CONTENTS

02 New Hyosung
22 Business Areas
52 Research & Development
62 Sustainability Management
84 About Hyosung
96 Business Directory
We know that new changes and advances do not come by chance alone.

A process must be in place to gather the small results of countless challenges and failures and harness them to overcome difficulties. We remember the endeavors and sacrifices of those building the energy for our future and successfully bringing about change.

At Hyosung, we are pursuing the path of challenge and exploration.
As the first Korean company to establish a corporate affiliate research institute, Hyosung has been dedicating itself to writing a new chapter in the history of numerous first technological developments. Based on this, Hyosung has started creating a new lifestyle culture throughout the world in textiles, industrial materials, chemicals, heavy industry and information and communication.
HISTORY OF ‘THE FIRST’

The history of Hyosung, a leader in key industries of Korea as well as the world for the past 50 years, is the history of technological breakthroughs achieved through an indomitable spirit overcoming countless ordeals and difficulties.

- 1971: Establishment of Korea’s first corporate affiliated research institute
- 1978: Development of Korea’s first PET Tire Cords
- 1998: Development of the world’s first 800kV GIS
History of New Challenges and Advancements

2003: Obtaining of Korea’s first ATM Quality Certification for the US financial industry
2008: Development of the world’s first yarn produced from recycled fishing nets waste
2011: Development of Korea’s first high-performance carbon fiber
2013: Commercialization of the world’s first Polyketone
New challenges bring future changes

With its global production system of core products spreading across over 111 or more locations in more than 29 countries around the world, Hyosung continues to provide differentiated products and services to satisfy the demands of customers.
Technology Leading
Future Changes

INDUSTRIAL FIBER
Global No. 1 in Seatbelt Yarn and Airbag Textiles
Hyosung Advanced Materials

NEW MATERIALS
World’s First Commercialized Polyketone Material, POKETONE™
Hyosung Chemical

ATM
No.1 in the United States and Indonesian, Russian ATM markets
Hyosung TNS
New challenges bring future changes
Hyosung is making its best efforts to develop innovative products that satisfy customer needs based on global market-leading technology and secure sustainable future growth engines.
Spandex Brand, creora®
World’s Top Tier Product Brand, aerocool®

creora®, by Hyosung TNC, currently has the No. 1 global market share in spandex with its best quality and largest production capacity in the world. It continues to maximize customer value by innovatively improving the functionality of textiles including nylon and polyester yarn, as one of the top 5 makers in the world.
INNOVATIVE
Automotive Materials, including Tire Cords, Airbag Fabric and Seatbelt Yarns
High-molecular Compound, POKETONE™ and Carbon Fiber, TANSOME®

Through optimized advanced materials, Hyosung continues to lead technological innovation in the automotive components industry. In particular, with the commercialization of the eco-friendly, high-molecular compound, "Polyketone," and the dream fabric material, "Carbon Fiber," Hyosung continues to open new chapters in the global industrial materials market,
ENERGY
Along with the development of world’s first 800kV GIS, Hyosung Heavy Industries is endeavoring to develop the core technologies required for establishing future electrical grid system such as STATCOM, Electricity Storage System (ESS), wind power generation, solar power generation and SMART Grid. Hyosung, with its heavy electric machine technology, has been preparing in advance to take the role of the leader in the new low-carbon, green-growth era.
CUSTOMER & FIELD ORIENTED MANAGEMENT

Hyosung is establishing a new management system in order to provide competitive products and services to customers around the world. With a system that better reflects the various demands of customers, Hyosung will continue to improve customer value.
Hyosung has completed its conversion into a holding company system, and restructured its departments into the affiliated companies of Hyosung TNC, Hyosung Heavy Industries, Hyosung Advanced Materials and Hyosung Chemical, which are overseen by Hyosung Corporation. The new system will increase management transparency and reinforce business expertise.

**Management System**

*Dec. 2017.*
Board of Directors approves the decision to restructure Hyosung into an affiliate system

*Apr. 2018.*
Foundation of holding company and temporary general stockholders meeting for the division

*Jun. 2018.*
Group divided into individual affiliates

*Jul. 2018.*
Modified current listing for holding company Hyosung, Hyosung TNC, Hyosung Heavy Industries, Hyosung Advanced Materials and Hyosung Chemical and relisted on stock exchange

**Textile / Trading**
- Hyosung TNC Corporation
- Hyosung Transworld Co., Ltd.

**Power & Industrial Systems / Construction**
- Hyosung Heavy Industries Corporation
- HYOSUNG GOODSPRINGS Inc.
- Chinhung International, Inc.

**Industrial Materials**
- Hyosung Advanced Materials Corporation
- Global Safety Textiles (GST)

**Chemicals**
- Hyosung Chemical Corporation

**Information & Communication**
- Hyosung TNS Inc.
- Hyosung Information Systems Co., Ltd.
- Hyosung ITX Co., Ltd.
- Galaxia Electronics Co., Ltd.
- Galaxia Communications Co., Ltd.
- Galaxia Device Co., Ltd.

**Other Affiliated Companies**
- Hyosung Capital Co., Ltd.
- The Class Hyosung Corporation
- Hyosung Toyota Corporation
- The Premium Hyosung Co., Ltd.
- Forza Motors Korea Corporation
- Hyosung Premier Motors Corporation
- A-seung Automotive Group Co., Ltd.
- Galaxia Corporation Co., Ltd.
- Shinwha Intertek Corporation
Beginning a new change for a better tomorrow

NEW HYOSUNG COMMITMENT TO EXCELLENCE

Changes in Hyosung are part of its endless quest for new technologies capable of increasing customer value, Hyosung’s history has focused on exploring a better tomorrow without fear, and Hyosung continues to add new chapters today.
Hyosung reinforces its competitiveness by concentrating its capabilities and establishing a corporate system suited to the market situation and business characteristics.

Hyosung maximizes management efficiency by defining ideal management objectives and making prompt decisions according to the circumstances of the subdivided markets.

Hyosung evaluates its management performance fairly and justly, and improves management transparency by granting autonomy and responsibility to mid and long-term business plans.

Hyosung is improving its corporate governance and managing business and investment risks more effectively to ensure business stability.

"Building a Better Life for the People based on the Best Technology and Management Capabilities"

HYOSUNG WAY is a value system to turn dreams into reality by bringing together the will and capabilities of all Hyosung members throughout the world.
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.
BUSINESS AREAS

- Textile / Trading
- Power & Industrial Systems / Construction
- Industrial Materials
- Chemicals
- Information & Communication
- Other Affiliated Companies
TEXTILE / TRADING

- Hyosung TNC Corporation
- Hyosung Transworld Co., Ltd.

GLOBAL PRODUCTION LINE
By establishing and expanding spandex production lines in Turkey, China, Vietnam, Brazil, and India, Hyosung is becoming more responsive to customer demand as well as enhancing product quality and production reliability.

ECO-FRIENDLY CERTIFICATE
Hyosung acquired GRS from Control Union (Netherland) for its eco-friendly yarn that will help save energy cost, and consume less petrochemical raw materials.

GLOBAL TRADING SERVICE
The mutual benefits of exporting and importing partners are maximized by diversifying the trade structure that explores new markets such as 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 at the center of global trading by introducing new products and exploring new markets based on the strength of its rich experience.
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® Fit²
- creora® Fresh
- creora® ActiFit

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 Seoul, Hong Kong and Shanghai. 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 competitive marketing activities under Hyosung’s win-win management, whose goal is to grow with customers. Having built local production facilities in China, Turkey, Vietnam, Brazil, and India 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. creora® Fresh, which helps neutralize causes of body odor to keep you feel fresh and comfortable and creora® ActiFit, which sustains its resilience under both the external environment like UV, acid rain and chemical elements including seawater, PH, and sunscreen for both indoor and outdoor sports. This is the reason why global business brands have consistently chosen creora®, and why it is the No. 1 market leader globally.

Nylon Polyester Fiber PU
- MIPAN regen®
- MIPAN fine & soft
- MIPAN robic
- MIPAN robic-air
- MIPAN aqua-X
- MIPAN fit
- MIPAN rexy
- MIPAN glurex

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 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 fit (far-infrared radiation yarn), MIPAN rexy (flat surfaced yarn with a shiny, metallic luster), MIPAN glurex (bonding yarn), MIPAN robic (high-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.
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 top-quality 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 for sweat odor; aerocooth, 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.

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 yarn 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 products 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, Dongbu Steel, SeAH Steel, SeAH Besteel, SeAH CSS, Dongkuk 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, PET Chip, Recycled PET, PSF, Recycled PSF
- Synthetic Resins: PP, PE, ABS, PS, PVC, etc.
- Fine Chemicals: MDI, TDI, PTMIG, ECH, BPA, Epoxy Resin, PTA, NPO, Nitric Acid, Ammonium Nitrate, etc.
- Mining Chemicals and Concentrates: Concentrates (Au/Ag/Pb/Zn/Cu/Sb), NaCN, Zinc Dust, etc.
- Others: TiO₂, Palm Oil, UCO, Adipic Acid, etc.

**International Chemical Trader Providing Ultimate Customer Service**

With more than 50 years’ experience, Chemical PU has grown as a specialized international chemical trader, based on Hyosung group’s global network and business experience. From upstream to downstream, we have diversified our product portfolio to create value by providing total solution to customers’ businesses. We also focus on human resources development to foster industry expertise, from petrochemical to mining chemical industry. We also pursue diversifying our business structure from bilateral trade to multi-lateral trade to create wider value chain, which can lead to ultimate customer satisfaction.

**LED Business Division**

- LED applications and new renewable energy solutions

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

The LED Business Division exports LED lighting and application products of high quality and with differentiated design for household, industrial and commercial purposes all over the world and provides total solutions that are optimized for a wide range of user environments and needs. It is also contributing Hyosung’s future value in its transformation into an eco-friendly, low-carbon growth partner for customers through the promotion of various LED lighting-based energy solutions and its new renewable energy business.

**Sebitseom Business Division**

**Sebitseom is Cultural Complex of Hangang River**

We are striving 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 a coffee shop and a tea salon, ‘solvit’ operates a Kids café 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 a landmark that represents Seoul.
Reducing customers’ logistics costs and enhancing productivity

Hyosung Transworld supports customers to reduce logistics cost and boost global competitiveness by providing high-quality logistics services and stable space securement on air and ocean freights, covering all cargo types including container, bulk, and plant / project materials. Hyosung Transworld has been in charge of the logistics of Hyosung’s more than 20 business sectors. Based on its over 20 years’ experience in forwarding business in a wide range of industries, Hyosung Transworld organized a 3PL (Third-Party Logistics) specialized department in 2018 and has been expanding its business areas since. To provide the optimal logistics solutions to suit each and every need of various customers, we keep moving forward through ceaseless business innovation and service developments, based on systemized VOC (Voice of Customer) and VOCC (Voice of Customer’s Customer) programs, etc. As an AEO (Authorized Economic Operator)-certified freight forwarder with 134 partners from 42 countries all over the world, Hyosung Transworld promises to enhance customer value with the very best total logistics services.
ENERGY SOLUTION PROVIDER

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.

GREEN ENERGY TECHNOLOGY

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

GREEN CONSTRUCTION

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.
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, motors, generators and gears 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 asset management. 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 long history and high 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)
- 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)

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 ultra-high voltage transformers, switchgears, middle and low voltage transformers and substations. 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 technology. With its industry-leading technologies, the Power Systems Performance Unit provides comprehensive engineering and solutions in power transmission, distribution and generation with its expertise in power systems, i.e., engineering, design, manufacturing, installation, testing, and maintenance service. Hyosung Heavy Industries is also reinforcing its new business such as energy storage system (ESS), STATCOM, HVDC and IT-based Asset Management to respond to environment changes in the power industry with the trends of the Fourth Industrial Revolution. To meet the global demand, the Power Systems Performance Unit is also strengthening global operations via Nantong Hyosung Transformer Co., Ltd. (established in China, 2006), Hyosung T&D India Pvt. Ltd. (established in India, 2015) and Hyosung HICO Ltd. (established in USA, 2019). We will provide the highest quality products and services to realize customer satisfaction and innovate in sales and management to gain a competitiveness in the local and global markets.

