

KOREA TECHNOLOGY FINANCE CORPORATION

2020 KOTEC ANNUAL REPORT



KIBO 기술보증기금

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CEO's Message



In 2020, KOTEC concentrated its capacities on helping SMEs and startups overcome crises arising from the Covid-19 pandemic.



KOTEC is performing a role as a 'comprehensive supporting agency for innovative growth' that enables SMEs and startups to drive the leading economy.

In 2020, SMEs and startups suffered major challenges as the global outbreak of the Covid-19 pandemic and its resulting impacts continued. The economic repercussions for people in the field have been exacerbated by the largest fall since the global financial crisis, while the financial conditions of many enterprises have also gotten worse, pushing them into a credit crunch.

Under these circumstances, KOTEC provided KRW 3.7 trillion (out of KRW 7.8 trillion in total new guarantees) for enterprises suffering from the crisis through 'Covid-19 damage support programs,' such as special guarantees and mutual agreement guarantees. Furthermore, it focuses its capacity on helping SMEs and startups overcome the crisis brought on by the Covid-19 pandemic, such as by extending the expiry of all existing guarantees for the full amount.



For improved sustainability, KOTEC will make continuous efforts to fulfill its Environmental and Social responsibilities and strengthen transparency in Governance, all in accordance with its purpose of establishment.



In addition to providing support for overcoming the crisis, KOTEC newly established preferred guarantees for non-contact and digital enterprises and built a technology transfer platform (Tech-Bridge) that matches and relays the technical demands of SMEs and startups and technical outcomes by public research institutes, while providing financial support for commercialization. In doing so, it gave SMEs and startups opportunities to jump in on the digital transformation trend accelerated by the Covid-19 pandemic and scale-up their organizations.

Internally, by digitalizing the overall guarantee process from consulting to guarantee certificate issuance, KOTEC has built infrastructure that enables non-contact digital provision of guarantees. Through seamless integration between expert opinions and artificial intelligence (AI) technology, it completed the development of a new technology rating system (AIRATE) with enhanced accuracy in predicting the growth and risk level of enterprises, which moved into full-fledged usage for technology appraisals in 2021.

Also in 2021, KOTEC is confronting an urgent task to provide the systematic support required for SMEs and startups to overcome the current Covid-19 crisis and prepare for the post-Covid-19 era, which is a new order emerging amidst the crisis.

As such, KOTEC will prepare a dedicated guarantee program for the 'Korean New Deal (Digital + Green),' which is a long-term project to improve the structure of the economy, driving the transformation of the Korean economy from one that follows to one that leads. Additionally, by reinforcing the support system in every stage of development, from opening to takeoff, and on to continuous growth and fostering of preliminary unicorn enterprises, it will bring forward the realization of Korea becoming one of the strongest venture countries.

To put in practice its ESG management, which is becoming a topic of conversation around the globe, KOTEC will make efforts in fulfilling environmental and social responsibilities and strengthening transparency of governance, all in accordance with its purpose of establishment, including newly setting up carbon valuation model-based green guarantees for the first time among financial institutions, fostering social ventures, and providing regionally-balanced new deal support, thereby improving its sustainability.

Above all, to help SMEs and startups succeed along the rough path that the ongoing Covid-19 pandemic might lay out for them, KOTEC will employ every means of policy at its disposal, such as provision of guarantees worth KRW 24.4 trillion, provision of venture capital through guarantee-linked investment, and demand-based technology transfer and commercialization support.

This annual report integrates all KOTEC works and summarizes its management status. We expect it will help you, our stakeholders from SMEs and startups and relevant institutions, better understand our work.

April 2021

President of KOTEC Jeong Yoon-Mo



INNOVATION

Creating values through continuous innovation, KOTEC will become a global leader in technology finance.

KOTEC has pioneered the way and led the national technology finance market from the very beginning - from back when the idea of technology finance was completely new and unfamiliar.

Now that technology finance based on intangible assets has emerged as a global buzzword, KOTEC will expand into the global market as the leader of technology finance by disseminating the Korean technology finance system abroad.

01

Introduction of KOTEC

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Purpose of establishment and role of KOTEC

KOTEC was established according to the Korea Technology Finance Corporation Act in April 1989 in order to facilitate financing for new technology businesses by stabilizing and developing technology guarantees and furthering their contributions to the development of the national economy (Article 1, Korea Technology Finance Corporation Act), as well as to make funds more readily available for enterprises lacking security solvency by guaranteeing any liabilities that may be incurred by such enterprises (Article 12, Korea Technology Finance Corporation Act).

Since its establishment, KOTEC has contributed to improving the competitiveness of technical SMEs by providing technology guarantees worth about KRW 393 trillion for technical SMEs holding excellent technologies and business characteristics but lacking security solvency. In particular, KOTEC has led the invigoration of technology transfers by establishing a system where the funds required for technical innovation are provided through technology appraisal. In the meantime, it has been operating specialized programs to create a new growth engine for the national economy, such as by providing support for matching and transferring technologies held by universities or research institutes with technologies required by SMEs, conducting technology protection projects, such as technology trusts, technology bailment, and intellectual property (IP) mutual aid, expanding discovery of and support for technically-innovative enterprises, such as startups and Inno-Biz enterprises, and making direct investments to cover up any blind spots in the investment market, thereby laying the groundwork for a comprehensive technology finance support system.

Key roles

KRW 25.7 trillion

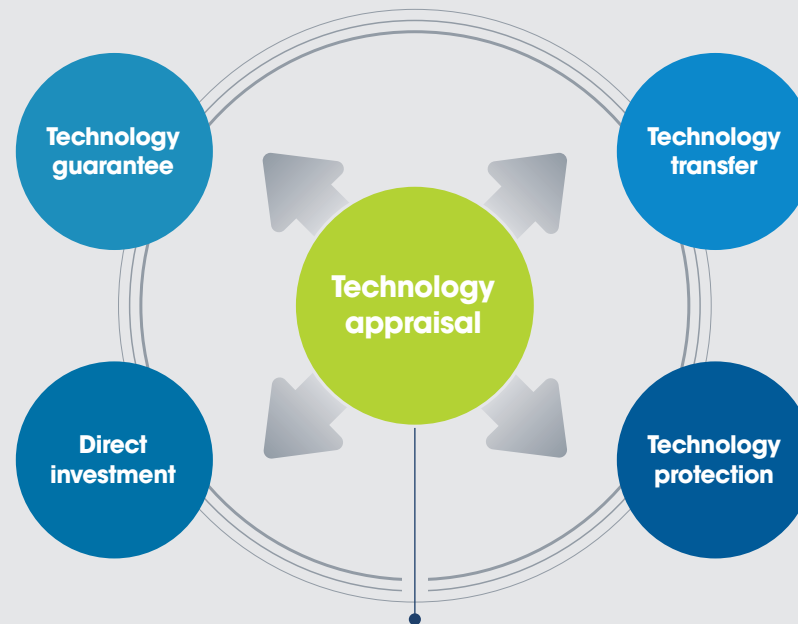
(guarantee balance as of 2020)

Provide guarantees for SMEs that lack security but hold excellent technical capabilities with high future values, such as technical competitiveness and commercialization feasibility

KRW 195.5 billion

(investment balance as of 2020)

Make direct investments, such as through subscriptions of new stocks and convertible bonds, into startups/local enterprises holding excellent technologies and technically-innovative enterprises



900 cases

(number of transferred technologies in 2020)

Facilitate transfers of available technologies held by public research institutes or universities and needed technologies by SMEs and provide financial support for technology transfers and commercialization

6,003 cases

(number of technology trust and technology bailment cases in 2020)

Protect technologies held by SMEs and provide overall support to invigorate transfers

510,000 cases (number of technology appraisal cases in 2020)

- Appraise intangible technologies based on technical competitiveness, marketability, and commercialization feasibility to use the results as a base for providing financial and non-financial support
- Perform internal-purpose appraisals for KOTEC's independent projects and external-purpose appraisals for which the results are disclosed to the outside

KOTEC's Key Customers

KOTEC selects enterprises that fall into dedicated support categories as key customers in line with its purpose of the establishment and direction of government policies.

Venture businesses

Enterprises that mount a business challenge based on new ideas or technologies and adventurous entrepreneurship;
As of the end of 2020, 66.1% of startups are using KOTEC's guarantees

Inno-Biz enterprises

Innovative tech SMEs that secure competitiveness based on their technological edge;
As of the end of 2020, 42.4% of Inno-Biz enterprises are using KOTEC's guarantees

Technology startups

Technical startups that contribute to creating jobs and nurturing growth potential;
These enterprises accounted for 36.0% of the total guarantee amount in 2020

Enterprises holding excellent technologies that fall under innovative-growth industries

Enterprises holding excellent technologies falling under innovative-growth industries, such as the new renewable energy industry and knowledge and culture industry;
These enterprises accounted for 32.3% of the total guarantee amount in 2020

R&D enterprises

Enterprises that develop and commercialize excellent technologies;
These enterprises accounted for 23.9% of the total guarantee amount in 2020

Providing concentrated support for **leading innovative tech enterprises** with technological competency and growth potential, enabling them to bring about economic growth.



Brief History



KOTEC was established

1989



'Technology Appraisal Guarantee System' was launched

1999



KOTEC's proprietary Technology Rating System (KTRS) was developed

2005



Relocated Headquarters to Munhyeon International Finance Complex in Busan

2011

1997

First 'Technology Appraisal Center' was opened in Korea



2002

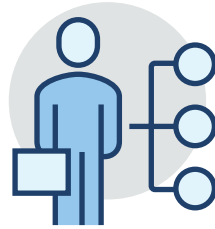
Implemented the Venture Investment Guarantee System



2007

Guarantee systems were unified into the Technology Guarantee Scheme (Abolition of assessment based on financial statements)





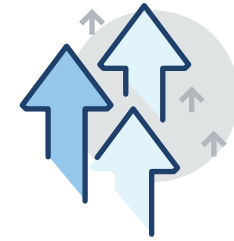
Established support system for technology transfers and commercialization (Established Tech-Bridge)

2015



Competent authority was changed (Financial Services Commission → Ministry of SMEs and Startups)

2017



- Accumulated guarantee amount reached KRW 393 trillion
- AI-based new technology rating model was implemented

2020

2012

Legislation of guarantee-linked investment of KOTEC



2016

Legal name was changed (Korea Technology Credit Guarantee Fund → Korea Technology Finance Corporation)



2019

- 30th anniversary of establishment was celebrated
- Technology protection program (Tech-Safe) was launched
- Designation was given as a specialized technology promotion agency for SMEs



Accomplishments in 2020

Jan. 9

Implemented special guarantees for enterprises running material, part, and equipment businesses

Mar. 30

Expanded the amount of new guarantees for SMEs and small-business owners to overcome the Covid-19 situation

Apr. 6

Held a kick-off ceremony for the dedicated small giants 100 support group

June 9

Held Digital Innovation Vision Sharing Workshop

June 11

Held a ceremony for the automobile mutually-beneficial coexistence guarantee agreement

June 19

Achieved A grade, the highest grade possible, in the Ministry of Economy and Finance's standing auditor's performance evaluation

July 23

Implemented a new AI-based technology appraisal model

Feb. 13

Launched the Covid-19 special guarantee

Mar. 2

Announced the joint labor and management declaration to overcome the Covid-19 crisis

May 28

Concluded the 'IP financial support promotion agreement for joint use of KPAS' with the Ministry of SMEs and Startups, KIPO, and four major commercial banks

June 18

Concluded an 'agreement for commercialization support for successful industrial technology R&D projects' with the Korea Evaluation Institute of Industrial Technology

June 15

Held a pump priming declaration ceremony for shared growth of small giants 100

July 6

Held a preliminary business establishment package one-day networking event





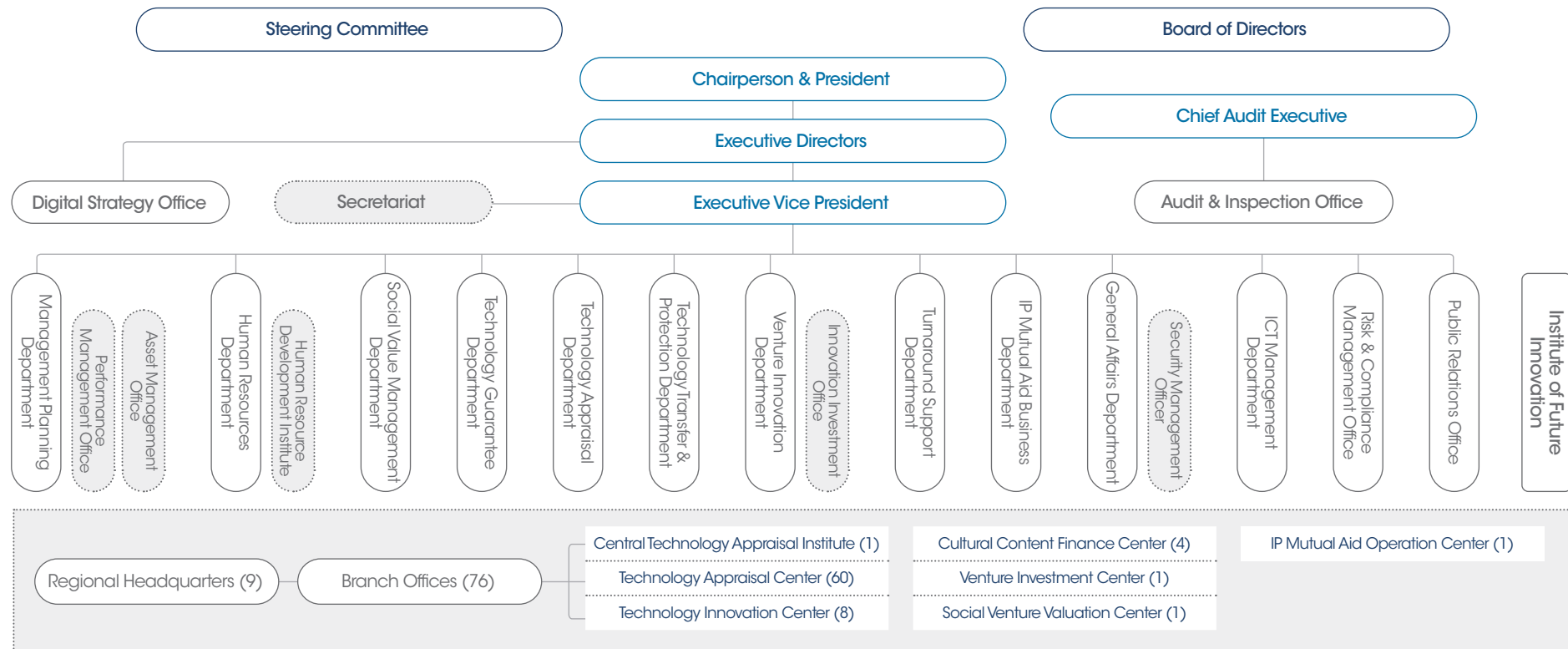
Organization and Human Resources

As of the end of 2020, KOTEC consists of its headquarters (11 departments, four offices, five affiliated offices, one institute) and branch offices (nine Regional Headquarters, one Central Technology Appraisal Institute, 60 Technology Appraisal Centers, eight Technology Innovation Centers, four Cultural Content Finance Centers, one Venture Investment Center, one Social Venture Valuation Center, and one IP mutual aid operation center), and its workforce consists of 1,497 staff members, including seven executives and 178 special service employees.

