeon Polyketone and DH-2 plant construction, established Jeonju Carbon Specialized Venture Training Center, established Hyosung Dong Nai Corporation, obtained Korea’s first STATCOM orders from India and Panama

2014
Supplied carbon fibers for Hyundai Motor’s future concept cars, received a $100 million order for a substation from China, and opened Jeonbuk Creative Economy Center and Sebitseom.

2013
Built an additional tire cord plant in Vietnam, signed MOU with Vietnam to build a propane dehydrogenation plant, a PP plant, and a LPG storage facility

2012
Concluded a contract for a power network in Qatar, added TAC film operations, and nominated as national project developer for offshore wind power 20M electric voltage-type HVDC

2011
Brazil Spandex plant completed, concluded a long-term steel cord supply contract with Goodyear and acquired two global plants, and acquired Global Safety Textiles (GST), a world-renowned airbag textile supplier

2010
Completed a steel cord plant in Vietnam, concluded a Spandex plant construction MOU in Brazil, concluded a business contract to set up a power network in Qatar, and developed Korea’s first high-performance carbon fiber

2009
Announced Hyosung Way, completed the aramid fiber plant, TAC film plant and merged with Star Lease, Inc., to establish Hyosung Capital, set up 2MW/750kW wind power generation systems, acquired international certification by DEWI-OCC, launched Hyosung Toyota, acquired GRS certification for ecological recycled yarns

2008
Turkey Spandex plant completed, acquired China Nantong Youfang Transformers Ltd., and acquired Chun Hung Industrial Inc.

2007
Yongyeon NF3 Plant completed, Vietnam Spandex/tire cord plant completed, PET sterilized filling facility newly constructed, solar plant #1 completed, Hyosung recorded revenues of 5 trillion won

2006
Concluded contract with Goodyear for long-term tire cord supply and acquisition of four global plants, acquired Agfa photo production facility in Germany, acquired Nantong Youfang Transformers Ltd., and Dongkuk Trading’s China Spandex plant

2005
Concluded a long-term steel cord supply contract with Michelin and acquired a plant in the United States, and completed a Nylon film plant in Jiaxing, China

2004
Spandex plant completed in Zhuhai, China, distribution transformer plant completed in Baoding, China, tire cord plant completed in Jiaxing, China, conclude contract with Northwest Power Network Corporation of China for ultra-high voltage circuit breakers and added nylon film plant to Gumi Plant II

2003
The Class Hyosung Corporation established, Hyosung Spandex (Guangdong) Co., Ltd., established, Hyosung Thin Film (Jiaxing) Co, Ltd. established

2002
Concluded a long-term tire cord supply contract with Michelin and acquired a plant in the United States, Aerocool selected as one of the world’s best products

2001
Adopted ERP, an advanced management system, China Spandex plant completed, Signed long-term PET bottle supply contract with Beijing Coca-Cola

2000
Gumi Spandex plant completed

1999
Hyosung Computer received KT Mark for ultra-high pressure gas insulating switch and polyester yarns (Aerocool)

1998
T&C, Trading, Living, and Heavy Industry Units merged into Hyosung Co., Ltd.; developed 800kV 2 Pole GIS for the first time in the world