Industrial Machinery PU

- Motors
- Gear units
- Generators
- Chemical process equipment
- Gas Filling Station

Korea’s No.1 electric motor manufacturer
Provides optimal solution through a wide range of industrial product lineups

The Industrial Machinery Performance Unit is a professional manufacturer specializing in rotating equipment such as motors, generators, and gear unit as well as industrial machinery such as chemical equipment, gas filling station. The electric motor division succeeded in localizing the propulsion motors for defense, BLDC motors and Q-Class motors for nuclear power plants with the accumulated technology and know-how for a long time. We have developed a series of motors that satisfy all 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 low-voltage motors, high-voltage motors, super-premium efficient motors, military motors, explosion-proof motors, and permanent magnet motors, which are optimized for various purposes and places. Generators are fulfilling customer satisfaction in various domestic and overseas market through various products such as ship, steam turbine, a water turbine, wind turbine, and MG-Set. In particular, we succeeded in localizing the ‘MG-Set for control of fuel rods’, the core facility of nuclear power plants, and expanded its supply to overseas nuclear power plants. We also manufacture gear units, which are power transmission devices, to produce products that require high reliability in various industries such as general industrial, power generation, marine, and defense industries. In this field, we succeeded in localization of ship gear box, gear box for power coal grinder, and high speed gear. The industrial machinery division produces tower, column, reactor, pressure vessel, and heat exchanger, which are core equipment used in petrochemical, oil and gas plant processes. We have been recognized for its technology, quality and production capability. Based on this, we are expanding our business scope to high end medical device such as proton therapy devices.
Wind Energy Business Division

- Wind turbine (5.5MW / 2MW / 750kW)

For a national project, Hyosung developed a 5MW & 5.5MW offshore wind power generation system
Acquired international certification in 2015 & 2019
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 has started commercial sales of 2MW models and has 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. We are targeting to supply our 5.5MW turbines to 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 Company 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 full 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.

The Gas filling station business has been supplying Hydrogen / CNG filling stations and systems based on CNG compression system technology, which has participated in the government’s eco-friendly vehicle supply project since 2000. We are committed to becoming a world-class comprehensive machinery and plant engineering company that not only supplies equipment but also provides a solution optimized for customers’ operating plants. We are always with our customers’ goals, strictly adhere to international and industry standards. we are doing our best for that purpose.
Global Pump Solutions Provider
Since commencing pump business in 1962, HYOSUNG GOODSPRINGS has manufactured and provided various pumps which meet clients’ diverse needs, from oil & gas plants, power plants, general industrial plant pumps to those for high-rise and general buildings, and led global market trends. Based on extensive knowhow and expertise accumulated over a long period of time, we have provided efficient solutions and trustworthy services as a pump industry leader. As the Republic of Korea’s leading pump manufacturer, HYOSUNG GOODSPRINGS has made a big contribution to the growth and development of domestic and overseas industries through continued R&D. With highly reliable high-pressure pumps up to 400bar and advanced technologies which enable 450℃ high-temperature and -195℃ cryogenic services, we have met the strict requirements of global clients including ExxonMobil (USA) and ARAMCO (Saudi Arabia). In 1998, we obtained the Korea Electric Power Industry Code in nuclear safety-graded pumps for the first time in the Republic of Korea. Since then, we have manufactured and distributed core hard-to-make pumps to nuclear power plants. HYOSUNG GOODSPRINGS Testing Center is capable of testing high-capacity and high-pressure pumps (up to 110,000㎥/h, 400bar, 200℃). All products must pass stringent quality tests before they are actually delivered to our clients to ensure they are perfectly safe and completely reliable.

Becoming the most reliable construction company on the strength of 60 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 proclaimed ‘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 Advanced Materials Corporation 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, Mexico and the EU, Hyosung Advanced Materials Corporation is able to provide stable supply of products and timely customer services.

EXTREME STRENGTH

Hyosung Advanced Materials Corporation 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.
We assure customer safety and satisfaction through optimal 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 strengthen its capabilities and competitiveness by developing and commercializing key 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 providing both textile and steel reinforcements to all global major tire makers. In particular, Hyosung Advanced Materials Corporation'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, it has established local production sites in many countries, including China, Vietnam, USA, and Luxembourg, enabling stable product supply and prompt customer services. Hyosung Advanced Materials Corporation signed a long-term supply agreement on steel cords with Michelin and Goodyear, successfully building a stable sales platform. And it expanded its overseas production facilities in China and Vietnam. Tire & Industrial Reinforcements PU is consolidating its position as a global tire reinforcements manufacturer by 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 other industrial applications. In particular, the unit developed Korea’s first automotive airbag yarns made of polyester, 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 carpet, Swan tile carpet, Swan mat
- 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 ranging 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 ranging 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 IATF 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 Advanced Materials Corporation 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.
\section*{Aramid Business Division}

\textbf{ALKEX®}
\begin{itemize}
  \item Aramid yarn / fabric for bulletproof helmets
  \item Aramid yarn for optical cables and ropes
  \item Aramid yarn for MRG (Hose & belt reinforcements and tire reinforcements)
  \item Aramid yarn for civil construction reinforcements
  \item Aramid yarn for staple (Protective clothing and gloves)
  \item Aramid yarn for composite
\end{itemize}

Successful commercialization of Aramid fibers, aiming to become a solution provider
The stronger-than-steel dream fiber ALKEX®, developed by Hyosung Advanced Materials Corporation 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 flame retardants, the high-functional super fiber ALKEX® is used as the core material for bulletproof vests, helmets, 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).

\section*{Carbon Business Division}

\textbf{TANSOME®}
\begin{itemize}
  \item Industrial applications: Pressure vessels, Construction, Automotive parts, Wind blades
  \item Aerospace applications: Primary & Secondary structures, Interiors, Brake discs
  \item Sports - Leisure applications: Golf shaft, Fishing rods, Premium bikes, Rackets, Premium boats
\end{itemize}

Korea’s first commercial manufacturer of high performance grade carbon fibers
Carbon fiber is getting more attention as a core material for weight reduction due to 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 4,000 tons will be increased to 24,000 tons by 2028. We plan to continuously expand our capacity further becoming a global top carbon fiber player by 2025.
Global Safety Textiles (GST)

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

Global No. 1 airbag fabric maker
Global Safety Textiles (GST), which produces flat fabric, cushion and one piece woven (OPW) products, is the world’s largest airbag fabric maker in the global flat fabric market.
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 advantages in hi-tech weaving and cutting processes, and patents in the OPW process. In addition, GST covers the total production process 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.
HIGH-QUALITY POLYPROPYLENE

Hyosung Chemical operates propane dehydrogenation (DH) process to steadily supply the main ingredient, high-purity propylene. And this allows high-quality polypropylene (PP) to be supplied globally.

FILM MARKET EXPANSION

TAC film is an electronic material that Hyosung has developed in-house, the first of its kind in Korea. It is widely used in LCD panels for TVs, computer monitors, laptops, cell phones and other electronic products. Hyosung has kept pace with changing market conditions by additionally developing Acryl film, which is resistant to water and based on TAC film technology.

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

Along with TPA, which is exported to Asia, Europe, the Middle East, etc., and polypropylenes (PP) including R200P, which has the world’s largest market share, Hyosung produces various other chemical products such as films and fluorine gas. In particular, polyketone, which Hyosung successfully commercialized for the first time in the world, is a key material that will lead the global components industry due to its outstanding physical properties and competitiveness as a high-molecular, new material.
PP/DH PU
• PP (Polypropylene)

Globally 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 Mitsui Chemical Hypol Process, Grace Unipol Process, and LyondellBasell Spheripol 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 adopted cutting edge technology methods. From raw materials to the finished products, it has successfully established vertical integration of its supply chain.

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 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.

POK Business Division
• Polyketone (POKETONE™)

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.
**Neochem PU**

- N\textsubscript{2}F\textsubscript{3} (Nitrogen Trifluoride)
- 20\% F\textsubscript{2} / N\textsubscript{2} mixture gas
- Cl\textsubscript{2}, HCl Gas

**Film PU**

- BOPA Film (For Food / Medicine Packaging, Lithium ion Battery)
- Polyester Film (Packaging, Display and Industrial Use)

**Optical Film PU**

- TAC film and Acryl film

---

**Producer of N\textsubscript{2}F\textsubscript{3}, used to manufacture semiconductor, display, solar products and other advanced products**

Having developed high-quality Nitrogen Trifluoride (N\textsubscript{2}F\textsubscript{3} gas) used in semiconductor, display and solar industry, the Neochem PU manufactures and sells 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.

**One of Global TOP 3 Suppliers of BOPA Film / Goal to be a Global Leader**

**Strengthens basis for growth in polyester film by expanding into specialty product**

As the material of outstanding features such as impact strength, anti-pinhole, printability and oxygen barrier, BOPA Film is widely used in packaging industry. Film PU produces and supplies BOPA Film with stable qualities by its accumulated technological know-how, at the same time has a wide variety of types applied in Retort, Medicine and Lithium ion Battery. To be a global leader of BOPA Film, Film PU has expanded manufacturing capacity as a Global Top 3 BOPA makers based on its new installation in Jiaxing, China in 2018.

As the material of outstanding features such as mechanical property, heat resistance and printability, polyester Film is widely used in diverse industries ranging from packaging to electric / electronic. Film PU strengthens its basis for growth with technological innovation and R&D, entering in high value-added film industry like electric & electronic component, display and super-clear window film.

---

**Self development and production of TAC films for polarizing plates**

**Current annual production capacity : a total of 110 million m\textsuperscript{2}, with 50 million m\textsuperscript{2} for the 1st TAC Plant, and 60 million m\textsuperscript{2} for the 2nd TAC Plant**

Hyosung has developed and produces tri-acetyl cellulose (TAC), which protects the PVA polarizing film in LCD polarizing plates for TV sets, monitors, laptops, and cell phones. In 2009, a plant producing TAC film for LCD panels was established in Ulsan, the first factory in Korea to mass-produce TAC film. A 2nd machine began operating in Oksan in 2013 and has been operating since, having an annual production capacity of 110 million m\textsuperscript{2}. These films are being applied to products for coating and OLED that require high quality standard. Hyosung has advanced into the Chinese market, which is emerging as the world’s largest display market, and its sales are increasing. Hyosung has kept pace with the changing market by developing an Acryl film that is resistant to water in 2018.
INFORMATION & COMMUNICATION

- Hyosung TNS Inc.
- Hyosung Information Systems Co., Ltd.
- Hyosung ITX Co., Ltd.
- Galaxia Electronics Co., Ltd.
- Galaxia Communications Co., Ltd.
- Galaxia Device Co., Ltd.

FINANCIAL AUTOMATION
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.

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

NGCN SOLUTION
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
- Multi-vendor Solution
- ATM total outsourcing
- SmileEDI

- Automated teller machines
- Teller cash recycler
- Multi function kiosks
- MoniManager
- Omni-channel Solution
- 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 becoming 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. 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.

Hyosung Information Systems Co., Ltd.

- Construction and consulting services for IT infra and data center modernization
- Private / Hybrid Cloud Solution
- Big Data & IoT Platform
- Enterprise Block chain Appliance
- Smart Video Surveillance and Analytics Solution

Construction and Consulting Services for Integrated ICT environment
Supporting business innovation for customers by building an efficient ICT environment

Hyosung Information Systems was established in 1985 as Korea’s first IT Company, offering mainframes and discs to public and financial organizations. Since then, HIS has provided IT solutions and services to over 1,700 SI companies and many corporations across diverse industries including financial, manufacturing, public service and communication.