In 2020, among the departments housed at its headquarters, the digital finance office was changed to a digital strategy office and moved directly under the executive director to reinforce the power of digital innovation execution in the Post Covid-19 era and accelerated transformation to a digital economy. Among the sales departments, two regional headquarters were newly established to reinforce connections among sales branches centered around the regional headquarters, while two sales branches (one technology appraisal center and one cultural content finance center) were newly set up to respond to expanded demand for technology finance, as the amount of guarantees increased to overcome the Covid-19 crisis and to support regional cultural industries.

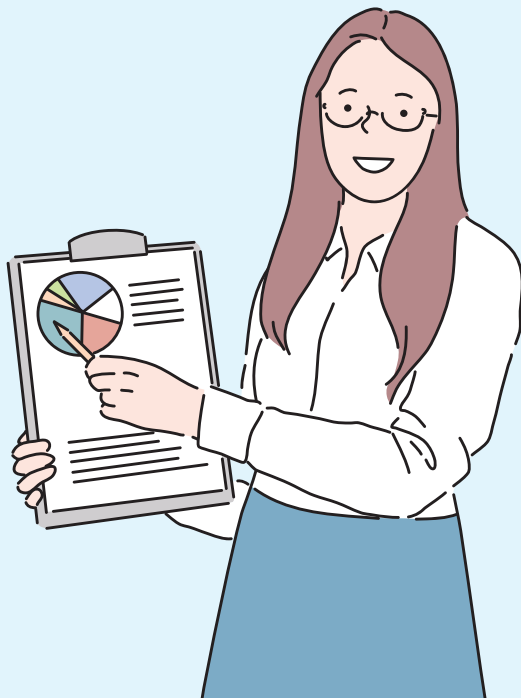
(As of December 31, 2020)

Category	Executives	1st Class	2nd Class	3rd Class	4th Class	5th & 6th Class	Special Services	General affairs officers	Non-limited term contract employees	Total
Current workforce	7	20	98	308	384	405	178	3	94	1,497



Mid- and Long-term Business Strategy

KOTEC was established to make funds more readily available for new technology businesses and further contribute to the development of the national economy. To meet this purpose of establishment, KOTEC set its mission as 'contributing to the national economy by activating technology finance and support for innovation for SMEs and startups' and established mid- and long-term management plans and strategies after collecting and employing opinions from both inside and outside the institution.



Mission

To contribute to the growth of the national economy
by invigorating technology finance and innovation support for SMEs and startups

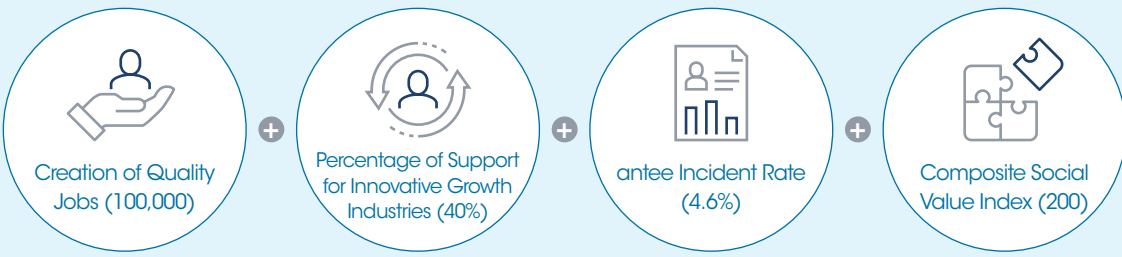
Vision

Adding value to technologies as the **No.1** partner in innovative growth for SMEs and startups

Core values

Fairness Innovation Togetherness

2025 Mid- and Long-Term Business



Strategic objectives



Strategic tasks

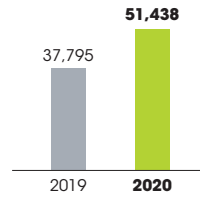
Increase support for SMEs to overcome the crisis	Implement a post-Covid-19 response support system	Promote digital customer oriented managerial innovation	Pursue values in safety and environmental preservation
Strengthen support for maintaining and creating quality jobs	Foster a vibrant and innovative startup ecosystem	Improve its position as a specialized institution for technology appraisal	Realize transparent and ethical management and social fairness
Support the vitalization of local and social economies	Support SMEs in improving technological competitiveness	Manage financial sustainability in a stable and balanced manner	Invigorate communication and participation and put social contribution into place
Foster a mutually-beneficial and fair entrepreneurial environment	Promote growth and scale-up measures for promising enterprises	Build a foundation for future-oriented management	Realize an organizational culture based on trust and cooperation

KOTEC in 2020

By building fair work processes based on technology appraisal and creating a variety of values through cooperation, KOTEC is making continuous efforts to develop itself into the most reliable comprehensive support agency for SMEs and startups' innovative growth.

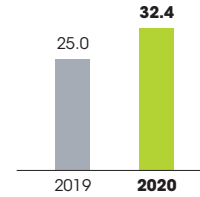
Managerial Achievements

Creation of Quality Jobs (cumulative total)



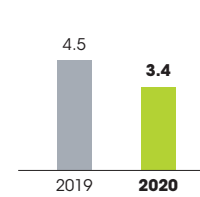
(The goal is more than 100,000 jobs by 2025)

Percentage of Support for Innovative Growth Industries



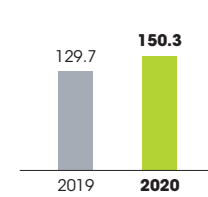
(The goal is higher than 40% by 2025)

Guarantee Incident Rate



(The goal is lower than 4.6% by 2025)

Composite Social Value Index



(The goal is higher than 200 by 2025)



Guarantee

New guarantee amount

KRW **7.8** trillion

Technology appraisal

Number of technology appraisal cases (cumulative total)

765,260 cases

Technology transfer

Number of technology transfer contract relays (new)

721 cases

Technology protection

Attraction of technology trusts (new)

317 cases

IP mutual aid

Registration of mutual aid (new)

3,797 cases

Investment

Guarantee-linked investment amount (new)

KRW **25.5** billion

Turnaround support

Amount of turnaround support guarantees (new)

KRW **29.6** billion

Workforce

Current workforce

1,497 persons

Safety

Occupational health & safety management system accreditation

First time among financial institutions

Customer

Customer satisfaction (for seven consecutive years)

Excellent

Ethics

Comprehensive anti-corruption index

Excellent

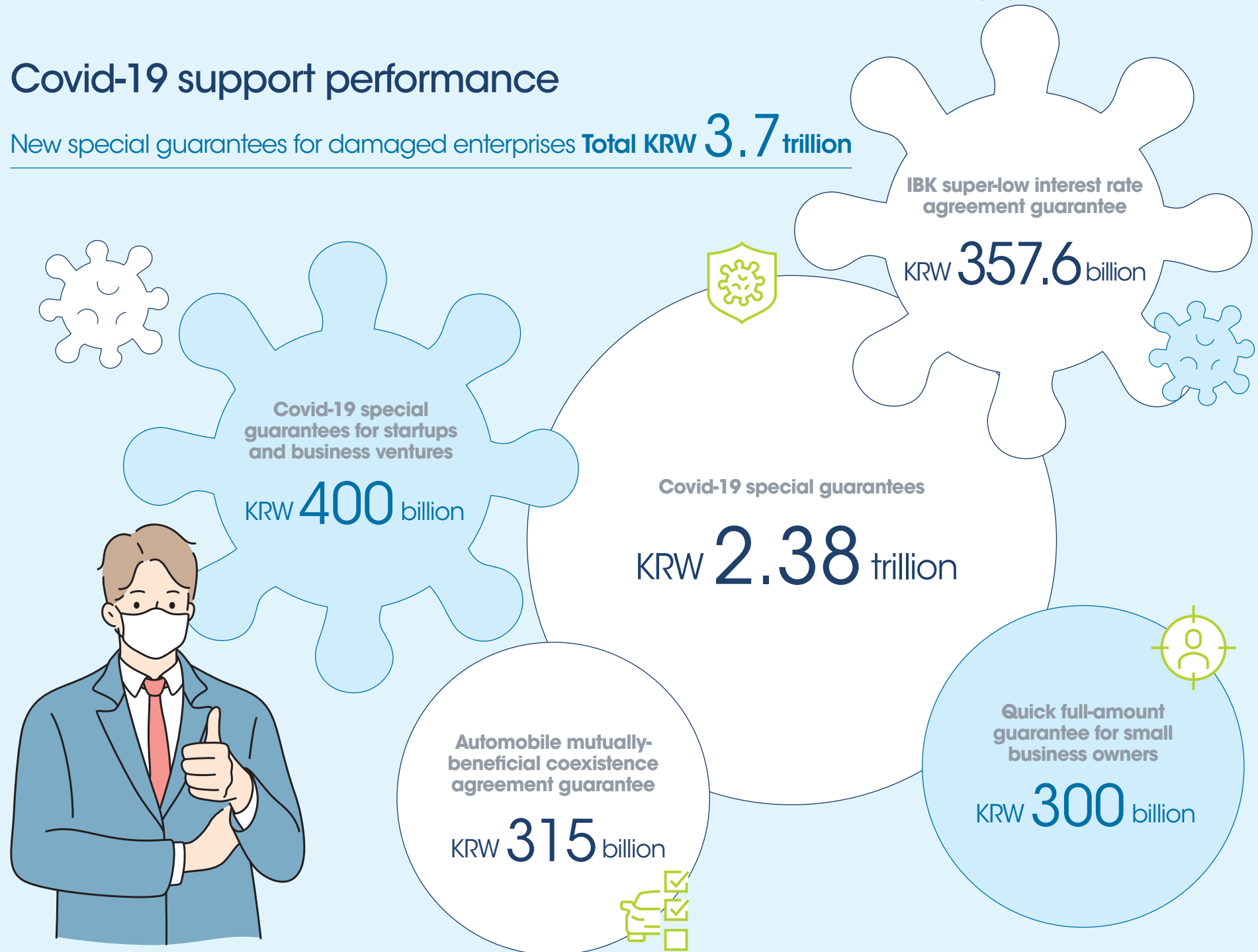
Security

Information security assessment

Very excellent

Covid-19 support performance

New special guarantees for damaged enterprises **Total KRW 3.7 trillion**



CHALLENGE

KOTEC is by your side to help you spread your wings
and take on new challenges

Amidst the recent depression in the global economy, greatly accelerated by the Covid-19 outbreak, KOTEC is providing emergency support, such as through its 'Covid-19 special guarantee,' to aid SMEs and venture businesses in overcoming this crisis, continuously expanding technology guarantees and promoting a variety of support programs while fulfilling its role as an institution offering comprehensive support for SMEs and startups.