1996
Daejeon nylon film plant completed

1995
China PET bottle plant and Daejeon tile carpet plant completed

1992
Anyang Plant started manufacturing Spandex

1990
Started Spandex business

1989
Started PP and propylene business, Hyosung Ebara established

1986
Developed a new computer model for offices, POWER-5800

1983
Developed microfiber yarns that combined nylon and polyester

1977
Hyosung Heavy Industry Changwon Plant completed

1975
Acquired Hanyoung Industry, Hanyoung Heavy Industry established

1973
Anyang Polyester and Dongyang Textile established

1972
Started exporting tire cord fabric to Southeast Asia

1971
R&D Center established

1968
Ulsan Plant completed

1966
Dongyang Nylon established

1957
Hyosung Industry established
BUSINESS RESULTS

Our innovation and thirst for challenge ensure our sustainable growth

We are committed to expanding our profitability by strengthening our existing business capacity based on ‘Value Management through Global Excellence’ and solidifying our market position through global network enhancement in the core business areas for a continuous growth. We promise to continue our creative innovation and seek new challenges to reinforce our global business competitiveness and make consistent changes and progress to maintain our image as the best global corporation.
Since its establishment, Hyosung had to overcome many difficulties but grew steadily. Gaining the capacity to raise its quality, technology, cost competitiveness, and marketing levels to global standards and exploring global markets, it is growing as one of the world’s best corporations. Moreover, we continue our growth through innovation and triumphs in new challenges.

**Business Results**

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sales</td>
<td>11,095</td>
<td>10,279</td>
</tr>
<tr>
<td>Total Assets</td>
<td>13,566</td>
<td>11,685</td>
</tr>
<tr>
<td>Operating Profit</td>
<td>682</td>
<td>876</td>
</tr>
</tbody>
</table>

(In millions of USD)
GLOBAL NETWORK

Hyosung is building a localized strategic global network

With nearly 20,000 people working in 90 business sites in 30 countries, Hyosung has been building up a global network based on localized strategies, and this has been the growth engine that has allowed Hyosung to become a global company where 70% of its profit is made from overseas businesses. Even today, Hyosung’s global network continues to march vigorously forward for a better tomorrow.
Global Network

The global competitiveness of Hyosung has been achieved by a localized strategic global network that allows the high-quality products clients demand to be supplied promptly and stably, along with excellent technologies. Since the early stages of the company’s history, Hyosung has been concentrating its efforts in establishing global production bases, and such efforts have allowed Hyosung to accurately reflect the tastes and lifestyle of local clients in its products.

Total 90 business places in 30 countries

<table>
<thead>
<tr>
<th>Region</th>
<th>Domestic</th>
<th>Overseas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>13 Plants</td>
<td>30 Manufacturing Entities</td>
</tr>
<tr>
<td>Europe &amp; Africa</td>
<td>4 R&amp;D Centers</td>
<td>21 Trading Entities</td>
</tr>
<tr>
<td>America</td>
<td>18 business places in 4 countries</td>
<td>39 Trading Offices</td>
</tr>
</tbody>
</table>
WORLD WIDE HYOSUNG MAP

AMERICA_

PITTSBURGH (USA)
HICO America Sales and Technology, Inc.

IRVING (USA)
Nautilus Hyosung America, Inc.

SOUTH HILL (USA)
GST LLC - South Hill

DECATUR (USA)
Hyosung USA, Inc. (Decatur Plant)

ENSENADA (MEXICO)
GST Automotive Safety Components International S.A. de C.V.

TORREON (MEXICO)
GST Safety Textiles Mexico S de RL de CV

SANTA CATARINA (BRAZIL)
Hyosung Brasil Industria E Comercio De Fibras Ltda.

AFRICA_

HAMMARSDALE (SOUTH AFRICA)
GST Automotive Safety South Africa (Proprietary) Limited

EUROPE_

COLMAR-BERG (LUXEMBOURG)
Hyosung Luxembourg S.A.

MILANO (ITALY)
Hyosung Europe S.R.L.

ISTANBUL (TURKEY)
Hyosung Istanbul Tekstil Ltd Sti

MAULBURG (GERMANY)
GST GmbH - Maulburg

BAD SÄCKINGEN (GERMANY)
GST GmbH - Bad Säckingen

MURG (GERMANY)
GST GmbH - Murg

SIGHISOARA (ROMANIA)
GST Automotive Safety RO S.R.L.

CZESTOCHOWA (POLAND)
GST Automotive Safety Poland Sp. z o.o.

America

18 business places in 4 countries
USA
BRAZIL
MEXICO
PANAMA

Sales (In billion KRW)

2017 889
2016 664
2015 653
ASIA

CHINA

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GST GmbH - Maarburg
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