HIS provides high level of technology across IT infra and customized services, accumulated over 30 years. Also, HIS proposes portfolios to modernize customer’s data center, strengthening Cloud business. Recently, HIS started to support customers’ digital transformation journey by expanding solutions including Big Data and Block chain.
Hyosung ITX Co., Ltd.

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

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.

Galaxia Electronics Co., Ltd.

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 largest 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.

Development and manufacturing of mobile device components, ATM rollers and units, optical sensors, motors, etc.

Galaxia Device is an IT component company supplying buttons, keypads and rubber parts for mobile phones, roller and units for ATMs, etc. 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 controls. 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 ATMs, the pick up roller, and the production of core ATM parts F-roller and G-roller. It also has the capacity of manufacturing competitive products, and is developing and manufacturing units and modules for various automated systems including ATM machines and check processors. In addition, the company is establishing the growth foundation to become a top-tier components company by preparing to enter new parts markets, such as sensors and motors, based on its achievements in mobile phone and ATM parts endeavors, and it is continuing research and develop core parts to lead the IoT field, which is regarded as the center of future industries.
OTHER AFFILIATED COMPANIES

- Hyosung Capital Co., Ltd.
- The Class Hyosung Corporation
- Hyosung Toyota Corporation
- The Premium Hyosung Co., Ltd.
- Forza Motors Korea Corporation
- Hyosung Premier Motors Corporation
- A-seung Automotive Group Co., Ltd.
- Galaxia Corporation Co., Ltd.
- Shinwha Intertek Corporation

COMPETITIVE, 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 financial instruments. Since its merger in 2009 with Star Lease Company, Hyosung Capital utilized its top-tier market penetration know-how in machinery and medical equipment leasing market. Star Lease has already 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. Through the hard work of its top-tier employees, it is developing a joint venture with Hyundai Heavy Industries Co., Ltd. in China’s 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. In order to achieve its vision for sustainable growth and to become a renowned ‘Total Credit Solution Provider’, everyone at Hyosung Capital is at their 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, Dongtan 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, Cheongju, Yongin Suji, Guri and Dongtan provide differentiated premium services that ‘make Benz like Benz.’ It also operates a showroom for 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.
Hyosung Toyota Corporation

Hyosung Toyota, founded in October 2009, is the official Toyota dealer in South Korea. The company is not just selling cars, it is striving to be customers' partner who can design a new lifestyle and experience the excitement. It manages showrooms in Seocho, Gangseo and Anyang Pyeongchon areas. It also runs service centers in Gangseo and Seocho area. And, it will continue to expand its business network. The company acquired the first ‘kodawari’ certification for Toyota dealers and has been operating CRM programs. Hyosung Toyota Corporation provides full customer satisfaction, thereby growing into a company that continues to be chosen by customers.

The Premium 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 and Suncheon 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.

Forza Motors Korea Corporation

FMK is the official importer of Ferrari and Maserati vehicles in Korea. Since its foundation in June 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.

Hyosung Premier Motors Corporation

Hyosung Premier Motors Corporation was established in 2016, and it is the official dealer for Jaguar-Land Rover in Busan, Ulsan, Pohang and Suncheon. In order to faithfully deliver the core values of Jaguar-Land Rover, the 'British Luxury' brand, to customers, it operates the brand's largest service center, new and used car showrooms in the Busan and Yeongnam area. Under the principle of 'Customer First' Hyosung Premier Motors Corporation is offering differentiated premium services unique to Hyosung to Jaguar-Land Rover customers.
A-seung Automotive Group Co., Ltd. is the sole importer in Korea for world renowned tuning brands such as Brabus, ABT 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.

Shinwha Intertek entered the display material business in earnest in 1983 by mass-producing tape for cathode-ray tube TVs and has grown into a display material company by starting an optical film business for LCD TV BLUs (back light units) in 2004. Shinwha Intertek, a leading company in optical film for LCD BLU that carries out transactions with major TV and LCD panel manufacturers all around the world with the development of independent technologies, has established customer-oriented SCM by expanding global supply capability and localization with two overseas branches (in Suzhou and Dongguan, China) to overcome its customers’ regional limitations, and has been developing high-functional film and tape for OLED applied to smartphones as well as optical film for LCD BLU and providing them to customer companies since February 2014. Shinwha Intertek has been growing its business of tape for mobile OLED to diversify its business structure in earnest. To discover future products, it will grow into a global material company that pushes the limits of displays and leads the future industry by developing next-generation display materials such as OLED and micro-LED, display material for vehicles, and eco-friendly furniture deco film for use in everyday life, and by advancing into special film areas that are currently monopolized by Japanese companies.

Galaxia Corporation is the official Korean distributor for the US performance sportswear brand Under Armour. The brand focuses on sports marketing for athletes under its brand mission, “To Make All Athletes Better,” and it has become Korea’s most preferred brand among athletes and sporting customers. Starting with the opening of the Cheongdam Direct Management Store in 2011, it now operates five independent stores, 52 department store sites and 10 mall stores, and Galaxia Corporation plans to continue to expand its distribution network.
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 world’s best products and many other world-class products and brands in textiles, industrial materials, chemicals, power & industrial systems, and information & communication fields, yielding 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.
RESEARCH & DEVELOPMENT

- R&DB Labs
- Power & Industrial Systems R&D Center
- Steel Wire Technical Center
- Technology R&D Center
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 (Nano materials)

Research Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>Developed PET CD continuous polymerization process, Quality improved NY bonding fiber, Developed soft spandex, Developed differentiated tire cord with high tensile strength and high modulus, Developed tire cord dip-recipe for improved thermal resistance and adhesive force, Developed crosslinked forming PP</td>
</tr>
<tr>
<td>2018</td>
<td>Developed R-TPO (Reactor made Thermoplastic Olefin) grade</td>
</tr>
<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 melange effect, PK Grade for pipe fitting parts, PK wear-resistant gear, PET film for LCD multi-layer sheet</td>
</tr>
<tr>
<td>2016</td>
<td>PET White dope dyed fiber, Developed highest LTHS (long term hydrostatic strength) PPR material, Developed CD (comagated conduit) grade for cold weather application, Developed high elongational spandex, Developed POK grade for industrial pneumatic tube, Acquired KWWA F106 certification for AMC hollow fiber membrane</td>
</tr>
<tr>
<td>2015</td>
<td>Developed deodorant PET fiber, 3H normal anti-glares film, anti-ballistic aramid solution, high flexibility shing impact strength Polyketone compound, large tow carbon fiber, VAc 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, CD PCCP), 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, PET water repellant yarns, 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/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-glares fiber for TVs, high heat resistant 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-filal yarns, and ultra-low shrinkage yarns for broad woven,</td>
</tr>
<tr>
<td>2010</td>
<td>Developed highly chlorine-resistant spandex, highly functional nylon shaped yarns (Aqua-X), highly sensitive nylon-shaped yarns (Rayex), high value-added electronic material with PP grade, and laptop thin films,</td>
</tr>
</tbody>
</table>
POWER & INDUSTRIAL SYSTEMS R&D CENTER

Hyosung has been recognized for its world-class technology in the field of high-voltage power systems having 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 industrial technology-based products and 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

2019
- 200MW BTB MMC HVDC core part development (converter sub-module, sub module controller), Development of 98.5% 700kW DC-DC PCS for railroad vehicle in Osong DC Substation, 125 kV ESS PCS UL (Underwriters Laboratories) Certification, Development of 97% 2MWh ESS for low-voltage DC distribution in Gochang Power Test Center of KEPCO, 7MW ESS development for DC Grid and energy cost reduction, Construction of demonstration complex in Chosun University Campus, Digital substation and environment-friendly R&D

2018
- 20MW BTB MMC HVDC pilot site commissioning / 400MW class MMC STATCOM installation and commercial operation (KEPCO Shin-youngju S/S, Shin-Choongju S/S) / Development of Asset Management Solution for 154kV Substation (AHMS First in Korea), Received AM system orders for SK Airgas (154kV S/S), POSCO (154kV S/S), and Mozambique Utilities (EDM, Over 114kV 64 S/S), Received AM Solution orders for KEPCO and KRRI

2017
- 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 BMW / 33MWh, Samcheonpo 12.5kW / 32MWh, Totally 50.3MW / 160MWh installed)

2016
- 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 / 500kW), 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

2015
- Energy Storage System for Wind Farm Integration (First in Korea, Yeongheung, 4MW PCS & 16MWh Battery), Energy Storage System for Energy Savings (Yeongju, 3MW PCS & 2MWh Battery), 150MW class MMC STATCOM (KEMA type test certificate), IE4 Super Premium Synchronous Reluctance Motor Line up (less than 45kW)

2014
- Renewable energy Integrated MW-class Li-Battery Energy Storage System, 20MW class Voltage Source Converter HVDC system, 150MW class Multi-Modular type STATCOM

2013
- Battery Energy Storage System and Micro Grid for Off-Grid island IE 4 Super Premium Synchronous Reluctance Motor

2012
- 1MW Li-Battery Energy Storage System, 250kW / 500kW PV PCS, 80kV Permanent Magnetics Synchronous Motor and Drive for Electric Vehicles (EV), EV Charging System, Power transformer Partial Discharge detection Diagnostic System

2011
- 20kW - 800kW 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 test Model ‘Blue-On’), Submarine Large-sized Propulsion Motor, 750kW-class DFIG type Wind Turbine PCS

2010
- 60kW class EV motors (applied HMC’s EV test Model ‘Blue-On’), Submarine Large-sized Propulsion Motor, 750kW-class DFIG type Wind Turbine PCS

2009
- 100MVA STATCOM

2008
- 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 (MDMD) GIS

2007
- 154kV gas transformers, 2MW-class wind power system

2006
- 10MVA STATCOM, GIS partial discharge diagnosis system, Power transmitter class FACTS device core parts domesticized (first in Korea)

2005
- 750kW class wind power generation systems, 100kW class fuel cell PCS, 36kV 31.6kA GIS

2004
- 245kV 50kA class GIS (First in Korea), 25.8kV 25kA GIS (applicable size changed, first in Korea), 24kV 40kA 3000A GIS (first in Korea)

2003
- 362kV 50kA GIS (first in Korea), 154kV 80MVA UPFC (FACTS) pilot plant (first in Korea)

2002
- Substation automation system, 300kV 40kA GIS

2001
- 154kV 40MVA FACTS transformers, Interpolar condenser without capacitor, 170kV gas circuit breaker

2000
- Distribution digital protection meters

1999
- 800kV ultra-high voltage circuit breakers, 765kV transformer device preventive and diagnosis system, 200kV gas engine heat combination systems, Package-type CNG filling systems, Nuclear power plant Q-class large-capacity motors, 362kV 63kA 8000A GIS (first in the world)

1995
- Gas turbine co-generator, railcar towing motors

1992
- 765kV transformers (first in Korea)

1987
- 170kV 31.5kA 1200A GIS

1986
- Amorphous transformer (first in Korea)

1984
- 154kV phase–separation transformers (3ph 154kV 386MVA)

1982
- Nuclear power plant 345kV transformers (1ph 345kV 1187MVA/Bank)
STEEL WIRE TECHNICAL CENTER

The Steel Wire Technical Center was established in 1986 to develop leading-edge production technologies for tire reinforcement materials (steel cord, bead wire) and related products. Using the research technology it has accumulated over the years, it is leading tire weight reduction research with the application of ultra-high tensile strength steel cords and is endeavoring to develop new environmentally friendly products to reduce the use of tire materials that are harmful to the environment. The Steel Wire Technical Center underwent a large expansion of its advanced analysis equipment, pilot facilities, and researchers to enhance basic research and research capabilities in 2007. It has been operating technical centers in China and Vietnam for the timely application of new technologies as well as quick response to global customer requirements. Through industry-university cooperation and external research network, it is making continuous effort to secure the world’s best technology providing competitive advantages to customers and new business technologies that will become a future growth engine.
### Research Areas