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Management Status

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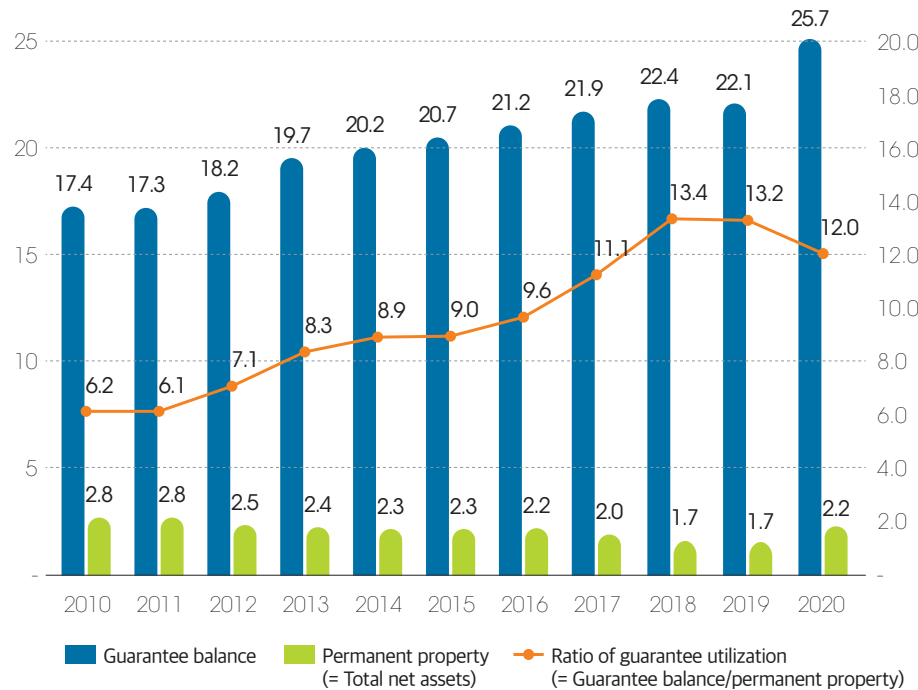
1. Overview

In 2020, the Korean economy suffered negative growth due to the severe economic recession following the spread of Covid-19. The lingering economic recession exacerbated the vulnerable managerial environment for SMEs. As such, KOTEC supplied guarantees worth KRW 25.7 trillion, marking an increase of KRW 3.6 trillion compared to 2019, to inject immediate liquidity for SMEs experiencing damage from the Covid-19 pandemic and extended the maturity for the total amount of existing guarantees, all in an effort to help SMEs overcome the managerial crisis. In particular, in quick response to the non-contact era brought on by the expansion of Covid-19, KOTEC implemented an electronic contract system that simplifies the guarantee procedure and, by doing so, enhanced customer satisfaction. As a result, a customer can now handle various guarantee-related works in a contactless manner. Furthermore, KOTEC diversified its work by successfully completing new projects, such as special guarantees for IP startups, special guarantees for material, parts, and equipment industries, the selection of 100 small giants, and VC investment matched special guarantees (loan-type).

Fundamental property represents basic financial resources for technology guarantees and investment support programs. It simultaneously serves as both the capital and the subrogation payment reserve and is set up through contributions from the government and financial institutions. In 2020, the amount of guarantees greatly increased due to the provision of support for enterprises suffering through Covid-19 and the response to the shift to a non-contact and digital industry structure, causing the cost burden to swell, such as for reserves for subrogation. However, thanks to the aggressive efforts to secure funds, such as the government's contribution of KRW 488.3 trillion, statutory contributions of KRW 546 trillion, and private contributions of KRW 125.3 trillion, KOTEC's permanent property increased to KRW 2.15 trillion, showing a year-on-year increase of KRW 475.3 billion. The ratio of guarantee utilization was down-stabilized to 12 times.

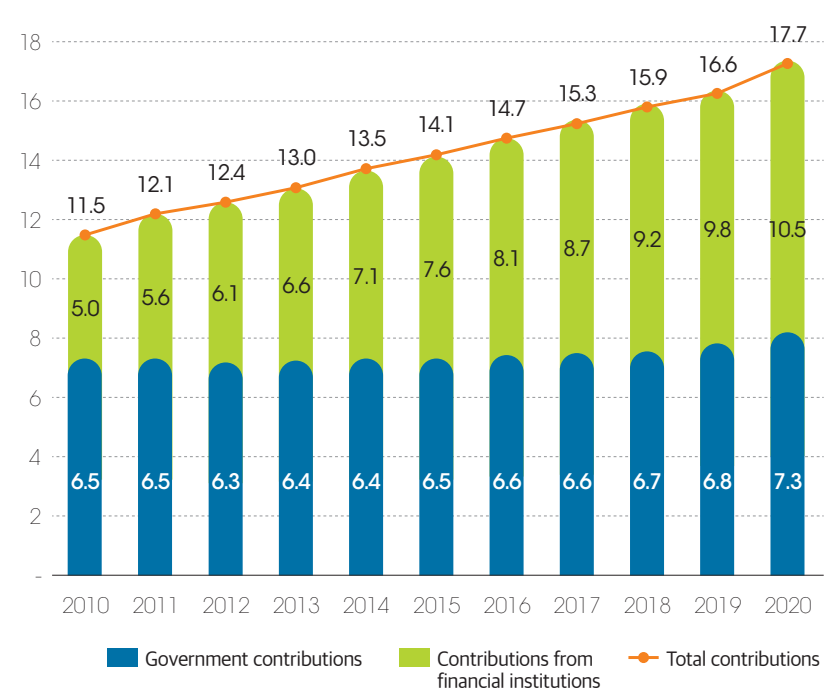
Permanent property and ratio of guarantee utilization

(Unit: KRW trillion, times)

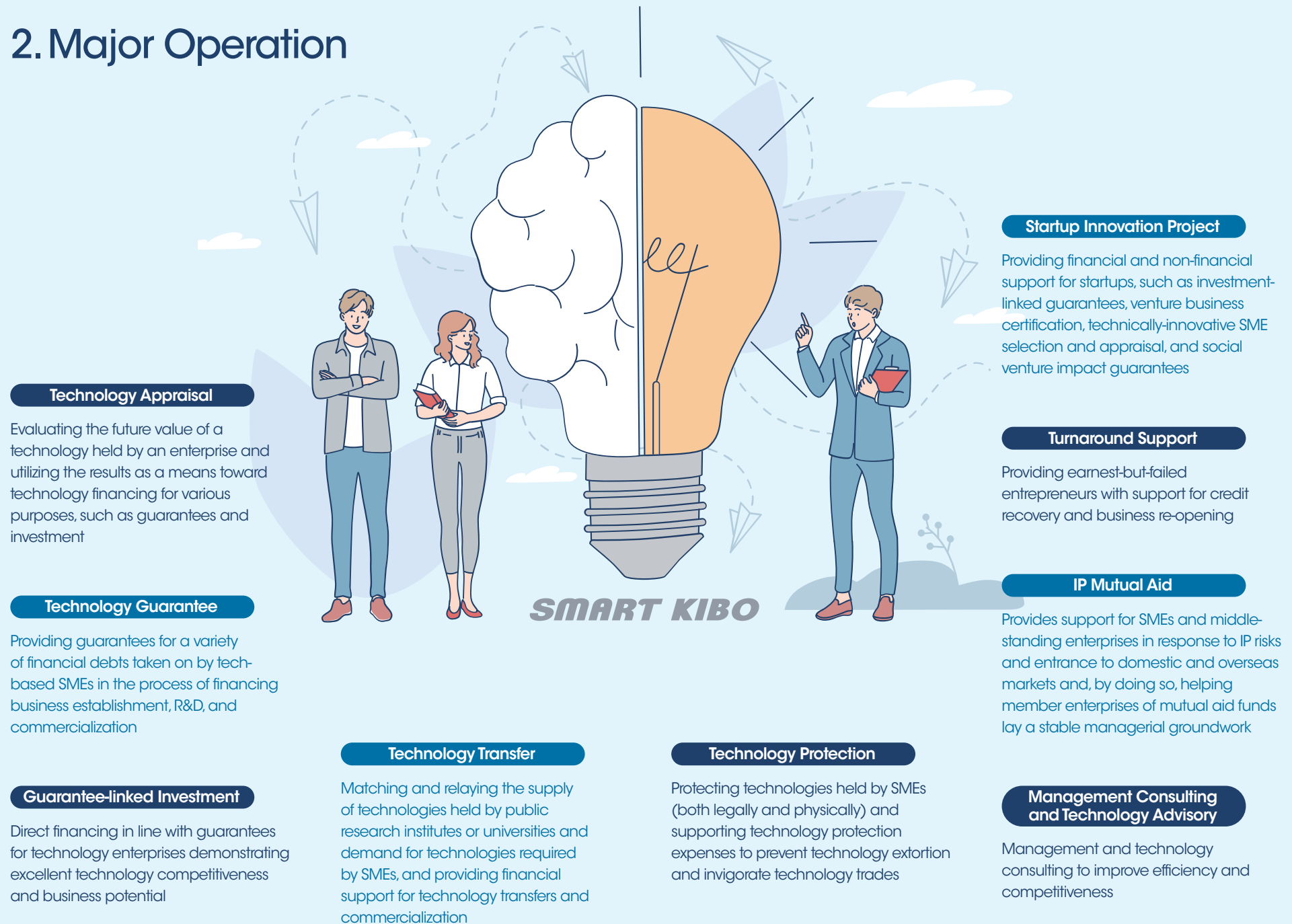


Status and accumulated contributions for the past 10 years

(Unit: KRW trillion)



2. Major Operation

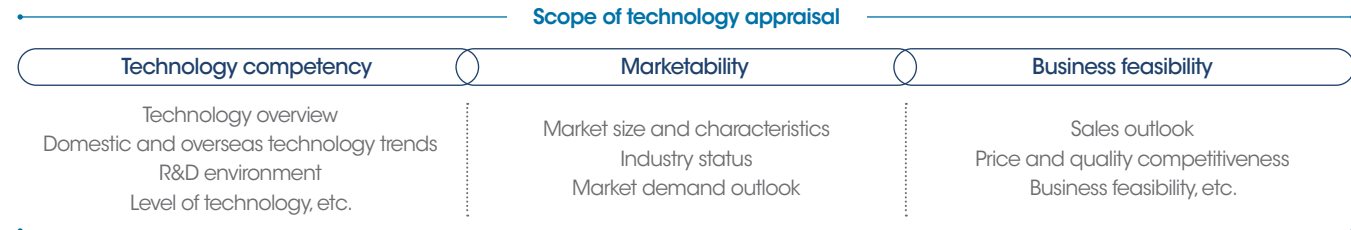


3. Technology Appraisal

Technology Appraisal Overview

➔ Concept of Technology Appraisal

Technology appraisal is a system that appraises the value of technological competitiveness, marketability, and commercialization feasibility for an intangible technology, such as intellectual property or technical know-how, and expresses the result in an amount, rating, grade, opinion, etc.



➔ Need for technology appraisal

Quantitative appraisal of an enterprise is generally done through credit evaluation, but in the case of enterprises in their earlier stages or of technically-innovative enterprises, they are not evaluated fairly in the market, as calculation of their credit rating (financial rating) is not possible or their ratings are given low scores. Technology appraisal is necessary for enterprises in the earlier stages or technically-innovative enterprises that fall into the blind spots of the existing credit evaluation system. The value of technology they hold can be acknowledged through technology appraisal rather than credit evaluation. Based on this acknowledged value, such enterprises can get aid in financing and receive policy support, such as by being selected as an excellent technical enterprise or through technology certification. In other words, technology appraisal is a prerequisite as a core function that reasonably measures value for enterprises in their earlier stages or technically-innovative enterprises, which generally fall into blind spots in the existing credit evaluation system.

➔ Types of Technology Appraisal

Technology appraisals are categorized into technology valuation, technology business feasibility evaluation, and comprehensive technology evaluation. It is used for a technology or for the enterprise holding the technology.

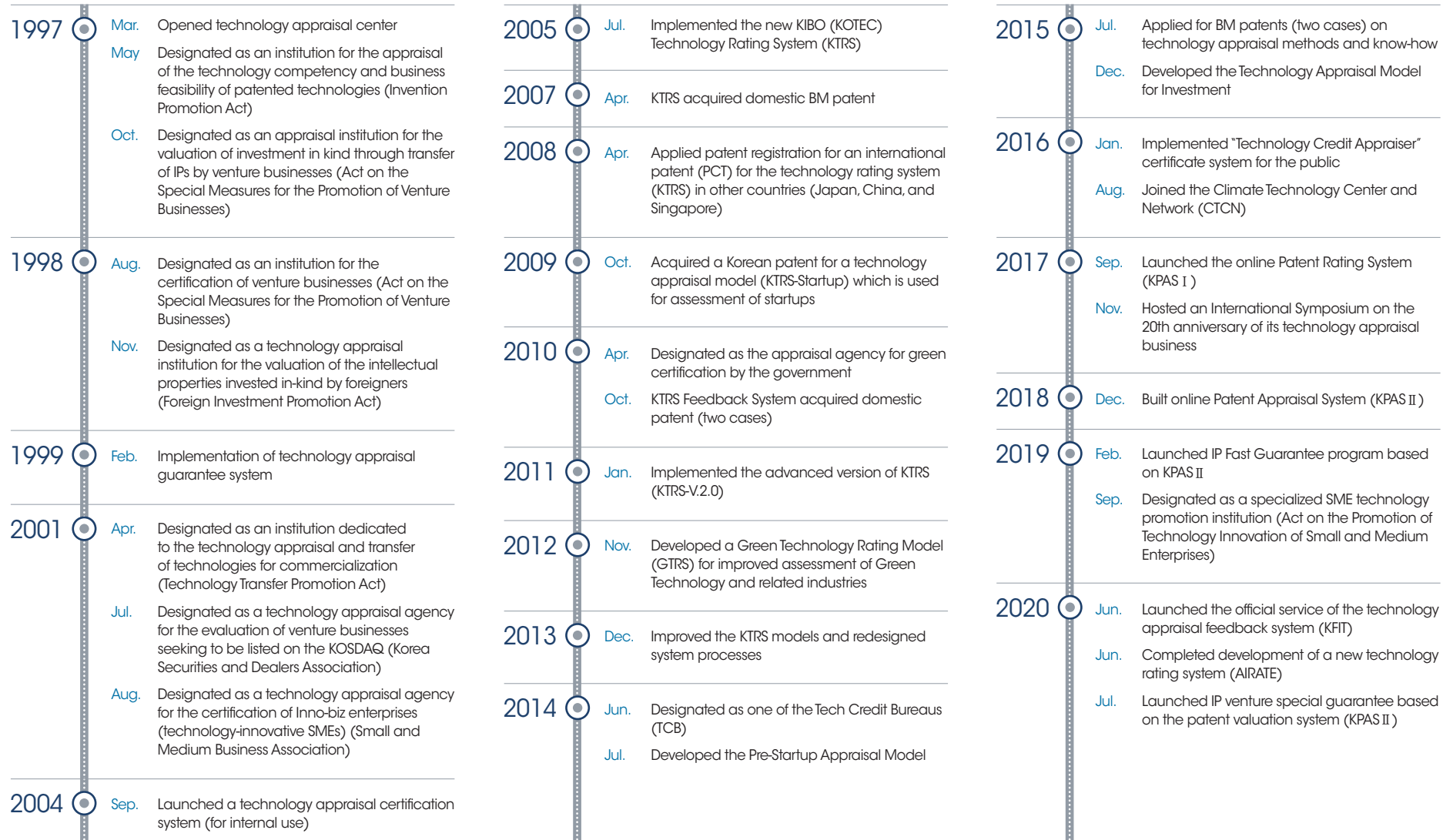
Types and targets of technology appraisal