#### Steel wire processing technology development
- Steel wire heat treatment technology
- Plating and surface treatment technology
- Wire Drawing Technology
- Mega high-tensile strength product manufacturing technology
- Cabling mechanism research

#### Tire-specialized research
- Ultra high performance tire (UHPT) reinforcements
- Low fuel consumption tire reinforcements
- Eco-friendly tire reinforcements
- Tire analysis and performance prediction technology
- Research on the characteristics of future vehicles and next generation tires

#### Steel wire application research
- Ultra-fine wire development
- Hose wire development
- Steel wire reinforcing communication cable development
- Special function wire development

### Research Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>Developed precision-control heat treatment technology through a metal microstructure prediction program</td>
</tr>
<tr>
<td>2018</td>
<td>Developed steel communication cable center tensile wire / supporting wire</td>
</tr>
<tr>
<td>2017</td>
<td>Developed the Zinc coated Steel cord for eco-friendly tire, Ultra-fine Steel wire for diamond coated wire, Developed fine-diameter hose wire</td>
</tr>
<tr>
<td>2016</td>
<td>Developed the Ultra-fine filament Steel cord for LTR carcass</td>
</tr>
<tr>
<td>2015</td>
<td>Developed hybrid cord, the new concept tire reinforcements</td>
</tr>
<tr>
<td>2013</td>
<td>Established Chinese Steel Wire Technical Center, Developed high performance stranding machine</td>
</tr>
<tr>
<td>2012</td>
<td>Developed fine-diameter saw wire, and diamond wire, Designed and optimized bead wire manufacturing process in Vietnam plant</td>
</tr>
<tr>
<td>2011</td>
<td>Established Vietnam Steel Wire Technical Center, Designed and optimized the saw wire manufacturing 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 for ultra-light tires</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 drawer of wire to reduce waste</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>Developed NT (normal tensile, 2850 Mpa), HT (high tensile, 3300Mpa), ST (super tensile, 3650 Mpa) steel cord</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>
TECHNOLOGY R&D CENTER

As Korea’s largest financial automation device R&D Center, the Center boasts independent hardware and software development technologies to produce the best 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>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>Developed Drive-Through ATM to reflect customer’s needs for the US, Bank market. Developed Self Order Kiosk device and S/W for the Kiosk. Developed SCD (Self-Check-out) device for the large sized market. Developed EPP (Encryption Pin Pad) for global security standard PCI 5.0 certification, Developed ATM S/W for Windows 10 for customer certification, Developed and operated Moni-Manager S/W for MVS project for India, Developed Self Bank Kiosk (Digital Kiosk) S/W for Kook Min and Hana bank, Developed TCR MSS00 S/W for Western Europe.</td>
</tr>
<tr>
<td>2018</td>
<td>Developed present BRM with differentiated functions to reflect customer’s needs for the U.S. Bank market. Developed transit BRM that allows cash replenishment/retract without opening the safe for enhancing the cash management of branches, Developed CDU that miniaturized cash dispenser cassette of the U.S retail market and improved customer convenience, Developed CCIM that increases the capacity of cash storage to increase the actual operation time of the device, Developed the SW solution (WARP) improving ATM UI of banks and reflecting multi-vendor SW needs,</td>
</tr>
<tr>
<td>2017</td>
<td>Developed a new middle and high-priced ATM MX82800 S/W 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 C/XFS specification.</td>
</tr>
<tr>
<td>2016</td>
<td>Developed standard ATM MX866005, MX56005 with improved security and performance, Developed an optimized branch solution “Mini-IBS”, Developed “Micro ATM” to reduce branches 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 (MS5000SE), Mobile ATM Solution (MARS)</td>
</tr>
<tr>
<td>2014</td>
<td>Developed Cash &amp; Check Recycler Machine (CCRM), Teller ATM (TCH) Line of Products (Under/High Counter Types), New ATM for Retail Banking (NH2600SE, MXS200), 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 (MX82800CL, MX86600), ATM specified for blind people, ATM software “MoniPlus 2S” for ATM Multi-vendor usage</td>
</tr>
<tr>
<td>2012</td>
<td>Developed New Branch Solution (Self Service Banking, Video Banking), teller ATM (TCH), cash / check mixed media recycling module (BRMT), passbook issue module, banknote fitness sorting technology, OCR technology for banknote serial numbers, CEN safe series (Grade I, I, I, I, V), ATM Software “MoniPlus” – global security standard certification</td>
</tr>
<tr>
<td>2011</td>
<td>Developed export-type check/cash deposit integrated module (CCIM), New Branch Solution (Hybrid ATM), circulating ATM with Global BRM (8000A, 8000TA), CEN Grade II –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 (Ubibus 8100), currency identification certification by Europe Central Bank.</td>
</tr>
<tr>
<td>2008</td>
<td>Developed the export-type cash deposit module (BNA), export-type check deposit module (BDA), 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 (12 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>
Founding and leading in new Corporate Social Responsibility

Hyosung’s sustainability management is to fulfill its economic, social, and environmental responsibilities based on its mission to create better lives for people based on the best technology and management capability. Through communication and cooperation with various stakeholders such as customers, employees, suppliers, and local communities, we will continue to pursue corporate management that contributes to domestic and overseas issues, and we will take the lead in creating a sound ecosystem that enables both companies and society to grow together.
• Customer-oriented Management
• Green Management
• Sharing Based Management
• Shared Growth Management
• Ethical Management
CUSTOMER RELATIONSHIP MANAGEMENT

100-Year-old Hyosung, Growing Together With Customers

We strive to maximize customer satisfaction by producing outstanding products and managing quality control in accordance with customers’ needs identified from VOC (Voice of Customer). Moreover, we focus even further on VOCC (Voice of Customer’s Customer) to deliver our values through customer-centered products and technology development.
Establishing C-cube(VOC) System
Pursuing customer-oriented management, Hyosung is devoted to maximizing its corporate value and customer satisfaction by identifying true customer needs from various channels such as VOC (Voice of Customer), VOCC (Voice of Customer’s Customer) and even VOCO (Voice of Competitor). Aligned with this, we have established a system to facilitate a process for C3 (VOC) activities which enables us to gather, analyze and further respond to voice of customers across all the business sectors such as sales, marketing, quality management and R&D. We are cultivating the environment where all members of the company can listen to our customers and try to work for their satisfaction.

G–VOC(Global Voice Of Customer) Management System
Hyosung Heavy Industries is practicing customer-oriented quality management by establishing and operating G-VOC (Global Voice of Customer) and the portal system.

Providing Customer-tailored Services
Tire & Industrial Reinforcements PU of Hyosung Advanced Materials is implementing specialized VOC (Voice of Customer) activities in order to provide optimized service to customers. We collect customer needs through a variety of channels including written feedback using specialized VOC questionnaire as well as technology exchange meetings during regular customer visits which take place at least 1-2 times a year. We endeavor to gather various opinions to improve our delivery, technology, quality, CSR, and many other customer value propositions. In particular, we aim to identify customer needs and provide optimal solutions through various interfaces such as R&D, production technologies and purchasing, and continue to keep up with activities to understand trends for products and market through internal seminars and market researches in cooperation with tire specialist.

• Customer-tailored Exhibition Hall, ‘Hyosung Square’
The Hyosung Square, an exhibition hall launched in June 2018 at Changwon Plant of Hyosung Heavy Industries, was designed to provide customer-tailored information with up-to-date technologies, contributing to building a corporate image as a global company.
Quality Management System
Each operating company of Hyosung operates its own quality management system tailored to its business area, products and customers. We conduct strict control of product quality to secure product reliability and customer satisfaction by acquiring internal and external certifications for product quality assurance.

Improving Production Process and Optimizing Facility Operation
By introducing the quality management system to its production lines, Hyosung has been thoroughly reviewing and continuing to improve the manufacturing process. In this way, we can achieve product conformity and production efficiency, meeting the demands of customers and the market. Hyosung assures successful implementation and maintenance of the quality management system, utilizing human and material resources effectively.

Securing Product Safety in the Entire Product Lifecycle
Hyosung ensures product safety in the entire lifecycle of a product ranging from clients' order to after-sales management. We assure customers' safety to gain their trust through our own verification system.

- OEKO-TEX® STANDARD 100
Hyosung TNC performs independent safety testing at all stages of processing from raw materials to the final products through the OEKO-TEX® STANDARD 100 certification system.

Global Quality Standard System
Hyosung Advanced Materials operates a global quality standard system to ensure the same level of quality, required by customers, at all global production lines. We manage quality standards of each process stage at each manufacturing site, establish guidelines from raw material input to final product shipment and share them with overseas production entities through regular monthly meetings and technical exchange meetings. To ensure identical quality product production equally benefiting from the best available technology across all global sites, regular monitoring and continuous feedback take place under the supervision of CTO and CPO.

Performing Quality Improvement Activities
Constantly performing various quality improvement activities, Hyosung has been improving production lines after reflecting customer needs and minimizing fundamental quality defects. Through this process, we fundamentally improve the quality gap and gather VOC to contribute to quality improvement.
The Construction PU of Hyosung Heavy Industries carries out quality inspection for all projects in seven steps from drawing review to confirmation before tenant review. With the participation of all relevant departments, we check the plan and progress status of each step to reduce defects that may lead to customer dissatisfaction.

Hyosung Advanced Materials is operating a key process for quality control based upon its own quality management system. In order to respond to customer needs for quality improvements and to earn reliability for our production lines, we continuously update our quality manual, process standards and each production unit standards.

7-Step Quality Control (QC) Inspection for Construction Project

- Drawing review
- QC inspection of civil engineering work
- QC inspection of framing construction
- QC inspection of Sample House
- QC inspection of fire protection/
  QC inspection of finish work
- Harrington care

Joint Participation at Global Trade Fairs with Client Companies

Hyosung operates a joint exhibition booth with client companies every year in international and domestic trade fairs, through which we help our customers expand their sales channels and identify their customers’ needs and trends. Moreover, we are consolidating our global leading position by promoting excellence of our products to potential customers. We also continue to support our clients’ business activities by participating trade fairs with Korean SMEs (small and medium enterprises), which usually have relatively limited opportunities for international-scale exhibition. Hyosung TNC, in particular, participated with its clients at the 2018 Preview in Daegu (PID), Vietnam Saigon Textile, Asia Nonwovens Exhibition and Conference (ANEX) in Japan. It attended Intertextile Shanghai together with 21 international client companies and performed various activities to grow together with its clients and secure market leadership. Hyosung Advanced Materials participates in Techtextil, the biggest industrial textile trade fair in the world which takes place bi-annually in Frankfurt, Germany, discovering new customers and clients as well as understanding market competitors. During the exhibition period, we invite customers to promote our business and hold various events such as ‘Hyosung Night’ to enhance our brand image through close communication with customers.

Building Customer Intimacy for Global Clients, ‘creora Workshops’

Hyosung TNC has been running ‘creora® workshops’, a tailor-made consultation event, in which it directly visits clients in their office and provides them with client-tailored market trend information as well as proposes developing new fabrics made of its yarn materials such as spandex, nylon and polyester. We visit not only clients in the domestic market, but also international clients overseas across Asia, Europe, and America to provide face-to-face consultation service, making them more competitive in their sector and further consolidating the partnership with them.
GREEN MANAGEMENT

Hyosung pursues a clean environment and a healthy future

As a global company operating in the industrial sectors with high environmental impacts such as textiles, chemical, industrial materials and heavy industries, Hyosung is striving to minimize its environmental impact through various activities in the entire business process. In this sense, Hyosung focuses its efforts on eco products considering entire product lifecycle and R&D projects for the next-generation energy sources such as ESS and hydrogen energy. We will continue to fulfill our social responsibility to preserve the environment and support sustainability for the future.
Green Management Vision 2030

Hyosung implements group-wide green management based on Green Management Vision 2030. To this end, we carry out detailed missions which include leading the response to climate change; creating a foundation for green management; promoting green company image; focusing on environmental projects; facilitating green purchases and eco-friendly growth engine. In addition, we are trying to improve safety awareness and culture so that all staffs including suppliers work in a safe environment.