Type of appraisal	Summary	Definition	Targets
Technology Valuation	Technology into amount	Appraises the value of the technology currently being manifested or to be manifested in the future and expresses the results of the appraisal in a monetary value	【 Technology or enterprise holding the technology 】 1. Rights registered or pending according to the 「Patent Act」 and 「Utility Model Act」 2. Rights registered according to the 「Design Protection Act」 3. Program registered according to the 「Copyright Act」 4. Technology falling under one of the following, for which the technology competitiveness is acknowledged A. Technology held by a new technology entrepreneur B. Technology falling under the 'scope of state-of-the-art technology and products,' as notified by the Ministry of Trade, Industry, and Energy C. Technology subject to evaluation according to a business agreement, etc.
Technology Business Feasibility Evaluation	Technology into grade	Assesses the technology competency and business feasibility of an enterprise that aspires to commercialize any of its technologies or ideas or to increase investment in an ongoing technology project	
Comprehensive Technology Evaluation	Enterprise into grade and amount	Comprehensively evaluates all the technologies of an enterprise by grade and amount in connection with its profile covering the business environment and its prospects	

Technology Appraisal Overview

➔ Progress

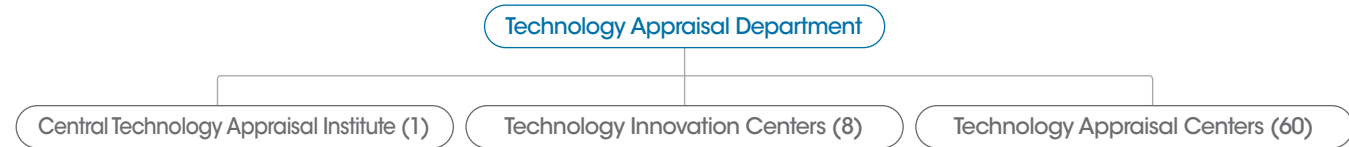
Since first introducing its technology appraisal services in March 1997, marking the first time in Korea, KOTEC has led the technology appraisal market as the best technology appraisal institution through efforts like implementing the technology appraisal guarantee system, developing and utilizing the KIBO Technology Rating System (KTRS), and being designated as a venture business and Inno-Biz enterprises certification institution and a qualifying examination institution for technology credit appraisal.



Technology Appraisal Organization and Human Resources

→ Technology appraisal organization

To reinforce its specialty in technology appraisal, KOTEC has differentiated the work of sales organizations according to the level of difficulty, demand, etc. As a result, as of the end of 2020, KOTEC had established one central technology appraisal institute, eight technology innovation centers, and 60 technology appraisal centers, securing specialized technology appraisal and finance networks.



Organization	Roles	Key Responsibilities
Central Technology Appraisal Institute (1)	Key appraisal institution for performing highly-sophisticated appraisals	<ul style="list-style-type: none"> Evaluation of technology with high difficulty or project-type technology Professional appraisal for going public on the KOSDAQ or KONEX Quality management of technology appraisals Marketing for technology appraisals
Technology Innovation Centers (8)	Organization specialized for professional technology appraisal or technology transfer and commercialization	<ul style="list-style-type: none"> Appraisal for government policy projects Professional technology appraisal (evaluation for technology transfer and investment, etc.) Government policy linked IP appraisal (IP appraisal guarantee, IP acquisition guarantee, etc.) Support for technology transactions and M&A businesses
Technology Appraisal Centers (60)	Organization dedicated to standardized appraisals focusing on guarantee-purpose technology appraisals	<ul style="list-style-type: none"> Technology appraisal guarantee Standardized IP appraisal guarantee, R&D guarantee, etc. Evaluation for certifying venture businesses and Inno-Biz enterprises, etc. Other types of technology commercialization feasibility examination, such as technology appraisal certification

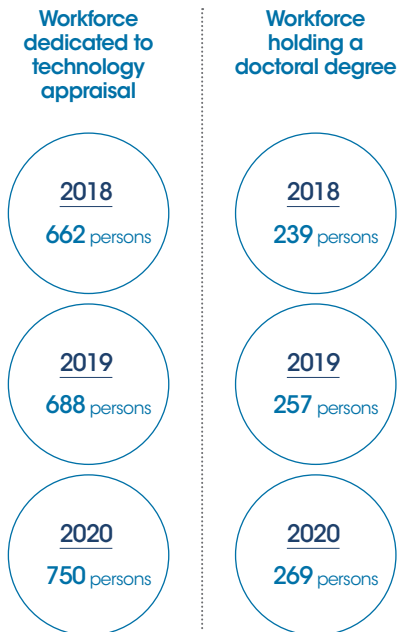
→ Workforce for technology appraisal

By providing opportunities to acquire overall theories and knowledge regarding technology appraisal, as well as to experience actual appraisal work, KOTEC is fostering and expanding its personnel dedicated to technology appraisal to meet certain qualifications and appraisal capabilities. To overcome the limitations of in-house human resources and to enhance appraisal expertise, KOTEC established a pool of external advisors from industry, academia, and research fields to perform swift and reliable technology appraisals.

External consultant pool

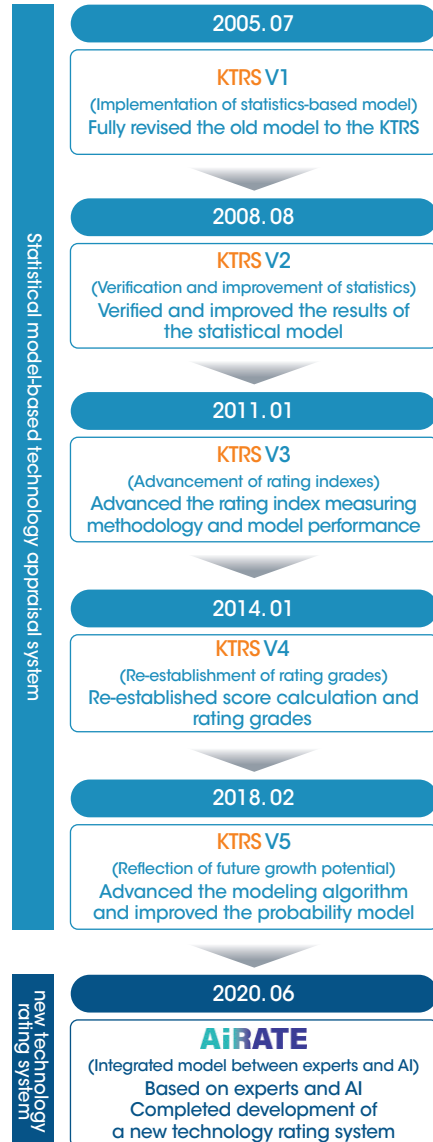
(Unit: number of persons)

Mechanical Eng.	ICT	Electrical & Electronic Eng.	Material Eng.	Chemical Eng.	Textile Eng.	BIO	Environment	Accounting	Patent Law	Cultural Content	Others	Total
151	114	119	78	72	12	86	32	151	55	29	57	956



Technology Appraisal System

Advancement process of technology appraisal system



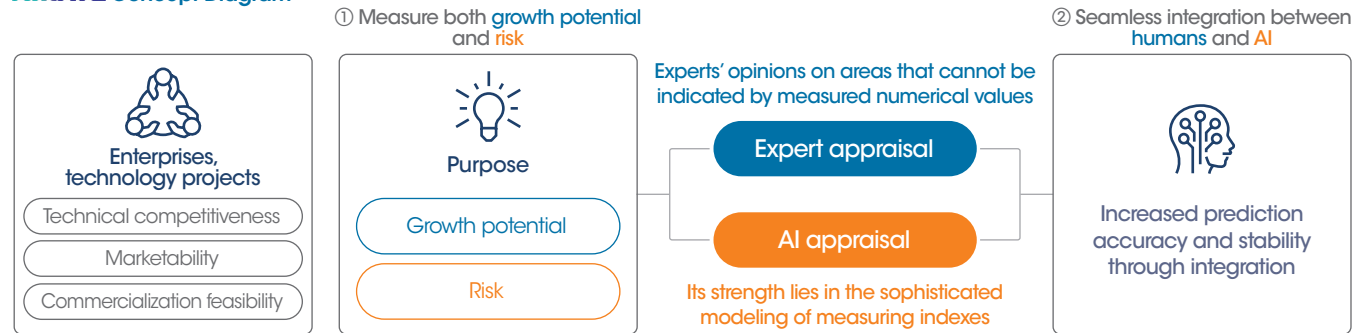
➔ New technology rating system (AIRATE)

KOTEC had developed its proprietary technology rating system, the KIBO Technology Rating System (KTRS), to assess and grade technological competency, business feasibility, and marketability of intangible technologies or knowledge, which are difficult to evaluate with conventional credit rating systems. It launched in July 2005.

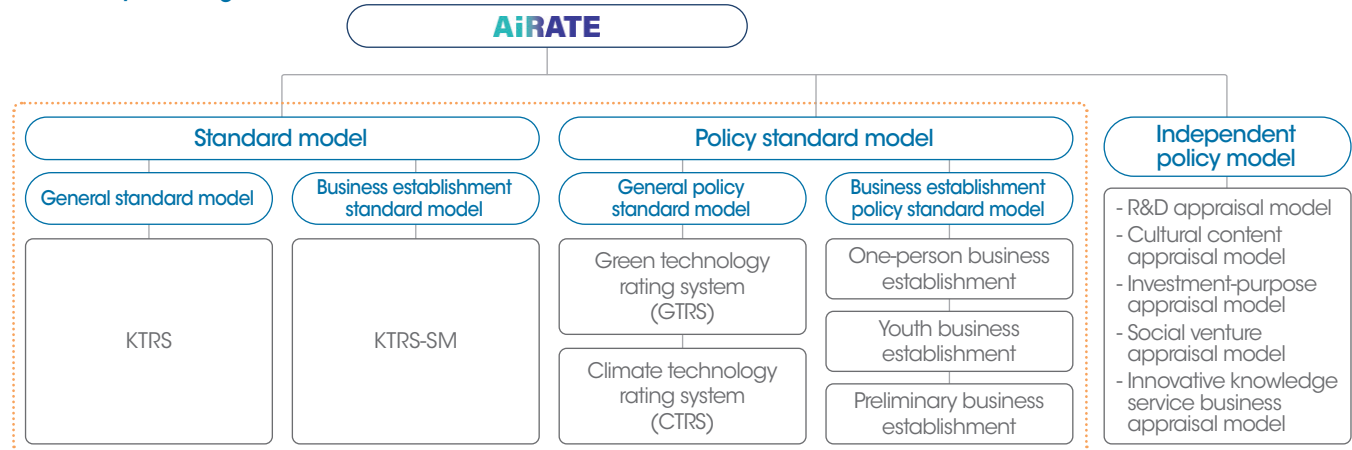
In July 2005, KOTEC introduced a technology rating system at work and performed several rounds of improvements. In June 2020, by analyzing a large volume of technology appraisal data on more than 330,000 cases accumulated to respond to internal and external needs and environmental changes, it successfully developed a new technology rating system, **AIRATE** in which expert opinions and AI technology are seamlessly integrated for the first time among financial support assessment models.

KOTEC revised **AIRATE** into a standard model-based modeling system by dividing it with consideration for the purpose of appraisal and use as a standard model, policy standard model, and independent policy model. By establishing a vertical-layer standard system, KOTEC simplified the models and is operating 12 types and 46 detailed models, responding to diverse financial support demands for technology.

AIRATE Concept Diagram



AIRATE System Diagram



Achievements in Technology Appraisal

Composition of technology appraisal

Assessment of technology commercialization feasibility
87.5%

Comprehensive technology appraisal
9.8%

Technology valuation 2.7%



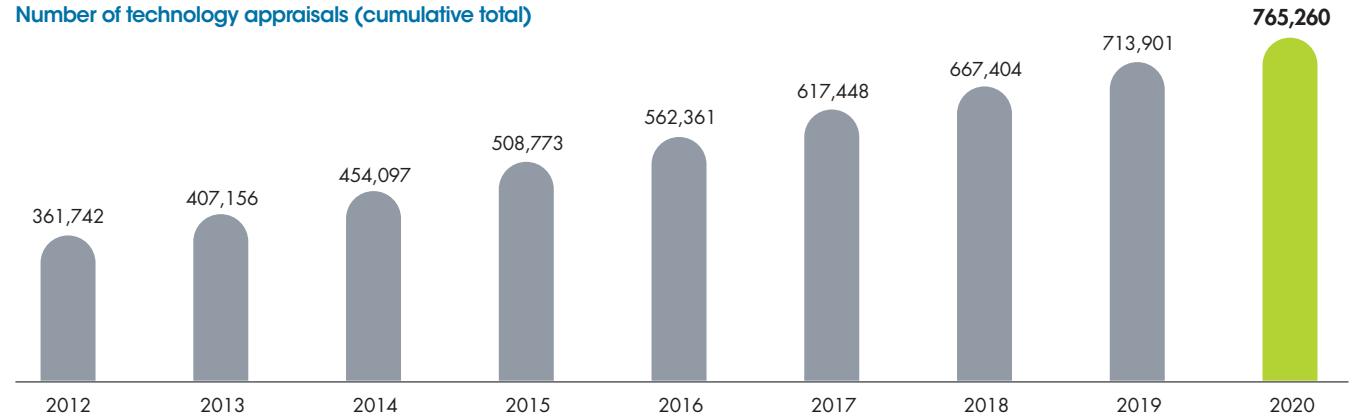
➔ Results of technology appraisal

Since its very first technology appraisal, performed in March 1997, appraisal achievements have been improving every year, bringing the total number of technology appraisals to 765,260 in 2020.

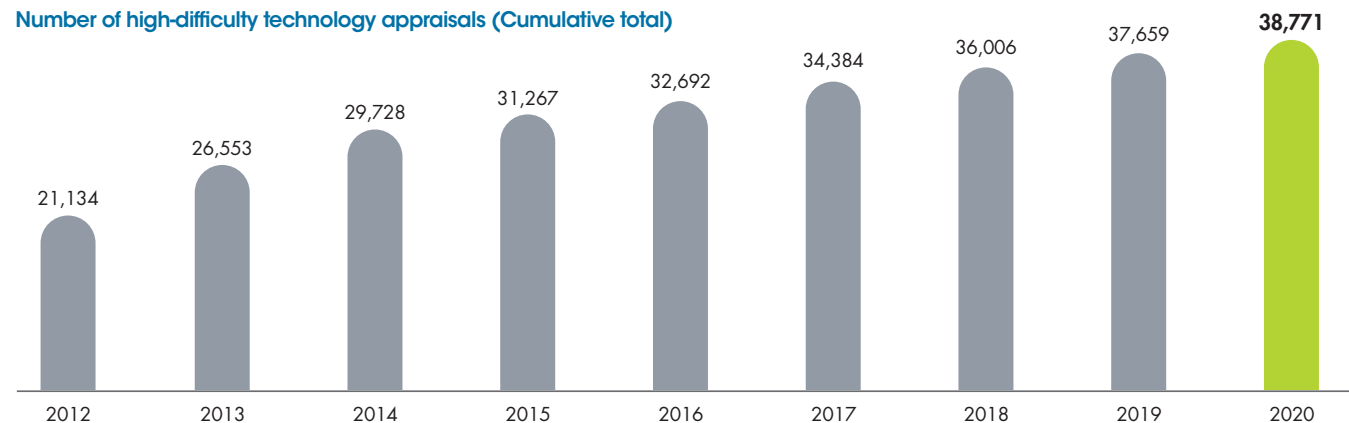
In 2020, KOTEC performed 51,359 technology appraisal cases. By appraisal type, the number of technology commercialization feasibility assessments recorded the highest figure at 44,933 (87.5%), followed by comprehensive technology appraisals at 5,029 (9.8%) and technology evaluations at 1,397 (2.7%).

In particular, KOTEC performs high-difficulty technology appraisals that require high-level expertise and objectivity. High-difficulty technology appraisals include appraisals of investment-in-kind special case industry property rights accompanied by technology evaluation, appraisals for technology transfers and transactions, appraisals for reference by the court or in a lawsuit, etc. So far in 2020, KOTEC has completed a total of 38,771 high-difficulty technology appraisal cases, greatly contributing to invigorating technology financing in Korea.

Number of technology appraisals (cumulative total)



Number of high-difficulty technology appraisals (Cumulative total)



Major Progress and Achievements of Technology Appraisal

Automated patent appraisal system (KPAS: Kibo Patent Appraisal System)

Patent rating (KPAS-I)

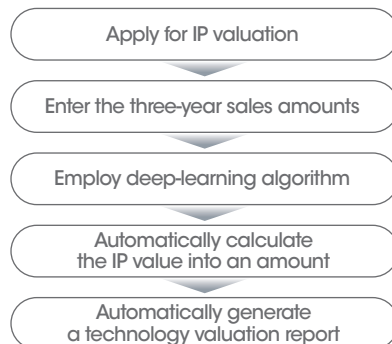
Based on the 'transaction probability' through trading, the grade of a patent is automatically rated on 9 grades (AAA-C).

Percentage (%)	Cumulative ratio (%)	Grade
4%	4%	AAA
7%	11%	AA
12%	23%	A
17%	40%	BBB
20%	60%	BB
17%	77%	B
12%	89%	CCC
7%	96%	CC
4%	100%	C



Patent evaluation (KPAS-II)

Based on the patent information and expert evaluation pattern learning, the AI system automatically calculates the value of a technology to produce an amount.



→ Playing a role as a frontier for IP financing with the AI-based patent appraisal system (KPAS)

Equipped with the best technology appraisal infrastructure in the country, KOTEC stands at the heart of driving IP finance. KOTEC introduced advanced financing programs, such as IP Valuation-linked Guarantees and Technology Value-linked Guarantees, in 2006 for the first time in Korea. It then restructured these programs into the IP-based Guarantee System in August 2013 so as to provide differentiated guarantee services for technology SMEs based on their IP Value.

Total IP-related supply result

(Unit: number of cases, KRW 100 million)

Category	2018		2019		2020	
	Number of cases	Amount	Number of cases	Amount	Number of cases	Amount
Total supply of IP guarantees	4,514	9,363	6,533	13,224	7,254	14,864
IP value guarantees	3,344	7,774	3,985	8,883	4,288	9,387
IP grade guarantees	-	-	977	2,366	1,151	3,167
IP acquisition guarantees	1,170	1,589	1,571	1,975	1,815	2,310

KOTEC developed its AI-based 'patent rating system (KPAS-I)' and 'patent evaluation system (KPAS-II)' and introduced relevant measures to support IP financing. As of 2020, based on the total supply, KRW 316.7 billion was provided through KPAS-I based 'IP grade guarantees,' while KRW 119.3 billion was provided through KPAS-II based 'IP fast guarantees' and 'IP venture special guarantees.'

In addition to AI-based patent appraisal systems, KOTEC concluded joint support contracts with related institutions, such as the Korean Intellectual Property Office, Ministry of Science and ICT, and commercial banks, in order to help enterprises with excellent technologies save on their financing costs. It also enhanced its IP financing performance, taking the lead in the domestic IP financial market.

Total supply results related to AI-based patent appraisal system (KPAS)

(Unit: number of cases, KRW 100 million)

Category*	2019		2020	
	Number of cases	Amount	Number of cases	Amount
Grade guarantees (KPAS- I)	977	2,366	1,151	3,167
IP fast guarantee and venture special guarantees (KPAS- II)	314	463	708	1,193

* IP grade guarantee and IP fast grade: newly established in 2019; IP venture special guarantee: newly established in 2020

Status and Achievements of Key Technology Appraisal Projects

Sharing the techniques for a technology appraisal system overseas

EU

- 2018.09** Selected as a developer for an EC innovative SME appraisal tool development project
- 2017.11** Concluded an MOU with EIB for trial application of KTRS for enterprises in Europe
- 2016.12** Requested for "introduction of the KTRS model in the EU" by EC

Peru

- 2018.04** Instructed on technology appraisal and guarantee systems to POGAPI

Thailand

- 2017.06** Instructed on the technology appraisal system to TCG

Vietnam

- 2016.04** Instructed on the technology appraisal system through the knowledge sharing program (KSP)

➔ Enhancing comprehensive R&D support for SME technology innovation

KOTEC introduced its R&D Guarantee Support program in 2008 to identify high-potential R&D projects and provide support for the entire project lifecycle in order to facilitate technology development and commercialization.

In August 2019, KOTEC concluded an agreement for commercialization support for successful R&D enterprises with the Ministry of SMEs and Startups and introduced a guarantee system linked with loan products from R&D dedicated banks (IBK, Hana Bank). In July 2020, it further introduced a guarantee based on an agreement on support for commercialization of R&D success projects with the Ministry of Trade, Industry, and Energy, expanding guarantee support for enterprises with successful governmental R&D projects.

Powered by implementation of a comprehensive SME R&D support system, in 2020, KOTEC achieved the improved result of KRW 6.1 trillion in terms of the total supply amount, representing a 10% year-on-year increase. It is devotedly fulfilling its responsibility as a comprehensive R&D support agency to enable technical innovation for SMEs.

Total R&D guarantee supply results

(Unit: number of cases, KRW 100 million)

Category	2018		2019		2020	
	Number of cases	Amount	Number of cases	Amount	Number of cases	Amount
Total R&D guarantee supply	20,073	53,138	22,330	55,456	23,117	61,021
Development stage	10,757	15,467	11,220	15,446	10,914	14,573
Commercialization stage	9,316	37,671	11,110	40,010	12,203	46,448

➔ Spreading the technology rating system (KTRS) to the global financial market (including Europe)

KOTEC has raised awareness and status for its technology evaluation system through international knowledge sharing and overseas transfers of the KIBO Technology Rating System (KTRS).

Since the first request for introduction of the KTRS model by the EC in 2016, KOTEC has entered into a business agreement with EIB for technology appraisal exchange and established a plan for KTRS application in Europe. In 2018, KOTEC was selected as a developer for the EC innovative SME rating tool development project and is working on developing a European-style InnoRate technology rating system (ITRS). In 2020, by benchmarking KOTEC's KTRS (33 indexes), 38 indexes were introduced, and the 1st pilot test is currently being co-executed, with verification underway.

Meanwhile, in addition to the EU, KOTEC has shared its know-how regarding technology appraisal, such as its technology rating system and technology appraisal and guarantee system, with countries in Asia and South America, including Vietnam, Thailand, and Peru, contributing to enhancing Korea's image in these regions.

Status and Achievements of Key Technology Appraisal Projects

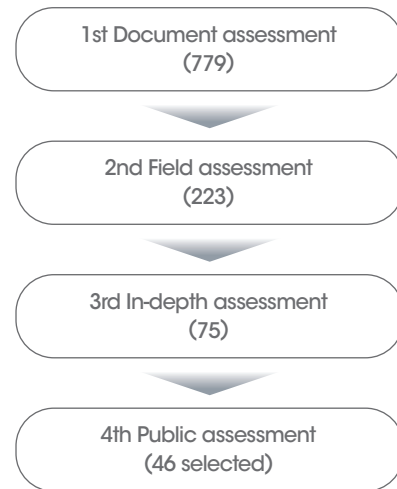
➔ Discovery of 100 material, parts, and equipment small giants to respond to the crisis due to Japan's restrictions on exports

KOTEC was designated as a specialized SME technology promotion institution according to the 「Act on the Promotion of Technology Innovation of Small and Medium Enterprises」 in September 2019, and it is now expanding the scope of its SME R&D commercialization support project from the financial sector to non-financial sectors.

In particular, in 2020, continuing from 2019, KOTEC took the lead in the 「100 Small Giants Selection Project」 as a dedicated small giant management agency to enhance the competitiveness of the material, parts, and equipment industries.

Amidst the crisis due to Japan's restrictions on exports, KOTEC exhibited its capabilities in agile response based on the excellent appraisal infrastructure. Continuing from the discovery of 54 national-representative small giants in 2019, KOTEC selected 46 more cases in 2020. It also set up a new business model based on cooperation between experts, the public, and institutions, turning the crisis into an opportunity for improving national competitiveness.

Process of 100 Material, Parts, and Equipment Small Giants



Public participation



100 material, parts, and equipment small giants, gathering opinions from the public and receiving aid from experts

- Introduced and operated a public appraisal group for the first time among content-type projects
* (2019) 865 persons → (2020) 908 persons applied, while the public appraisal group (80 members) participated in the presentation assessment.
- Experts and the public participated together, realizing an open and transparent assessment
- Integration of the non-contact model (1st step) and AI appraisal method (KPAS, KIBOT) (2nd step)
- Held real-time online Q&A and provided explanatory content and promotional materials

Communication and cooperation



One-stop communication and cooperation channel for small giants, 'Technical Innovation Support Group,' resolving enterprises' difficulties through 1:1 tight support

- A dedicated support group was launched in April and conducted more than 2,000 enterprise support activities
- KOTEC led implementation of a cooperation system for more than 30 projects in 10 institutions
- Thanks to expanded cooperative support, the competitiveness of the material, parts, and equipment industries was strengthened

Return to society

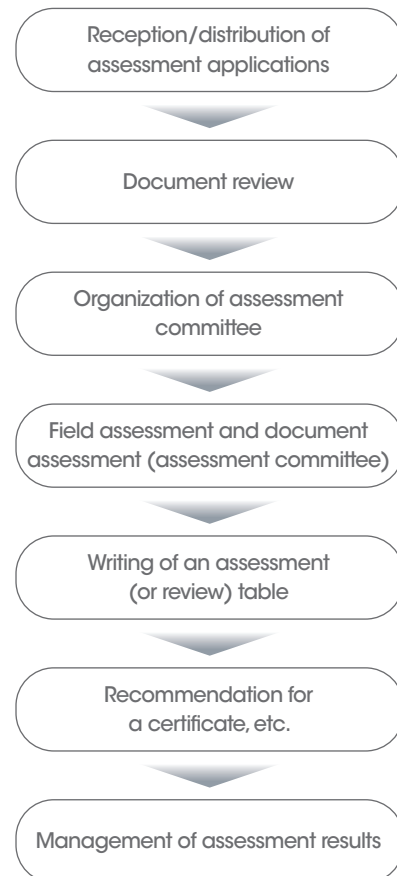


Formation of a return-to-society fund for the first time and sharing of policy outcomes with the public through encouragement of voluntary returns to society

- Adopted the joint declaration for return of outcomes from governmental support to society (June, November)
- Agreement on formation of a return-to-society fund for the first time, funded by beneficiary enterprises (KRW 2 billion, November)
- Agreement on mutually-beneficial cooperation between the Korea Strong Small Business Association and startups (November)

Status and Achievements of Key Technology Appraisal Projects

Green certificate assessment process



➔ Leading low-carbon green growth through green certificate assessment

KOTEC is participating in the green certificate assessment project, which is the government's representative low-carbon green growth policy, unique among financial institutions. In 2020, KOTEC performed the certifications for 142 green technologies, certifications for 350 green products, and certifications for 4 green enterprises, totaling 496 cases. These account for 51.5% of the total 963 green certificate assessments, marking the highest among the 11 assessment agencies. KOTEC has been taking the lead in fulfilling and spreading low-carbon green growth policy and playing a role of improving the effectiveness of policy operation.