Establishing a foundation for green management
- Establishing a dedicated organization in each operating company
- Securing professional personnel
- Introducing energy management system
- Defining R&Rs for relevant personnel in each operating company and training
- Introducing carbon asset management system (HSCAMS)

Promoting green projects
- Hazardous substances and wastes management
- Ecosystem protection
- Participating in environment clean-up activities
- Air and water pollutants management
- Waste management and waste reduction activities
- One company one river/park/mountain activity at each plant

Facilitating green purchasing
- Supporting green management of suppliers
- Implementing green purchasing agreements
- Resource saving
- Supporting green management (e.g. Energy Companion Project)
- Water saving activities
- Waste reduction of products

Leading climate change response
- Facilitating emission reduction activities
- Management of GHG emissions and reduction
- Government policy response and compliance
- Emission Trading Scheme response
- Clean Development Mechanism projects
- Introducing energy-saving facilities

Building a green corporate image
- Green technology and green company certifications
- Facilitating environmental information disclosure
- Adopting LCA (life-cycle assessment)
- Participating in Carbon Disclosure Project
- Implementing Environmental Information Disclosure System

Creating a green growth engine
- Supporting hydrogen economy
- Implementing projects related to recycled low-carbon materials
- Leading renewable energy projects
- Strengthening market presence in carbon fiber
- Proactive investment to recycled materials
Hyosung's Eco Products

‘regen’ - Recycled polyester yarn made of waste PET bottles
Hyosung TNC’s ‘regen’ is Korea’s first eco-friendly polyester yarn which was made of substances extracted from waste PET bottles. Made of 100% recycled material, regen dramatically reduces landfill wastes and CO2 emissions. In recognition of its outstanding environmental performance, regen has acquired the world’s first GRS (Global Recycle Standard) certification in the sector of polyester recycle textile from Control Union, a global certification organization based in the Netherlands.

‘MIPAN regen’ - Recycled nylon yarn
‘MIPAN regen’ is a nylon yarn recycled from waste petrochemical materials. Hyosung TNC takes the lead in efficient use of resources as well as energy saving by reducing the use of petrochemical materials through this product. Although being recycled from pre-consumer wastes, MIPAN regen maintains the same quality as normal nylons. Unlike conventional partially-recycled nylons, MIPAN regen is made of 100% process wastes, and is widely recognized for its excellence in environmental performance.

Eco Products from Green Process

‘Eco-Friendly Dip Recipe’ - Improving fatigue resistance of tires
‘Chemical Dip’ is a chemical-compound fluid associated with the final manufacturing process of tire cords. The chemical dip also improves adhesion of tire cords to rubber within the tire, thus allowing the tires to achieve best driving performance, while lasting longer through enhanced resistance. Hyosung Advanced Materials has worked to reduce waste tires by prolonging tire life with increased fatigue resistance as well as to reduce harmful substances without using resorcinol and formalin in manufacturing process.

Lyocell Tire Cord - Eco product made from wood-extracted materials
Conventional rayon tire cords, which are mainly used as tire reinforcement materials for high-speed driving tires, generate hazardous chemical substances in their manufacturing process due to the use of sulfuric acid. ‘Lyocell Tire Cord’, developed by Hyosung Advanced Materials as an alternative to rayon tire cord, however, does not release toxic substances such as carbon disulfide or hydrogen sulfide, since it is made of cellulose extracted from wood. In this way, we can prevent air and water pollution caused by release and treatment of hazardous chemicals.
TANSOME® - Carbon fiber, the key to improve fuel economy of automobiles
Having only one-fourth the density but 10 times the strength of steel, TANSOME® is the first high-performance carbon fiber developed in South Korea through independent technology of Hyosung Advanced Materials. Featuring its ultra-lightness and high-intensity, TANSOME® is used as a key material for improving fuel efficiency of automobiles through vehicle weight reduction, ultimately contributing to reducing carbon emissions.

creora® eco-soft - Low-heat settable spandex
Hyosung TNC’s creora® eco-soft, whose soft-touch fabric can be produced at approximately 15-20℃ lower temperature than conventional spandex, enables textile manufacturers to reduce emissions as well as to save costs through less energy consumption.

High Intensity Steel Cord - Improving fuel economy of automobiles
As a producer of the high-strength steel cord which accounts for 45% of global supply, Hyosung Advanced Materials is contributing to emission reduction through increased fuel economy of vehicles. Given the ongoing environmental awareness and trends, we expect demands for ultra tensile (410 Kg/mm2 based on 0.20mm) steel cords to further increase in the future.

ESS (Energy Storage System)
ESS is a device which enables excess energy to be stored when power demand is low to use it afterwards. In this way, ESS increases reliability of power supply and generates additional values through flexible power management system. Hyosung Heavy Industries, as a leading company of ESS in Korea, provides suitable devices in a variety of purposes such as integrating renewable energy sources, frequency regulation, peak cut and installing independent microgrid.

Voltage Type HVDC (Ultra High Voltage DC Transmission)
HVDC is a transmission technology that has emerged as a core technology of next-generation electrical grids because of its low power loss, which makes it good for large capacity and long-distance transmission. Hyosung Heavy Industries succeeded in developing 20 MW voltage HVDC in 2018. It has established a testbed in Jeju Island and is currently developing 200 MW voltage HVDC.

Hydrogen Filling Station for Next-generation Hydrogen Vehicles
In 2008, Hyosung Heavy Industries succeeded to develop a hydrogen vehicle charging system for the first time in Korea. Since the first delivery to Hyundai Motor’s Namyang Research Center, we have been building and operating hydrogen stations in more than 20 places including Ulsan, Korea Highway Corporation and Hyundai Mobis.

Smart Grid, STATCOM (STATic synchronous COMpensator)
Hyosung Heavy Industries is the only company in Korea that has commercialized STATCOM technology. It has won orders from substations in Korea, the electricity board in India, and the power transmission board in Panama utilizing its strength in voltage stabilization and maximization of transmission efficiency and is currently making efforts to expand its market in Asia and the Americas. Also, it operates an energy monitoring service in Jeju Smart Grid Test-Bed, the first pilot testing bed for implementing smart grids in Korea.
Happiness doubles when shared

In order to help and benefit more people in need, we plan to gradually widen the range of the services of our social contribution activities and focus on those who are excluded from welfare services. In addition, we will strengthen long-term and practical support rather than temporary support and continue to carry out more social programs linked to business strategies so that we fulfill our social responsibility by sharing our growth with the society.
Medical Rehabilitation Support Programs for Youth with Disabilities and their Family
Since 2013, we have been supporting the rehabilitation of disabled children in a collaboration with the Purme Foundation, a non-profit organization that helps independence and rehabilitation of people with disabilities. In addition to financing rehabilitation expenses for disabled children who are not timely treated with adequate medical care due to economic reasons, we also support family trips to build robust family relationship. In particular, we focus on challenges faced by their siblings and support their psychological therapy and education expenses. From 2019, we are running the project with a enlarged scope.

Overseas Child Sponsorship
Hosung’s employees support children living in underprivileged areas by providing monthly sponsorship as well as supporting development projects in the areas. In addition, Hyosung Vietnam also provides a clean and safe education environment for the children and help children from minority ethnic groups learn Vietnamese language by building a library.

Global Medical Volunteer Group, ‘Smile Expedition’
In 2011, we created the ‘Smile Expedition’ with an intent to “Let’s find a smile for the sick Vietnamese,” by providing free medical services to people with disabilities and the poor in Dong Nai province, Vietnam. In Vietnam, there are number of citizens who are isolated from medical benefits due to poverty and lack of medical facilities. Hyosung, therefore, organized the ‘Smile Expedition’, a medical volunteer group and collaborate with the ‘Food for the Hungry International’, an international relief organization, to provide diverse medical services free of charge including dentistry, gynecology, internal disease treatment, orthopedic surgery and acupuncture. By 2018, about 12,000 people have recovered their health and smiles through Hyosung Smile Expedition. In 2019, we will expand health education and disease prevention for teachers and parents in order to build health awareness of the residents effectively.
Support for Palace Restoration Project
Cooperating with the Arumjigi Foundation, we implemented a project to restore lights and interior space of pavilions (Heejeongdang and Daejojeon) in Changdeokgung Palace. Through the first and second projects, we restored the interior lighting and chandeliers of the pavilion, enabling visitors to enjoy sightseeing inside.

Cultural Heritage Conservation Activities in Changdeokgung Palace
Since 2006, employees of Hyosung have regularly participated in the cultural heritage protection activities of Changdeokgung Palace. In 2018, we organized an event in Changdeokgung Palace with employees and their family members in which we all cleaned a pavilion, Juhabru, in the palace together while strengthening the employee bond as well as contributing to cultural heritage conservation.

Sponsorship for Artists with Disabilities in Seoul Art Space Jamsil
We have supported the visual artists of Seoul Art Space Jamsil, the only art residency studio for disabled artists in Korea which is run by Seoul Foundation for Arts and Culture, by funding their artwork and exhibition costs. In addition, we have provided education program for culture and arts to employees to strengthen bond and communication among colleagues.

Sponsorship for Theater Company and Producers
Since 2015, we have been donating to Yeonwoo theater company, contributing to the revitalization of creative theater plays in Korea. The funds are used for activities to produce creative plays such as finding and casting new actors and playwriting.

Sponsorship for the Orchestra of Youth with Disabilities
We continue to support the Onnuri Love Chamber, a youth orchestra group with physical and mental disabilities. The donation is used for purchasing musical instruments and granting scholarships, as well as for preparing a stage for them to perform in public, such as the Sevitseom outdoor stage in Han River Park. We also arranged a special music class where they could get direct lesson from orchestra members of the 'Silk Road Ensemble' led by world-renowned cellist Yo-Yo Ma.
Supporting Patriots and Veterans

Housing Support Project for Veterans
We are trying to improve living environment of veterans of the Korean War and the Vietnam War who are experiencing financial difficulties, by providing repair work for their outdated houses. We have been giving the support for 7 years since we first fund-raised in 2012.

Donation of Book Cafe in the Army
As part of our social contribution activities for supporting patriots and veterans, we have established a book café within the ROK 1 Corps of Korean Army, supporting their project, 'Facilitating reading military culture'.

History Field Trips for Senior Veterans
In cooperation with the Southern Seoul Office of Patriots and Veterans Affairs, we supported the elderly veterans to explore historical sites, providing them with opportunities to go out with their family which is usually difficult otherwise.

Creating Job Opportunities

Support for Employment Promotion Program for Women from Vulnerable Group
In lined with the government’s initiative of 'job creation', we are supporting job programs which are highly effective for employment of middle-aged women.

Support for the Social Enterprise, 'Goodwill Store'
We established Hyosung Goodwill Store which is operating under consignment. Goodwill Store is a social enterprise that sells items donated by businesses and individuals at low prices and contributes the subsequent profits to job creation and vocational training for people with disabilities. It also contributes to economic independence of disadvantaged and vulnerable people in the society by hiring them to operate the store.

Sponsorship for Eden Welfare Foundation
Since 2014, as part of commitment to job creation for people with disabilities, we have supported the Eden Social Welfare Foundation, a social company working on employment for the disabled. We donated unused or malfunctioning computers for their up-cycling project and financed the cost of replacing the machine producing bin bags, for their facility improvement.