Kinds of green certificates

Categories	Certification and verification target
Green technology certificate	Technology capable of minimizing emissions for greenhouse gas and pollutants by saving energy and resources through efficient use and throughout the entire cycle of social and economic activities * Promising technologies in 20 areas (93 key areas), such as new renewable energy
Green technology product verification	Products commercialized for sales and in which certified green technology (according to the Framework Act on Low Carbon, Green Growth) is applied
Green business certificate	Businesses with big economical or technical ripple effects with economic activities related to green growth, such as installation or construction of green industrial facilities or infrastructure and application, distribution, or spreading of green technologies or industries * 109 businesses in nine areas (except for new materials among 10 green technology areas)
Green specialized enterprise verification	Enterprises lasting for a year or longer from establishment and for which the sum of sales amounts for certified green technologies and verified green technology products in the previous year are more than 20% of the total sales amounts in the previous year

Proportion of KOTEC in green certificate assessment

(Unit: number of cases, %)

Kind of certificate	2018			2019			2020		
	Total	KOTEC	Proportion	Total	KOTEC	Proportion	Total	KOTEC	Proportion
Green technology	281	100	35.6	318	124	39.0	293	142	48.5
Green technology product	488	134	27.5	592	258	43.6	661	350	53.0
Green business	0	0	-	0	0	-	0	0	-
Green specialized enterprise	19	4	21.1	15	3	20.0	9	4	44.4
Sum	788	238	30.2	925	385	41.6	963	496	51.5

4. Technology Guarantee

Technology Guarantee Support

➔ Technology guarantee support

To deal with the Covid-19 situation, KOTEC provided help to SMEs and small business owners suffering through managerial difficulties due to the pandemic. For this, it accelerated the support process through innovation of the guarantee system and newly established a support product dedicated to damaged enterprises. As a result, in 2020, the amount of new support reached KRW 3.7 trillion (out of new guarantee amount of KRW 7.8 trillion). KOTEC also extended the maturity of existing guarantees worth KRW 16.8 trillion (95.3%), for which the maturity is pending, out of the total 17.6 trillion.

Furthermore, to respond instantly to demands for funds from SMEs due to the Covid-19 pandemic, KOTEC supplied total guarantees worth KRW 25.44 trillion in 2020 and, looking into the guarantee amount, in order to enable overcoming the Covid-19 crisis through preemptive guarantee supplies, it increased the amount to KRW 25.7 trillion, which is KRW 3.44 trillion higher than the previous year.

Guarantee supply results by year

(Unit: KRW trillion, %)

Category	Guarantee balance				Guarantee supply			
	2018	2019 (A)	2020 (B)	Change (B-A)	2018	2019 (C)	2020 (D)	Change (D-C)
Total guarantees	22.4	22.1	25.7	+3.6	22.5	22.0	25.4	+3.4
Technology guarantees (new guarantees)	22.0	21.8	25.4	+3.6	22.3 (5.2)	22.0 (4.8)	25.3 (7.8)	+3.3 (+3.0)
Securitized enterprise guarantees (new guarantees)	0.4	0.3	0.3	-	0.2 (-)	0.2 (-)	0.1 (-)	Δ0.1

Guarantee support results by guarantee type

(Unit: KRW trillion, %)

Category	2018		2019		2020	
		weight		weight		weight
Guarantee provision	22.5	100.0	22.0	100.0	25.4	100.0
Innovative tech SMEs	21.7	96.6	21.3	96.8	24.8	97.5
Technology appraisal guarantees	22.0	97.7	21.5	97.9	25.1	98.5
Knowledge & culture industry	4.1	18.2	4.2	19.0	5.0	19.8
Innovative growth SMEs	4.9	21.8	5.5	24.9	8.2	32.3
Export SMEs	2.7	12.1	3.1	14.3	3.7	14.6
Young startups	1.6	7.2	1.7	7.6	1.7	6.7
R&D guarantees	5.3	23.6	5.5	25.2	6.1	24.0

* including duplicates

Transformation into a leading economy to respond to the Covid-19 crisis and the post-Covid-19 era

Status of guarantees in the Korean New Deal areas



➔ Support program for enterprises damaged by the Covid-19 pandemic

KOTEC provided enterprises damaged by the Covid-19 pandemic or supplying Covid-19 related products or services with financial support worth KRW 2.38 trillion in total in 2020 through Covid-19 special guarantees. It additionally supported KRW 400 billion for infant enterprises (within seven years of establishment) and startups to overcome the managerial crisis and maintain employment levels through Covid-19 special guarantees for startups, and provided KRW 315 billion through automobile mutually-beneficial coexistence agreement guarantees for auto parts companies to secure available funding and overcome the employment crisis. As support for small business owners who are suffering most from the Covid-19 pandemic, quick full-amount guarantees worth KRW 300 billion were provided, and for SMEs facing managerial difficulties, super-low interest rate agreement guarantees, for which the interest rate is about 1%, worth KRW 357.6 billion were provided through cooperation with IBK. In total, new guarantees worth KRW 2.7 trillion were provided to help enterprises suffering from the Covid-19 pandemic as they tried to normalize their operations.

Status of support programs for enterprises damaged by the Covid-19 pandemic

Introduced measures	Details
Covid-19 special guarantee	Support for SMEs damaged by the Covid-19 pandemic or enterprises supplying Covid-19 related products or services
Covid-19 special guarantee for infant enterprises and startups	Special guarantee for infant enterprises (within seven years of establishment) and startups to overcome the managerial crisis and maintain employment
Automobile mutually-beneficial coexistence agreement guarantee	Support for auto parts companies to secure available funding and overcome the employment crisis
IBK super-low interest rate agreement guarantee	Supply of immediate liquidity to SMEs suffering through managerial difficulties due to the Covid-19 pandemic through a business agreement with IBK
Quick full-amount guarantee for small business owners	Quick support program for small business owners damaged by the Covid-19 pandemic

➔ Guarantee for a successful Korean New Deal

As a response to the post-Covid-19 era, KOTEC newly established a preferred guarantee support program focusing on support in the fostering of non-contact and digital enterprises, and in 2020, under the program, newly provided KRW 1.13 trillion in total. For invigoration of the smart factory support program by the government, it also provided smart manufacturing and service guarantees worth KRW 617.6 billion.

In addition, according to the government's 2050 carbon neutrality declaration, to act aggressively toward transitioning into a decarbonized economy and for success of the Korean New Deal, KOTEC provided new green guarantees worth KRW 151.3 billion for enterprises running new renewable energy plants or related businesses. To foster social ventures that create both social values and economic outcomes, it ran the social venture impact guarantee and provided support amounting to KRW 123.9 billion in 2020.

Result of new guarantees for the Korean New Deal

(Unit: number of enterprises, KRW 10 million)

Introduced program	Purpose of introduction	New guarantees in 2020	
		Number of enterprises	Amount
Preferred guarantee for non-contact and digital enterprises	Concentrated on fostering non-contact and digital enterprises to respond to the post-Covid-19 era	2,587	11,311
Smart manufacturing and service guarantee	Strengthening the competitiveness of the domestic manufacturing industry by expanding smart factories	808	6,176
Green guarantee	Enterprises running new renewable energy plants or related businesses	183	1,513
Social venture impact guarantee	Fostering social ventures that create both social values and economic outcomes	321	1,239
Guarantee for enterprises running locally-specialized businesses	Vitalizing the local economy by expanding support for local enterprises	10,825	39,384

Preemptive Support for Innovative-Growth Enterprises to Lead the Fourth Industrial Revolution

➔ Supplementing the future growth engine by running support programs for innovative-growth areas

In line with a big shift in the industrial structure brought about by the Fourth Industrial Revolution, KOTEC is operating a dedicated program for enterprises working in Fourth Industrial Revolution-related areas (Industry 4.0 First Guarantee) as a preemptive support measure for fostering new growth areas, set to become the key industries of the future. Through the program, it provided 3,944 enterprises with KRW 1.6 trillion in 2020. In particular, for the D.N.A. and BIG3* areas, which are the six new key industries designated by the government, it has given support worth a total of KRW 982 billion to 2,094 enterprises in 2020.

In addition, through the smart factory support program to support enterprises investing in smart factories and enterprises building data and infrastructure, KOTEC provided guarantees of KRW 617.6 billion and further explored a linked support plan to enable enrolled companies to apply for the government's smart factory support program.

Status of guarantees through the Fourth Industrial Revolution support programs

(Unit: number of enterprises, KRW 10 million)

Introduced program	Purpose of introduction	New guarantees in 2020	
		Number of enterprises	Amount
Industry 4.0 First guarantee	Strengthening the new-growth industries to lead the Fourth Industrial Revolution	3,944	16,028
DNA+BIG3*	Government's six new key industries	2,094	9,820
Smart factory support program	Integrated support for manufacturing, IT, and services to add more values	808	6,176

* D.N.A. + BIG3: Data, Network (5G), AI, System semiconductor, Bio-health, Future vehicles

➔ Strengthening the Tech-Valley support system to support startups by universities and research institutes

With an aim to create dynamic power for economic growth and revive 'Made in Korea' successes by promoting business startups for high-level technical professionals, KOTEC established the Tech Valley program, an excellent technology-commercialization platform that supports the commercialization of exceptional technologies developed by universities and research institutes in a systematic manner.

After concluding an agreement with five universities (Seoul National University, Yonsei University, Korea University, KAIST, and POSTECH) for the first time among financial institutions, KOTEC further signed the U-Tech Valley agreement with 77 business establishment leading universities. It also entered into the R-Tech Valley building agreement with 19 government-contributed research institutes and into the M-Tech Valley agreement with three major companies. Through these initiatives, it provided new guarantees amounting to KRW 223.4 billion for 119 enterprises in 2020.

Status of Tech-Valley guarantee support

(Unit: number of enterprises, KRW 100 million)

Category	2018		2019		2020	
	Number of enterprises	Amount	Number of enterprises	Amount	Number of enterprises	Amount
Tech-Valley guarantee	96	1,736	106	1,945	119	2,334

➔ Fostering innovative enterprises to realize technology independence

In order to lead technology independence in the material, parts, and equipment industries, which are the core components of the manufacturing industry's competitiveness, and to discover and foster enterprises holding excellent technologies in the related industries, KOTEC introduced a special guarantee for enterprises falling under the material, parts, and equipment industries. It provided KRW 287.4 billion in special guarantees for 467 enterprises in the material, parts, and equipment industries, helping develop domestic technologies for which the level of foreign dependence is high.

Status of special guarantees for enterprises falling under the material, parts, and equipment industries

(Unit: number of enterprises, KRW 100 million)

Introduced program	Purpose of introduction	New guarantee result in 2020	
		Number of enterprises	Amount
Special guarantee for enterprises falling under the material, parts, and equipment industries	Lowering foreign dependence for core technologies and fostering competitive enterprises in the material, parts, and equipment industries	467	2,874

Expanding support for enterprises creating jobs and fostering the business establishment culture through technology financing

➔ Operating job creation support programs customized to enterprises' employment environments

To achieve both 'quantitative expansion' and 'qualitative improvement' in job creation in the Covid-19 era, KOTEC has eased the requirements for being selected as a job creating enterprise and, by doing so, expanded the scope of preferred support recipients. It additionally began operating the 'Good-job guarantee' program, which is a customized job creation support program in line with the employment environment.

The Good-job guarantee is a specialized support program for employment types and is aimed at strengthening guarantee support for enterprises contributing to job creation amidst the Covid-19 situation. By easing the requirements for regional SMEs to apply for sharing-jobs, it supplemented support for regions suffering through an employment crisis and is focusing on creating 'more and better jobs.'