Employee Volunteer Programs

Hyosung Sharing Volunteer Group
We organize the Hyosung Sharing Volunteer Group to proceed regular CSR activities. The Sharing Volunteer Group, operated in the company-wide level, consists of a group leader and different teams. Any employee can join the group at any time. We are motivating the employees to voluntarily engage with CSR by supporting paid time-off for volunteer work and rewarding outstanding volunteers.

Incentives for Participants of Sharing Volunteer Group
We have selected outstanding volunteers based on their performance in the Sharing Volunteer Group and dispatched them abroad to conduct volunteer works. Four of them have volunteered for a project to build a kindergarten in Dong Nai province where Hyosung’s overseas business site is located. In addition, we are also supporting the employees to participate in volunteer activities using their working hours through volunteer time off system.
The road toward transparent communication and thorough responsibility

Hyosung strives to build close relationship with its suppliers based on the belief that enhancing their competitiveness is our future. The Shared Growth Promotion Team, an internal organization dedicated to promoting shared growth, is providing relevant training programs, operating various support systems and working with SMEs to find new business opportunities. We also continue to collect diverse opinions from the suppliers through interactive communication, consolidating the trust relationship with the suppliers.
Based on co-destiny relationship, Hyosung and its suppliers and partners are sharing the common goal of “sustainable global leaders” and cooperating to realize it for the future. Hyosung has established a shared growth system based on belief that the competitiveness of suppliers directly contributes to our growth. In this way, we will continue to facilitate mutual communication as well as build close partnership with the suppliers.

**Organizational System of Supplier Management**

<table>
<thead>
<tr>
<th>Share Growth Team</th>
<th>Operation of shared growth programs and supplier support programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchasing Department for Each Operating Company</td>
<td>Management of purchasing and supplier contracts</td>
</tr>
<tr>
<td>Technological Cooperation and Research Department</td>
<td>Technological cooperation and joint research with suppliers</td>
</tr>
</tbody>
</table>

Hyosung is operating various programs and policies to facilitate shared growth. Not only does Hyosung lead the partner companies’ growth through cash payment and support for their participation in international exhibition and overseas training, but it also focuses on compensating their performance by introducing an award system for outstanding suppliers.

**Financial Support**
- Payment in cash to suppliers under shared growth agreement
- Financial support for joint overseas expansion
- Network loan
- Shared growth funding

**Management Support**
- "Business Doctor"
- Support for overseas training
- Support for training of suppliers
- Support for training venues

**Productivity Improvement**
- Consulting for productivity improvement
- On-site plant visit program
- Support for ICT-QC (smart plant)
- Energy Companion Project

**Business Expansion**
- Support for international trade fair
- Joint participation in overseas projects
- Support for overseas expansion channel

**Technology Support**
- Performance Exchange
- Joint R&D and patent application
- Tech-ESCROW
- Contribution of Hyosung’s R&D capacity for joint research

**Secondary Suppliers**
- Shared growth agreement between first and secondary suppliers
- Shared growth payment system
- Industry innovation movement
- Cash payment monitoring
Risk Management and Enhancing Sustainability of Suppliers

Fair Supplier Selection Process
Hyosung has introduced a fairness and transparency criteria for selecting suppliers. We publicly announce the application criteria and recommendation requirements in our shared growth website. Any interested company can freely apply for registration as a supplier through Hyosung e-Procurement System.

Supplier Registration Evaluation
In order to manage supply chain risks, Hyosung conducts registration screening for all new suppliers before they get approval to participate in bidding process. Hyosung Heavy Industries Corporation evaluates the companies for supplier registration based on three aspects such as management, production and quality with the detailed evaluation items including business management, human rights, environment, safety and health, risk (financial, CSR).

Supplier Monitoring and Production Support
Hyosung conducts on-site review and real-time monitoring for outstanding suppliers selected by Hyosung in order to review their compliance with Hyosung’s CSR standards. When proceeding contracts, Hyosung requires suppliers to consent with our monitoring activities in areas of safety and labor, and those failing to meet the criteria are excluded from the list of outstanding suppliers. Any case of workplace accident during the length of contract is reflected to evaluation of the corresponding supplier, and the suppliers’ labor relations with their subcontractors, such as payments and cash payment rates are closely monitored by Hyosung.

On-site Review for New Suppliers
When new suppliers are found, they undergo on-site review to confirm whether the site is suitable for supply. During the review, Hyosung Chemical uses a rating system to evaluate the overall condition and suitability as a supplier after checking quality along with safety environment including on-site workers, facility management and sourcing of raw materials. When a supplier is rated as non-conforming, the contract with the supplier is suspended accordingly.

Supplier Evaluation System
Construction PG of Hyosung Heavy Industries conducts evaluation every year for companies which participated in the field construction for longer than a month in the corresponding year. Main evaluation subjects include safety and quality as well as construction and general management status. Hyosung Advanced Materials has established a plan for reevaluation of all processing suppliers once a year and evaluates their labor strikes, wage balances, and environment in addition to quality and delivery dates. Incentives are given to the suppliers based on the result.

Suppliers Risk Management Areas (Hyosung Advanced Materials)

| SOURCING                                   | • Procurement Management                  |
|                                          | • Product Realization                     |
|                                          | • Quality Monitoring & Improvement        |
| GENERAL                                   | • Safety & Environment                    |
|                                          | • Employee Education                      |
| QUALITY                                   | • Customer-Oriented Management            |
|                                          | • Improvements To Come                    |
| SAFETY & ENVIRON                          |                                           |
Strengthening Supplier Communication

Since 2011, Hyosung has signed agreements with its business partners and made various efforts to achieve shared growth based on ‘relationship’ and ‘communication’. Through regular communication channels, such as Business Partners Meeting, we interactively communicate and share information with the suppliers. Hyosung’s suppliers can make suggestions to us through online and offline channels and also voice their grievances through hot-line and a feedback channel on the website (Sinmungo) in the event of unfair demands or violation of regulations. Hyosung will continue to make various efforts to achieve shared growth by establishing trust-based relationship with suppliers and providing them with opportunities for continued engagement.

Energy Companion Project for the Suppliers

Hyosung actively participates in Energy Companion Project, a shared growth energy project run by the Korea Energy Corporation to promote shared growth with its business partners and to strengthen the capabilities of SMEs. This project supports the suppliers’ energy efficiency improvement and emission reduction through implementing energy consumption diagnosis to the suppliers with high energy use and deriving improvement measures for their energy efficiency.

Supplier Communication Channels

| Shared Growth Meeting with Suppliers | Hot-line | Sinmungo | Dispute Mediation Committee |

Shared Growth Meeting with Suppliers

In order to establish win-win partnership through shared growth, Hyosung Heavy Industries has been hosting Shared Growth Meeting with Suppliers twice every year since 2008. By arranging a communication platform for suppliers and employees of Hyosung to freely and comfortably exchange opinions with each other, we effectively share our business aims to the suppliers as well as facilitate shared growth together by reflecting their opinions and suggestions.
ETHICAL 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 right and ethically sound decisions at all times. We keep our corporate culture sound and right and fulfill its social responsibility to play the role of a respected global corporation.
Code of Ethics

I. Compliance with Laws and Regulations

"We strictly comply with laws and company regulations."
1. We respect the national laws and comply with all regulations and socially defined norms of conduct.
2. Westrictly comply with the company’s business policies and regulations and fulfill our responsibilities and duties.
3. We regularly create jobs by earning honest business profits and earnestly fulfilling our basic roles as members of our society.
4. We respect the market economy rules and trading practices not only in domestic regions but also overseas regions that the company is operating in and comply with the laws and regulations accordingly.
5. We never conduct or get involved with illegal insider trading or money laundering.

II. Customer-respecting Management

"A company exists to offer the value that can satisfy customers."
1. Gaining the trust of our customers is our most important priority.
2. We provide distinguished quality and service that can satisfy the needs of our customers.
3. We strive to establish transparent and fair business practices with our customers and develop healthy partnerships.

III. Shareholder-orientated Management

"A company belongs to its shareholders and it should absolutely gain their trust."
1. We increase the profits for our shareholders and investors by creating value with better performance.
2. We conduct business logically and transparently to gain the trust of both our shareholders and investors.
3. We respect the rights of our shareholders and investors and offer them all the necessary information at the appropriate time to realize profits with integrity.

IV. Employee-respecting Management

"Each of the employees is the most important asset of the company."
1. We mutually respect the character of each of our fellow employees and establish a sensible corporate culture based on mutual trust and understanding.
2. We create a pleasant and safe workplace where individuals can openly express their creativity.
3. We do not discriminate based on unreasonable grounds, such as nationality, educational background, place of birth, gender, age, religion, disability, political inclination, or marital status.

V. Employees Compliance Management

"All employees aim to perform their tasks in transparent and fair manner by complying with ethical management"
1. Employees do not force, impose or respond to unfair or unethical tasks within the organization.
2. Employees do not accept or promise bribes.
3. Employees try to avoid any conflict of interest between the company and customers as well as among customers and prioritize the interests of the company and customers if any conflict of interest occurs.
4. Employees strictly manage and protect corporate and customer information which is acquired to complete work-related tasks and do not use it for private purpose.

VI. Suppliers Shared Growth Management

"Suppliers are a source of competitive edge for the company, and we aim for shared growth based on transparent and fair trading with suppliers."
1. When selecting suppliers, it is considered whether they comply with Hyosung’s human rights, environmental and social values.
2. A business trade with a supplier is made in an equal position, and we do not engage in unfair trade practices, abusing our superior position.
3. We create a foundation for shared growth with suppliers by enhancing their sustainability through multi-faceted support activities.

VII. Social Responsibility Management

"A company is a member of society and must achieve harmony with society to grow."
1. We fulfill all the responsibilities and duties as a member of society as well as strive to achieve mutual prosperity and progress through social contribution efforts.
2. We aspire to be an environmentally friendly company and try to get appreciation and respect from the community.
**Ethical Management System**

A company-wide ethics training is implemented in order to help employees better understand ethics management and internalize the acquired knowledge. The departments or relevant personnel with high ethical and legal compliance risk are required to undertake ethics training as mandatory education. All employees in Hyosung receive training to enhance understanding of ethical management and learn responsible management and related current issues such as the Improper Solicitation and Graft Act and Trade Secret Protection Act. We have incorporated ethics in training program for each job level of employees for entry-level employees, promoted employees and executives. A separate set of ethics training which is rather job-oriented is provided to the teams including purchasing, contracting and planning management as well as shared growth.

**Ethical Management Awareness Building**

All employees and executives in Hyosung write ‘Pledge to Practice Ethical Management’ and ‘Pledge to Comply with Improper Solicitation and Graft Act’. In addition, we are making efforts to spread promotional materials for ethics awareness to employees to help them internalize ethical management.

**Stakeholder Whistleblowing Channel**

**Internal Whistleblowing Channel**

The HR counselling center in Hyosung serves as a reporting channel of unethical activities of employees at work and provides consultation for ethics standards and related grievances. It is directly operated by HR executives and receives various grievances at work as well as reports of unethical cases such as sexual harassment, embezzlement, and personnel corruption.

**External Whistleblowing Channel**

We are operating a Hot-Line system to handle various reports and inquiries from the suppliers. Our suppliers can report cases of unethical behaviors from business trades such as bribery and soliciting, cases of unfair subcontracting trades as well as grievances and suggestions for improvement. The Hot-Line is accessible through ‘Hyosung Shared Growth’ site, and other external stakeholders can also report through this channel.
Hyosung conducts an audit on all aspects of management, from on-site management to job diagnosis for production management. We have established and operated internal audit regulations since 1984. We also conduct audits in the technology and quality sectors to build customer trust in our products and gain their satisfaction. In addition, we guarantee the independence of audit activities so that audit activities will not be subject to outside interference during audit, and we perform proper protection activities such as ensuring anonymity so that auditors and informants will not be subjected to unfair treatment and disadvantages.