Status of New Good-Job Guarantee

(Unit: KRW 100 million, %)

Category	2018	2019	2020
Result of new Good-Job Guarantee support	8,935	10,218	20,101
Proportion to the total guarantee supply	4.0	4.6	7.8

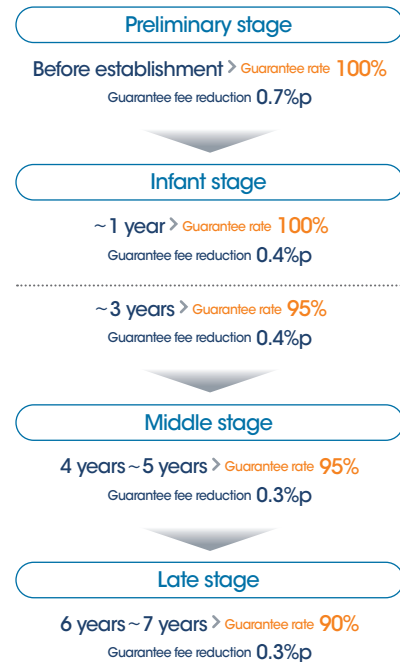
Status of new Good-Job Guarantee by employment type

(Unit: KRW 100 million)

Employment type	Details	New guarantee results for 2020	
		Number of enterprises	Amount
Jumping-Job	Enterprises with 10 or more full-time employees a year ago, for which the number of employees has increased by 20% or more compared to the previous year	727	6,265
Sharing-Job	<ul style="list-style-type: none"> (Conversion to regular position) Enterprises that convert two or more positions to regular positions within a year (Employment of women) Enterprises that recruit female employees with interrupted careers within a year (Local recruitment) Enterprises for which the main workplace is located in non-capital regions and the number of employees has increased by three or more compared to the previous year (Recruitment of individuals with disabilities) Enterprises that have recruited employees with disabilities in the past year (Recruitment from Meister schools) Enterprises that have recruited graduates from specialized high schools or Meister schools within the past year (Job stabilization fund) Enterprises in which two or more employees have received job stabilization funds within the past year (Social enterprises) Job-providing type social enterprises 	1,790	8,691
Best-Job	Enterprises that maintain 30 or more full-time employees * Excluded if the number of employees decreases	381	5,144

Expanding support for enterprises creating jobs and fostering the business establishment culture through technology financing

Status of preferred support by business establishment stage and years of operation



→ Invigorating the startup ecosystem by providing support for startups through the entire growth cycle

KOTEC introduced a technology startup support program to invigorate startup establishment, forming the foundation for future growth. It adopted a preferred support system according to business establishment stage, going from the preliminary stage to the late stage for startups showing great job creation potential, in an effort to expand support. In addition, through the 「customized startup growth guarantee」, the four startup fostering areas of knowledge and culture startups, science and engineering challenger startups, technology experience root startups, and advanced growth linked startups were selected according to startup type and were provided with concentrated guarantees. As a result, a total of KRW 2.8 trillion was provided in new guarantees for 10,396 startups, all in an effort to invigorate the startup ecosystem.

Status of new customized startup growth guarantee

(Unit: number of enterprises, KRW 100 million)

Category	Guarantee recipient	New guarantee results for 2020	
		Number of enterprises	Amount
Knowledge and culture	Enterprises running in the knowledge and culture industries (knowledge-based manufacturing, knowledge-based service businesses, cultural content businesses)	2,991	6,022
Science and engineering challenger	Manufacturing enterprises whose representative (including the actual executive) holds a science or engineering background	5,043	13,625
Technology experience root	Manufacturing enterprises whose representative (including the actual executive) is 40 to 59 years old and has 10 years or more work experience in the same industry	2,361	6,965
Advanced growth linked	Enterprises running in the advanced industries or selected for the startup support program by the Ministry or SMEs and Startups	2,961	9,179
Sum (excluding duplicates)		10,396	28,022

→ Expanding the challenging startup culture by providing diverse support measures for startups

KOTEC has been encouraging innovation for young entrepreneurs by running a young startup support program to bolster the challenges met by young entrepreneurs. Additionally, to guide business establishment for high-tech professionals with excellent technology, KOTEC expanded the scope of support for Meister startups, and by providing a wide range of support measures for middle-aged technical professionals possessing rich technology experience, it contributed to the expansion of entrepreneurship and related culture.

Status of new customized startup growth guarantee

(Unit: number of enterprises, KRW 100 million)

Category	2018		2019		2020	
	Number of enterprises	Amount	Number of enterprises	Amount	Number of enterprises	Amount
Young startups	3,856	4,799	3,739	4,697	3,263	3,789
Meister startups	410	1,126	320	722	973	2,818
Middle-aged technical professional startups	-	-	1,070	2,735	1,604	3,431

Furthermore, KOTEC has been making exemptions for new guarantees from joint surety since 2018 and is planning on exempting existing guarantees from joint surety in stages by 2022. By doing so, it is building a foundation for entrepreneurs to discard their fears of failure and to pursue challenges based on excellent technology.

Results of exempting existing guarantees from joint surety

(Unit: KRW 100 million)

Category	2018	2019	2020
Amount of guarantee exempted from joint surety (cumulative total)	13,582	53,726	85,569

5. Technology Transfer and Protection

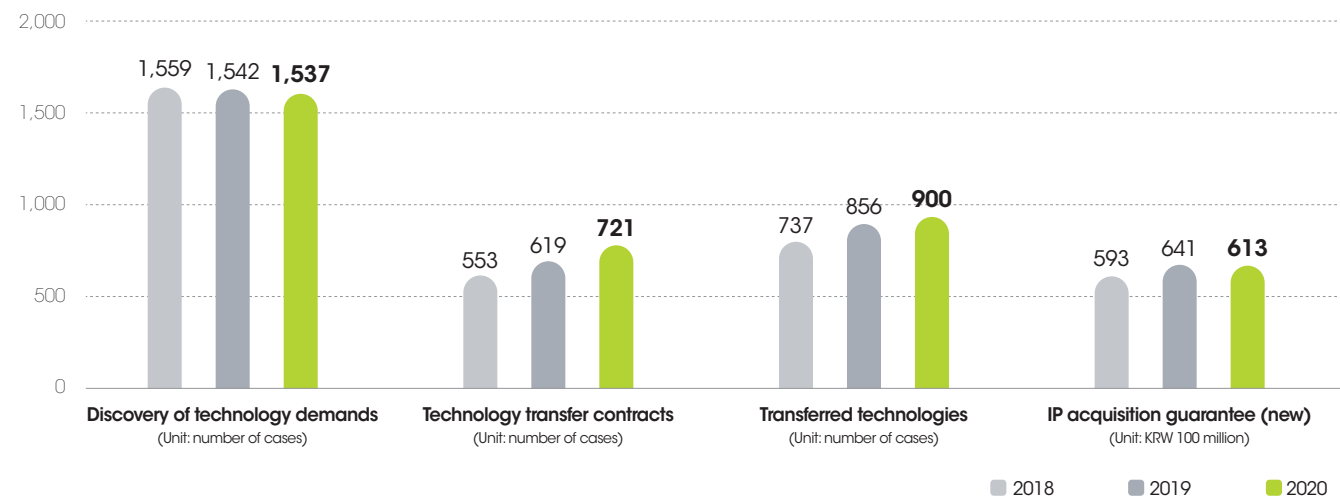
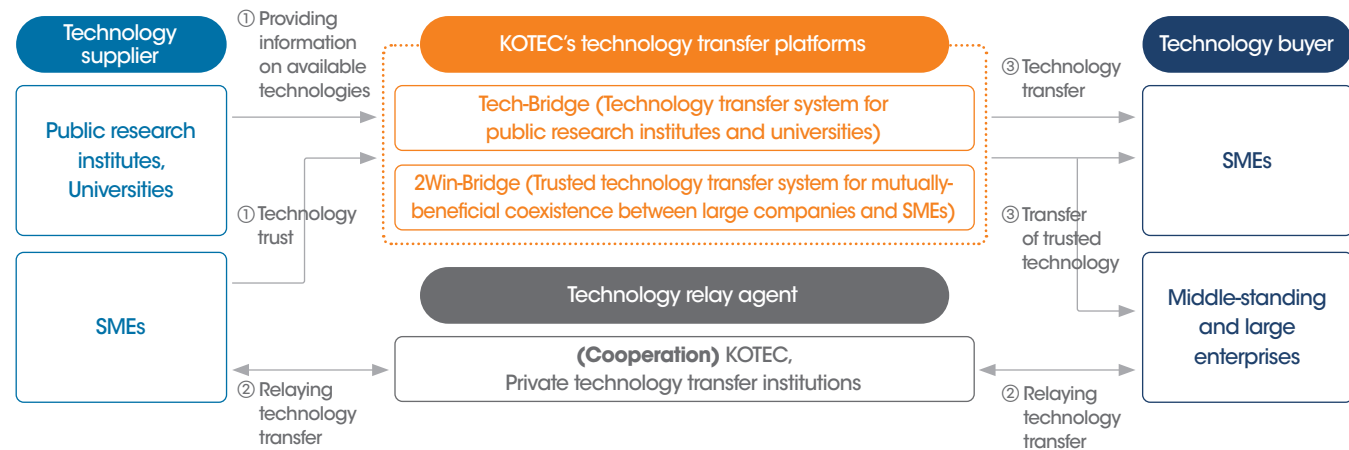
Technology trade



To enable SMEs to successfully acquire and commercialize required technologies, KOTEC has been providing support for technology exploration, relaying technology transfers, and financing commercialization while promoting the open technology innovation ecosystem.

To that end, it has built the Tech-Bridge and 2Win-Bridge, which are technology transfer platforms, and secured integrated online and offline technology transfer infrastructure by installing the technology innovation center.

The Tech-Bridge, an online technology distribution platform, gathers information about technology demands and supplies and provides customized information for different enterprises. As it is integrated with the Kibo Technology Matching System (KTMS), it can automatically match and recommend required technologies and available technologies. To this point, about 390,000 technologies held by public research institutes have been made available, and every year, 1,500 technology demands are being discovered and provided to market participants, including enterprises, research institutes, and technology transfer agencies.



Technology trade

The 2Win-Bridge is a system that matches technology demands by large companies and available technologies under protection through trust and moves forward to technology transfer or M&A. The system was launched in 2020 as a trial program and found 68 innovative SMEs to make 253 total technology matches and recommendations.

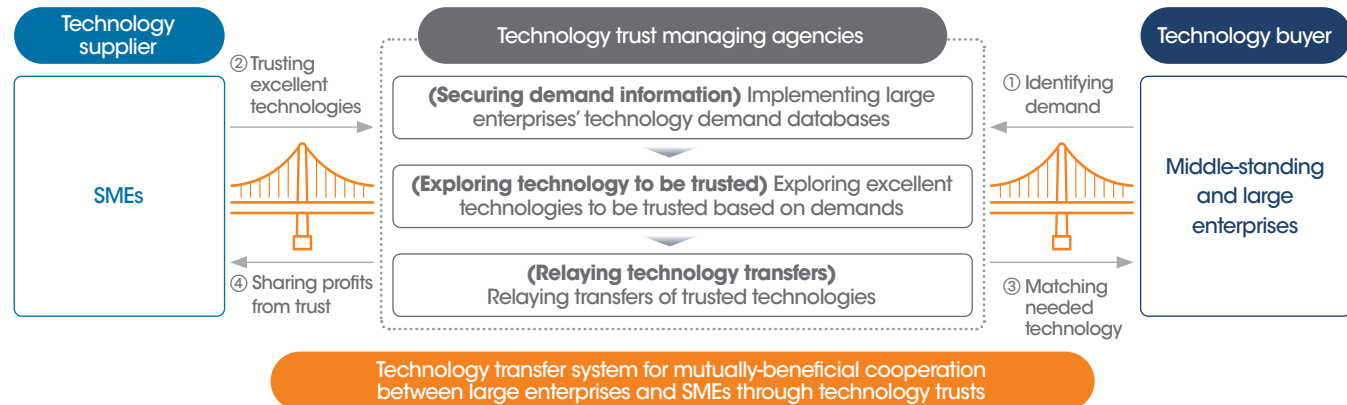
In addition, for invigoration of the 2Win-Bridge, business agreements were conducted with large enterprises (SKC Co., Ltd. in May 2020 and SK picglobal Inc. in September 2020), supplementing the cooperative network. Based on this, information was secured on large enterprises' technology demands and KOTEC's customer database was able to discover and recommend excellent SMEs and startups aggressively for joint R&D activities and to secure sales channels. Those were efforts by KOTEC to build mutually-beneficial cooperation between large enterprises and SMEs and to promote wins for all parties.

Business agreement with SKC Co., Ltd., which is the 1st large enterprise participating in the 2Win-Bridge



2Win-Bridge

The technology protection and transfer system based on trusted technologies for mutually-beneficial cooperation between large enterprises and SMEs is capable of enabling a fair position for SMEs in technology transfers and for large enterprises to be cleared from misunderstandings in technology extortion.



Provided support for cooperation, such as joint R&D activities and securing sales channels with **nine SMEs in total**



Discovered and provided a list of **253 technologies** with **59 excellent enterprises** → Discussion is underway with **two excellent enterprises**

Comprehensive Technology-Protection Support System

By systematically protecting technologies held by SMEs, KOTEC is taking the initiative in eradicating technology extortion and spreading fair technology transfer culture. To that end, it operates the technology protection system as a preliminary preventive measure against technology extortion and the IP mutual aid program that financially supports a lawsuit in the event of a dispute. By doing so, it has established a comprehensive technology protection support system, handling 2,206 technology protection cases and providing 3,797 IP mutual aid services in total in 2020.