**Internal Audit Operating System**
We conduct regular audits according to internal audit regulations and special audits if certain issues arise. The material cases detected from the audit results are dealt with different measures such as caution, punishment and reimbursement depending on the seriousness of the cases.

**Follow-up Monitoring after Audit**
The audit results are reported to the CEO, and those who are notified of the results are required to make immediate improvements to the indicated matters. At the same time, the audit team regularly reviews the issues to prevent recurrence.

In order to establish a fair business trade culture together with suppliers, we have incorporated four fair trade guidelines, which are recommended by the Korea Fair Trade Commission, in our corporate regulations. In addition, we have released guidelines for preventing retaliatory behaviors to suppliers, thus establishing a firm foundation for fair partnership and building transparent business relationship.

**Four Fair Trade Guidelines**

<table>
<thead>
<tr>
<th>Making contracts</th>
<th>Selection and Operation of Partners</th>
<th>Internal Deliberation Committee</th>
<th>Written Proof of Subcontracting</th>
</tr>
</thead>
</table>

Hyosung Heavy Industries implements a retaliation prevention policy which prohibits the company to reject or stop the trade or significantly limit the quantity or content of products or services of the suppliers in trade due to the reasons stipulated in the policy. The employees perceived with the relevant misconduct are summoned to disciplinary procedure accordingly.

**Fair business compliance program**
Hyosung introduced Compliance Program (CP) to establish a fair business trade culture with transparent and legitimate procedures. In addition, the Transparent Management Committee under the BOD reviews and determines on the issues related to unfair internal transactions and status of CP implementation.
Companies committed to enhancing customer value stand out in global competition

Hyosung exports over 70% of its products overseas and boasts a global manufacturing system consisting of 36 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 to stay ahead in the fierce global competition.
ABOUT
HYOSUNG

• Brief History
• Business Results
• Global Network
BRIEF HISTORY

We are marching the spirit of a pioneer

Hyosung has played the role of a dynamic locomotive behind the Korean economy. As 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.
## Corporate History

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>Achieved group operating profit KRW 1 trillion, signed an MOU with the Linde Group for liquid nitrogen business</td>
</tr>
<tr>
<td>2019</td>
<td>Completion of Conversion to Holding Company System, expansion of Jeonju Carbon Fiber Plant, establishment of Production Technology Center, Hvosung TNC began operations at a spandex plant in India, Hyosung Heavy Industries acquired an ultra-high voltage transformer plant in Tennessee, U.S.A.</td>
</tr>
<tr>
<td>2018</td>
<td>Commencement of Construction for the India Spandex Plant and Vietnam Bà Rà–Vũng Tàu PP/DH Plant, establishment of Vietnam Quảng Ninh Tire Cord Plant, Hvosung is restructured into a holding company and four operating subsidiaries</td>
</tr>
<tr>
<td>2017</td>
<td>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</td>
</tr>
<tr>
<td>2016</td>
<td>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</td>
</tr>
<tr>
<td>2015</td>
<td>Completed Yongyeon Polyketone and Dri-Z plant construction, established Jeonju Carbon Specialized Venture Training Center, established Hvosung Dong Nai Corporation, obtained Korea’s first STATCOM orders from India and Panama</td>
</tr>
<tr>
<td>2014</td>
<td>Supplied carbon fibers for Hyundai Motor’s future concept cars, received a $100 million order for a substation from Algeria, and opened Jeonbuk Creative Economy Center and Sebitseom</td>
</tr>
<tr>
<td>2013</td>
<td>Won a project for a PV power plant in Mozambique, hosted the GWP declaration, initiated the Hvosung Volunteer Group for Sharing, commercialized carbon fiber and completed a carbon fiber plant in Jeonju, and succeeded in the world’s first commercialization of an advanced material, polyketone</td>
</tr>
<tr>
<td>2012</td>
<td>Concluded a contract for a power network in Qatar, added TAC film operations, and nominated as national project developer for offshore wind power 20MW electric voltage-type HVDC</td>
</tr>
<tr>
<td>2011</td>
<td>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</td>
</tr>
<tr>
<td>2010</td>
<td>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</td>
</tr>
<tr>
<td>2009</td>
<td>Announced Hvosung Way, completed the aramid fiber plant, TAC film plant and merged with Star Lease, Inc., to establish Hvosung Capital, set up 2MW / 750kW wind power generation systems, acquired international certification by DEWI-OCC, launched Hvosung Toyota, acquired GRS certification for ecological recycled yarns</td>
</tr>
<tr>
<td>2008</td>
<td>Turkey Spandex plant completed, acquired China Nantong Youfang Transformers Ltd., and acquired Chin Hung International Inc.</td>
</tr>
<tr>
<td>2007</td>
<td>Yongyeon NF Plant completed, Vietnam Spandex/tire cord plant completed, PET sterilized filling facility newly constructed, solar plant #1 completed, Hvosung recorded revenues of 5 trillion won</td>
</tr>
<tr>
<td>2006</td>
<td>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</td>
</tr>
<tr>
<td>2005</td>
<td>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 Jiaying, China</td>
</tr>
<tr>
<td>2004</td>
<td>Spandex plant completed in Zhuhai, China, distribution transformer plant completed in Baoting, China, tire cord plant completed in Jiaying, China, concluded contract with Northwest Power Network Corporation of China for ultra-high voltage circuit breakers and added nylon film plant to Gunmi Plant 1</td>
</tr>
<tr>
<td>2003</td>
<td>The Class Hvosung Corporation established, Hvosung Spandex (Guangdong) Co., Ltd., established, Hvosung Thin Film (Jiaying) Co., Ltd., established</td>
</tr>
<tr>
<td>2002</td>
<td>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</td>
</tr>
<tr>
<td>2001</td>
<td>Adopted ERP, an advanced management system, China Spandex plant completed, Signed long-term PET bottle supply contract with Beijing Coca-Cola</td>
</tr>
<tr>
<td>2000</td>
<td>Gunmi Spandex plant completed</td>
</tr>
<tr>
<td>1999</td>
<td>Hvosung Computer received KT Mark for ultra-high pressure gas insulating switch and polyester yarns (Aerocool)</td>
</tr>
<tr>
<td>1998</td>
<td>T&amp;C, Trading, Living, and Heavy Industry Units merged into Hvosung Co., Ltd., developed 800KV 2 Pole GIS for the first time in the world</td>
</tr>
<tr>
<td>1996</td>
<td>Daejeon nylon film plant completed</td>
</tr>
<tr>
<td>1995</td>
<td>China PET bottle plant and Daejeon tile carpet plant completed</td>
</tr>
<tr>
<td>1992</td>
<td>Anyang Plant started manufacturing Spandex</td>
</tr>
<tr>
<td>1990</td>
<td>Started Spandex business</td>
</tr>
<tr>
<td>1989</td>
<td>Started PP and propylene business, Hvosung Ebara established</td>
</tr>
<tr>
<td>1986</td>
<td>Developed a new computer model for offices, POWER-5800</td>
</tr>
<tr>
<td>1983</td>
<td>Developed microfiber yarns that combined nylon and polyester</td>
</tr>
<tr>
<td>1979</td>
<td>Eonyang Plant started manufacturing PET bottles</td>
</tr>
<tr>
<td>1977</td>
<td>Hvosung Heavy Industry Changwon Plant completed</td>
</tr>
<tr>
<td>1975</td>
<td>Acquired Hanyoung Industry (predecessor of Hvosung Heavy Industry)</td>
</tr>
<tr>
<td>1973</td>
<td>Dongyang Polyester and Dongyang Textile established</td>
</tr>
<tr>
<td>1972</td>
<td>Started exporting tire cord fabric to Southeast Asia</td>
</tr>
<tr>
<td>1971</td>
<td>R&amp;D Center established</td>
</tr>
<tr>
<td>1968</td>
<td>Ulsan Plant completed</td>
</tr>
<tr>
<td>1966</td>
<td>Dongyang Nylon established</td>
</tr>
<tr>
<td>1957</td>
<td>Hvosung Industry established</td>
</tr>
</tbody>
</table>
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 meet 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.

### Group management performance

<table>
<thead>
<tr>
<th></th>
<th>Total Sales</th>
<th>Operating Profit</th>
<th>Total Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyosung</td>
<td>18,004</td>
<td>1,002</td>
<td>18,347</td>
</tr>
</tbody>
</table>

(In billions of KRW)

### Management performance of holding company and major subsidiaries

<table>
<thead>
<tr>
<th></th>
<th>holding company</th>
<th>Hyosung TNC</th>
<th>Hyosung Heavy Industries</th>
<th>Hyosung Advanced Materials</th>
<th>Hyosung Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sales</td>
<td>3,373,447</td>
<td>5,983,145</td>
<td>3,781,445</td>
<td>3,053,616</td>
<td>1,812,470</td>
</tr>
<tr>
<td>Operating Profit</td>
<td>236,828</td>
<td>322,913</td>
<td>130,252</td>
<td>158,326</td>
<td>153,887</td>
</tr>
<tr>
<td>Total Assets</td>
<td>6,527,055</td>
<td>3,224,307</td>
<td>4,000,830</td>
<td>2,531,099</td>
<td>2,063,516</td>
</tr>
</tbody>
</table>

(In millions of KRW)

### Group sales proportion

- Hyosung Chemical: 10.1%
- Hyosung Advanced Materials: 17.0%
- Hyosung Heavy Industries: 21.0%
- Hyosung TNC: 33.2%
- Holding company: 18.7%

※ End of December 2019

※ This financial data is a simple sum of the 2019 consolidated financial statement, total sales amount, operating profit, and total assets of the holding company and major subsidiaries of Hyosung Group.
GLOBAL NETWORK

Hyosung is building a localized strategic global network

With nearly 20,000 people working at 100 business sites in the world, Hyosung has been building a global network based on localization 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.
World wide Connection

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 on establishing global production bases, and such efforts have allowed Hyosung to accurately reflect the tastes and lifestyle of local clients in its products.

Total 111 business site in 29 countries

<table>
<thead>
<tr>
<th>Region</th>
<th>Domestic</th>
<th>Overseas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>75 sites</td>
<td>15 sites</td>
</tr>
<tr>
<td>Europe &amp; Africa</td>
<td>17 sites</td>
<td>10 sites</td>
</tr>
<tr>
<td>America</td>
<td>19 sites</td>
<td>4 sites</td>
</tr>
</tbody>
</table>

Production Network

<table>
<thead>
<tr>
<th>Domestic</th>
<th>Overseas</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Plants</td>
<td>36 Manufacturing Entities</td>
</tr>
</tbody>
</table>

Marketing / R&D Network

<table>
<thead>
<tr>
<th>Domestic</th>
<th>Overseas</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 R&amp;D Centers</td>
<td>26 Trading Entities</td>
</tr>
</tbody>
</table>
WORLD WIDE HYOSUNG MAP

AMERICA_

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

IRVING (USA)
Nautillus Hyosung America, Inc.

SOUTH HILL (USA)
GST LLC - South Hill

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

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

TORREON (MEXICO)
Hyosung Safety Textiles Mexico S. de R.L. de C.V.

SANTA CATARINA (BRAZIL)
Hyosung Brasil Industria E Comercio De Fibres 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

MAULBORG (GERMANY)
GST GmbH - Maulburg

MURG (GERMANY)
GST GmbH - Murg

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

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

15 Plants
5 R&D Centers

Seoul: Mapo · Cheongdam · Bangbae · Suseo · Banpo Office, Technology R&D Center

Anyang Plant
R&D Labs
Power & Industrial Systems R&D Center

Daejeon Plant

Gumi Plant

Jeonju Plant

Ulsan Plant
Steel Wire Technical Center

Yongyeon Plant

Changwon Plant
Power & Industrial Systems R&D Center

TEXTILE_

ULSAN PLANT
Nylon/Polyester chips, Nylon fibers

GUMI PLANT
Spandex, Polyester fibers, Polyester chips

DAEGU PLANT
Dyeing

POWER & INDUSTRIAL SYSTEMS_

CHANGWON PLANT
Transformers, Switchgears, Motors

SEJONG PLANT
Welding machine, PV inverter

HGS CHANGWON PLANT
Pumps

INDUSTRIAL MATERIALS_

ULSAN PLANT
Tire cords, Technical yarn, Aramid, PET BCF

ANYANG PLANT
Rolled carpets, Car mat, Nylon BCF

DAEJEON PLANT
Tire carpets, Mat, PP BCF

JEONJU PLANT
Carbon fibers

CHEMICALS_

YONGYEON PLANT
PP/Oh, TPA, Polyketone, NF, BOPA films
TAC films, PET films

DAEJEON PLANT

GUMI PLANT
PET films, BOPA films

OIKSAN PLANT
Tac films, Acryl

INFORMATION & COMMUNICATION_

HYOSUNG TNS GUMI PLANT
ATM
INFORMATION & COMMUNICATION

Hysung TNS Inc.
www.hyosung-tns.co.kr
HQ
(06349) Suseo Bldg, 281, Gwanggyeong-ro, Gangnam-gu, Seoul (Suseo-dong)
T. 82-2-6181-2114 F. 82-2-6181-2222

Gumi Plant
(34041) 108-3 Gongdam2-ro, Gumi-si, Gyeongsangbuk-do (Simi-dong)
T. 82-54-470-9009 F. 82-54-470-9019

Oksan Plant
(28101) 99, Oksan Sandan-ro, Oksan-myeon, Heungdeok-gu, Cheongju-si Chungbuk (Heojeong-ni)
T. 82-43-249-3600 F. 82-43-249-3899

OTHER AFFILIATED COMPANIES

Hysung Capital Co., Ltd.
www.hyosung-capital.co.kr
HQ
(06054) 306 Dosan-daero, Gangnam-gu, Seoul (Nonhyeon-dong)
T. 82-558-9688 F. 82-2-511-3318

Busan Office
(48058) Room 103, 30, Centum seo-ro, Haeundae-gu, Busan (H-dong, KN Tower)
T. 82-51-784-7811 F. 82-51-463-7805

Daegu Office
(41525) 47 Hwarang-ro, Dong-gu, Daegu
T. 82-53-426-9801 F. 82-53-426-9830

Seobu Office
(35235) Room 702, Gounson Building, 59, Dunsan-eup, Seo-gu, Daejeon
T. 82-42-485-4806 F. 82-42-484-0366

Gwangju Office
(61947) 112, Sangmyeonehra-ro, Seo-gu, Gwangju
T. 82-62-385-2193 F. 82-62-385-2194

Suwon Office
(16670) 181, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do (3P R7 Bldg, Maetan-dong)
T. 82-31-216-8717 F. 82-31-216-8719

Hysung ITX Co., Ltd.
www.hysungitx.com
HQ
(07212) 15F Ite Bldg, 57 Seonyudong2-ro, Yeongdeungpo-gu, Seoul-si (Yangpyeong-dong 4ga)
T. 82-2-2102-8400 F. 82-2-2102-8424

Galaxia Electronics Co., Ltd.
www.galalec.com
HQ
(16642) 50 132 Beonjil, Omocheonno, Gwonseon-gu, Suwon-si, Gyeonggi-do (Gosaek-dong)
T. 82-31-8060-8909 F. 82-31-278-2214

Galaxia Communications Co., Ltd.
www.galaxiacom munications.com
HQ
(06349) Suseo Bldg, 281, Gwanggyeong-ro, Gangnam-gu, Seoul (Suseo-dong)
T. 82-556-0123 F. 82-2-512-1759

Galaxia Device Co., Ltd.
www.galaxia device.com
HQ
(16642) 50 132 Beonjil, Omocheonno, Gwonseon-gu, Suwon-si, Gyeonggi-do (Gosaek-dong)
T. 82-31-548-9329 F. 82-31-548-9626

HRD CENTER

Anyang HRD Center
(14080) 74 Simma-dong, Dong-gu, Anyang-si, Gyeonggi-do (Hongdae-dong)
T. 82-31-428-1101 F. 82-31-452-8176

Changnyeong HRD Center
(50221) 38 Hwangeok-ro, Changnyeong-eup, Changnyeong-gun, Gyeongsangnam-do
T. 82-55-533-7890 F. 82-55-533-7699

RESEARCH & DEVELOPMENT

Hysung R&D Labs
(14080) 74 Simma-dong, Dong-gu, Anyang-si, Gyeonggi-do (Hongdae-dong)
T. 82-31-428-1000 F. 82-31-454-0089

Power & Industrial Systems R&D Center (Anyang)
(14080) 74 Simma-dong, Dong-gu, Anyang-si, Gyeonggi-do (Hongdae-dong)
T. 82-31-428-1000 F. 82-31-596-1699

Steel Wire Technical Center
(44781) 30 Nabodo, Nam-gu, Ulsan-si (Maeam-dong)
T. 82-52-278-7741 F. 82-52-278-7749

Technology R&D Center
(06349) Suseo Bldg, 281, Gwanggyeong-ro, Gangnam-gu, Seoul (Suseo-dong)
T. 82-2-6181-2114 F. 82-2-6181-2222
<table>
<thead>
<tr>
<th>Country</th>
<th>Location</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>RUSSIA</td>
<td>Hyosung Russia LLC.</td>
<td>Prospect Vernadskogo 6, Business Center 7th Floor, Moscow, 119311</td>
<td>T. 7-495-510-6131</td>
<td></td>
</tr>
<tr>
<td>SPAIN</td>
<td>Hyosung TNC Barcelona Office</td>
<td>Calle Caravel-la la Niña, 12, 7º - B, 08017 - Barcelona, Spain</td>
<td>T. 34-93-430-7735</td>
<td>F. 34-93-410-1737</td>
</tr>
<tr>
<td>UK</td>
<td>Hyosung Heavy Industries UK Branch</td>
<td>Suite 1, Parkway 5, Parkway Business Centre, Princess Rd, Manchester M14 7HR, UK</td>
<td>T. 44-161-226-9559</td>
<td></td>
</tr>
<tr>
<td>AFRICA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOUTH AFRICA</td>
<td>GST Automotive Safety South Africa (Proprietary) Limited</td>
<td>19 Kelly Road, Hammarsdale, 3700, KwaZulu Natal, South Africa</td>
<td>T. 27-317-361-016</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyosung South Africa (Pty) Ltd.</td>
<td>6th Floor, Fredman Towers, 13 Fredman Drive, Sandton, Johannesburg, Gauteng, Republic of South Africa</td>
<td>T. 27-0372-723-0477</td>
<td></td>
</tr>
<tr>
<td>NORTH AMERICA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyosung Holdings U.S.A., Inc. (LA Office)</td>
<td>34 Executive Park Ste. 200 Irvine, CA 92614</td>
<td>T. 1-714-989-8900</td>
<td>F. 1-714-989-8901</td>
</tr>
<tr>
<td></td>
<td>Hyosung U.S.A., Inc. (Headquarter)</td>
<td>1556 Montgomery Street, South Hill, VA 23970, U.S.A.</td>
<td>T. 1-434-447-7629</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyosung TNC Corporation Panama Office</td>
<td>International Business Center Piso 8, AVE.Manuel Espinosa Bantista Bella Vista, Apdo.0819-06390, Panama City, Republic of Panama</td>
<td>T. 507-214-8968</td>
<td>F. 507-214-8971</td>
</tr>
<tr>
<td></td>
<td>Hyosung TNC Corporation Panama Office</td>
<td>Three Penn Center West, Suite 300, Pittsburgh, PA 15276, U.S.A.</td>
<td>T. 1-412-787-1710</td>
<td>F. 1-412-787-2270</td>
</tr>
<tr>
<td></td>
<td>Hyosung HICO, LTD</td>
<td>2865 Riverport Rd, Memphis, TN 38109, U.S.A.</td>
<td>T. 1-901-942-0775</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyosung U.S.A., Inc.</td>
<td>19 Kelly Road, Hammarsdale, 3700, KwaZulu Natal, South Africa</td>
<td>T. 27-317-361-016</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyosung South Africa (Pty) Ltd.</td>
<td>6th Floor, Fredman Towers, 13 Fredman Drive, Sandton, Johannesburg, Gauteng, Republic of South Africa</td>
<td>T. 27-0372-723-0477</td>
<td></td>
</tr>
<tr>
<td>CENTRAL &amp; SOUTH AMERICA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BRAZIL</td>
<td>Hyosung Brasil Industria E Comercio De Fibras Ltda.</td>
<td>BR 101, Km 69, Bairro Rainha, Araquari, CEP 89245-000, Santa Catarina, Brasil</td>
<td>T. 55-47-3025-9600</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyosung Brasil Industria E Comercio De Fibras Ltda. (Sao Paulo Trading)</td>
<td>Av. Eng. Luis Carlos Berrini,1297 Conj 142, Sao Paulo/SP - CEP 04571-010, Brasil</td>
<td>T. 55-11-5185-4200</td>
<td></td>
</tr>
<tr>
<td>MEXICO</td>
<td>Hyosung Mexico City S.A. de C.V.</td>
<td>Paseo de Tamarindos 90, Torre 1, Piso10, Col. Bosques de las Lomas, C.P. 05120, Mexico D.F., Mexico</td>
<td>T. 52-55-2520-2790</td>
<td>F. 52-55-5540-2078</td>
</tr>
<tr>
<td></td>
<td>Hyosung Mexico S. de R.L. de C.V.</td>
<td>Blvd. Industria de la Transformacion #450 Parque PYMES Col. Industrial Mieleras Torreon Coahuila Mexico C.P. 27400</td>
<td>T. 52-871-222-8400</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyosung Automotive Safety Components International S.A. de C.V.</td>
<td>Blvd. Industria de la Transformacion #450 Parque PYMES Col. Industrial Mieleras Torreon Coahuila Mexico C.P. 27400</td>
<td>T. 52-871-222-8400</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyosung Automotive Safety Components International S.A. de C.V.</td>
<td>Blvd. Industria de la Transformacion #450 Parque PYMES Col. Industrial Mieleras Torreon Coahuila Mexico C.P. 27400</td>
<td>T. 52-871-222-8400</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyosung TNC Corporation Panama Office</td>
<td>Three Penn Center West, Suite 300, Pittsburgh, PA 15276, U.S.A.</td>
<td>T. 1-412-787-1710</td>
<td>F. 1-412-787-2270</td>
</tr>
<tr>
<td></td>
<td>Hyosung HICO, LTD</td>
<td>2865 Riverport Rd, Memphis, TN 38109, U.S.A.</td>
<td>T. 1-901-942-0775</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyosung U.S.A., Inc.</td>
<td>19 Kelly Road, Hammarsdale, 3700, KwaZulu Natal, South Africa</td>
<td>T. 27-317-361-016</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyosung South Africa (Pty) Ltd.</td>
<td>6th Floor, Fredman Towers, 13 Fredman Drive, Sandton, Johannesburg, Gauteng, Republic of South Africa</td>
<td>T. 27-0372-723-0477</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyosung South Africa (Pty) Ltd.</td>
<td>6th Floor, Fredman Towers, 13 Fredman Drive, Sandton, Johannesburg, Gauteng, Republic of South Africa</td>
<td>T. 27-0372-723-0477</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyosung South Africa (Pty) Ltd.</td>
<td>6th Floor, Fredman Towers, 13 Fredman Drive, Sandton, Johannesburg, Gauteng, Republic of South Africa</td>
<td>T. 27-0372-723-0477</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyosung South Africa (Pty) Ltd.</td>
<td>6th Floor, Fredman Towers, 13 Fredman Drive, Sandton, Johannesburg, Gauteng, Republic of South Africa</td>
<td>T. 27-0372-723-0477</td>
<td></td>
</tr>
</tbody>
</table>