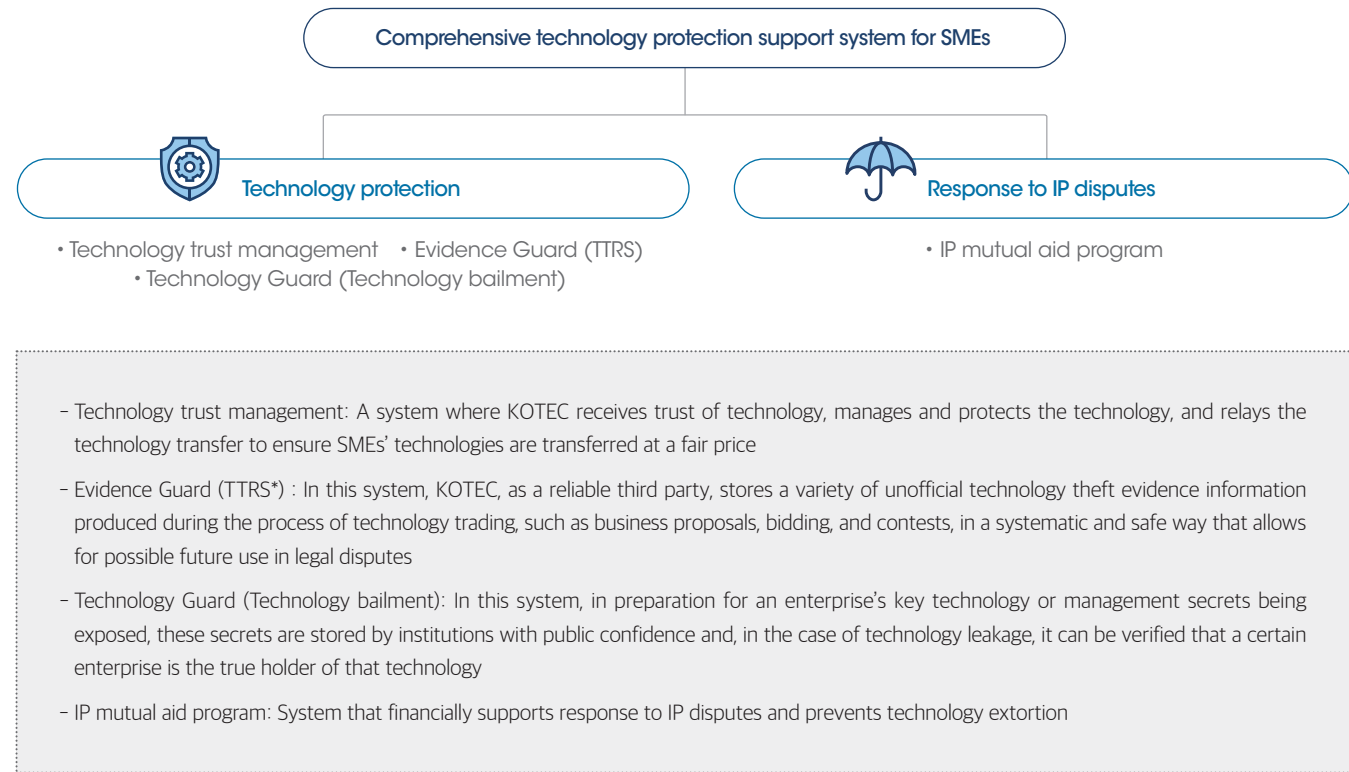
Target information of TTRS*

* Technology data Transaction record Registration System

Stage	Target information
Technology development stage	Technology development research notes, experiment reports, design drawings, all kinds of meeting materials and reports, etc.
Information management stage	Confidential agreements from internal employees, emails with confidential information, reporting materials about confidential information, etc.
Transfer negotiation stage	Official documents or emails from customers about transfers or offers, official documents created during the transfer negotiation stage, MOU agreements, recording files, etc.
Actual transfer stage	Emails or official documents requesting technical information, reports on work details, materials about customers' inspection results, materials about work by staff in charge involved in the transfer, etc.
Infringement response stage	Evidence of infringement detected at a certain point in time

Target information for Technology Protection System (Technology bailment)

Category	Target information
Technical information	Design drawings for facilities or products, manuals, product manufacturing and production methods, R&D reports, material mixing ratio and ingredient table, source code, data, digital content, technology in an idea format, R&D materials, etc.
Managerial information	Cost information, accounting information, marketing information, trade secrets, business plans, information about enterprise operation, management, and sales, etc.



Contracts for technology trust

317



TTRS registrations

367



Technology bailment registrations (Technology protection system)

1,522



IP mutual aid program (mutual aid)

3,797

Status and Achievements in Key Tasks of Technology Transfer Programs

➔ Building an open technology innovation ecosystem for SMEs with concentrated support

To lay the legal foundation for building a concentrated support system to encourage technology transfers of SMEs, KOTEC partially revised the 「Act on the Promotion of Technology Innovation of SMEs」 in March 2021. To prepare the legal foundation, it went through public opinion gathering procedures through a public meeting, panel discussion, and enterprise communication channels and conducted research on how to promote technology transfers and benchmarking of advanced countries' practices. The revision includes designation of KOTEC as a dedicated agency for technology transfer support programs for SMEs and installation of a separate account for technology innovation projects, and based on that, KOTEC will put forth more efforts in forming an open technology innovation support ecosystem.

Legal and institutional bases were prepared as the 'Act on the Promotion of Technology Innovation of SMEs' was decided in the National Assembly (in March 2021) → Invigoration of open technology innovation support is expected

➔ A new suggestion for the post-Covid-19 era, implementing a technology transfer platform with public agreement

① Expanding the non-contact digital technology transfer infrastructure based on data, networks, and AI (D.N.A.)

KOTEC has built a system for integrated technology transfer information management and technology recommendations based on data, networks, and AI (D.N.A.), implementing non-contact digital technology transfer infrastructure in preparation for the post-Covid-19 era. In particular, by developing a function that recommends a technology fitting each enterprise's demands, it accelerated the process of consultation as the recommended technology can be suggested quickly, improving agility in technology transfers.

Category	Brief description	Brief description Key achievements
Data (Big Data)	Integrated data management system for inferring connections in a large volume of data	New implementation of smart media
Network (Cooperation)	Web-based cooperation channel with governmental departments and private technology transfer agencies	Trial projects with the government and the private agencies
AI	AI based intelligent recommendation capable of gaining public agreement (including mobile service)	One-click auto-recommendation service

Business agreement to make the IP transfer market more vibrant



② Expanding work connections with related institutions to invigorate the IP transfer market

Through invigoration of the IP transfer market, KOTEC has strengthened the connection with IP related institutions. While building a platform to promote the IP transfer market and running related support programs, it concluded business agreements with the Ministry of SMEs and Startups, KIPO, and Korea Intellectual Property Strategy Agency. Also, by facilitating information sharing between the Tech-Bridge and the IP market, jointly relaying technology transfers, and supporting implementation of an intellectual property package, it enabled the online and offline availability of technology transfers.

③ Discussing execution strategies for and sharing information about cooperative technology transfer projects with public research institutes and related agencies

For transfers of 33 technologies (including know-how) held by the National Security Research Institute, it discussed the plan for joint execution with the technology innovation center and shared relevant information. Furthermore, to promote joint projects with the Korea Intellectual Property Strategy Agency, it gave explanations regarding support projects to employees at the technology innovation center and discussed how to make use of the Tech-Bridge platform. By promoting joint technology transfer projects with public research institutes and relevant agencies, KOTEC has contributed to the invigoration of the technology transfer market.

Status and Achievements in Key Tasks of Technology Protection Programs

➔ Improving the technology protection system for realization of a fair economy based on public participation

① Realigning and adding regulations to invigorate technology trusts

To prepare a basis for private participation in technology transfers, KOTEC realigned and added regulations for technology trust management works. Since technology trust management was added to the work scope of KOTEC, following the revision of the Korea Technology Finance Corporation Act, KOTEC has realigned the related regulations.

- Changed the basis for conducting trust management work from the 'Work Guideline by the Ministry of SMEs and Startups' to the 'articles of association and operational manual'
- Prepared a basis to consign the trust work to private technology transfer agencies for invigoration of transfers of trusted technologies
- * Newly added a provision on consignment of trust work to Article 22 in Technology Trust Management Regulations

② Improving work efficiency by advancing the work method for transfers of trusted technologies

KOTEC revised the 「Technology transfer work manual」 and 「Technology trust information system work manual」 for regulations related to transfers of trusted technologies and centralized works for transfers of trusted technologies, including reception of technology fees, settlement, and journalizing to the Technology Innovation Center to improve work efficiency. By doing so, it has improved overall work efficiency and accelerated the processing to enhance customer satisfaction.

③ Contributing to expanding awareness of fair technology transfers through trial projects and promotion activities

To alleviate the burden of establishing a startup or venture business, KOTEC carried out a trial project to exempt entrepreneurs from idea bailment fees. Using the technology bailment system, it preliminarily protects ideas of startups and venture businesses from being leaked, extorted, or infringed upon and, by doing so, paves the way for startups and venture businesses in their earlier stages to grow.

Additionally, to facilitate technology protection and promote fair technology transfers, it reviews plans to utilize transfers of bailed technologies. KOTEC conducted an outsourced practical law study to examine a way of disclosing information about bailed technologies by utilizing the IP application system and reviewing controversial issues and necessary procedures for separate bailment contracts for a transfer-target technology.

Lastly, KOTEC produced a leaflet about the technology trust system and reinforced its promotion. It then carried out active promotional activities, such as distributing 16,400 copies of the leaflet to regional headquarters, sales branches, etc., totaling 76 offices, in the early stage of introduction, raising awareness of the technology trust system.

(Technology bailment fee) Startups: free, Venture businesses: KRW 50,000 → Provided with practical benefits

(Distribution of leaflets) Distributed 16,400 copies to 76 offices, including regional headquarters and sales branches in total → Raised awareness

Status and Achievements in Key Tasks of Technology Protection Programs

'Kind Enterprise' business agreement with SKC Co., Ltd.



➔ Vitalizing the technology protection system by strengthening mutually-beneficial coexistence and cooperation with the private sector and related institutions

① Expanding mutually-beneficial coexistence and cooperation in technology protection between large enterprises and SMEs and inviting more SMEs into the technology protection system

By running the 2-Win Bridge for mutually-beneficial coexistence and cooperation and fair technology transfers between large enterprises and SMEs, KOTEC discovered technology demands for large enterprises and expanded the cooperative network between large enterprises and SMEs, such as by concluding a 'Kind Enterprise*' agreement with SKC Co., Ltd. and an MOU with SK picglobal Inc. For effective protection of technologies held by SMEs, it worked on inviting in more technology trusts and bailments.

* Kind Enterprise

Enterprises voluntarily participating in mutually-beneficial cooperation, which is different from the traditional 1st-tier partner focused cooperation. They share their strengths, such as their infrastructure (groundwork), mutually-beneficial existence programs, and know-how, with their partners, including SMEs, small business owners, and the self-employed, and go further to include non-partner enterprises.

② Reinforcing support for SMEs' technology protection by concluding MOUs and alleviating enterprises' burdens

KOTEC entered into a business agreement with the Korea Occupational Safety and Health Agency in September 2020 to support bailment fees for SMEs. This agreement is an annex to the 「Business agreement to support guarantees for excellent safety-performance enterprises and enhance the level of occupational safety and health」 concluded in May 2019, which includes support for bailment fees for SMEs showing excellent safety performance and recommended by the agency. For 20 excellent enterprises recommended by the agency, among the enterprises bailed in Tech-Safe, KOTEC provided full support for fees, thus alleviating their burdens.

Besides this, through cooperation with local governments, it promoted expansion of technology protection fee support projects and worked to alleviate the burden of fees. As a result, voluntary demands were created, and the base for technology protection projects was expanded. By promoting related systems such as grants for additional points to the win-win index¹⁾ and utilization of the obligatory bailment system for smart factories²⁾, it encouraged more demands for technology protection.

1) Grant of additional points to the win-win index: If a large enterprise pays technology bailment fees on its partner's behalf, it gets additional points in the win-win index.

2) Obligatory bailment system for smart factories: The source code related to implementation of a smart factory is obligatorily bailed for two years.

6. IP Mutual Aid

SMEs and middle-standing enterprises are lacking the capabilities to respond to technology infringement and, as a result, the number of technology extortion incidents is growing. Furthermore, since there are a growing number of applications for domestic or overseas patents by SMEs and middle-standing enterprises, their costs for IP related activities are increasing year by year. KOTEC is running the IP mutual aid program to alleviate IP related risks for SMEs and middle-standing enterprises, back up their entrance into domestic and overseas markets, and provide them with a stable managerial foundation. The IP mutual aid program is a program where member enterprises pay installments and receive aid from the accumulated installments in cases of IP rights disputes or applications for domestic or overseas patents. Through the program, KOTEC is helping the member enterprises run their own businesses without worries regarding technology extortion.

→ IP Mutual Aid

- **Accumulation of mutual aid installments** Monthly installments paid by a member enterprise are accumulated with a certain interest rate, and the accumulated principal and interest are paid out at the time of cancellation of the mutual aid contract in a lump sum.
- **Loan for IP expenses** In the case of an application for a domestic or overseas patent or a domestic or overseas judgment litigation, a member enterprise can get a loan within five times the accumulated installments and can use this amount to handle the application or litigation. The enterprise must pay back the loan in installments within five years.
- **Loan for managerial expenses** In the case of a shortage of funds or other reasons, a member enterprise can get a loan within 90% of the accumulated installments and pay it back within a year.

→ Benefits to member enterprises

- **Consultation services** Providing free consultation services in terms of IP disputes, commercialization, tax, accounting, etc.
- **Additional services** Providing diverse customer-friendly benefits

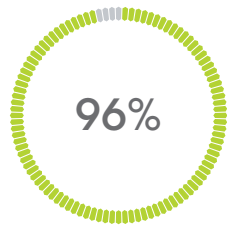
Category	Service	Benefits
Public sector	Support for preferential examination costs in the application process for industry property rights	Providing support for preferential examination costs in the application process for industry property rights
	Enterprise's credit report	40% discount on fees for enterprise credit reports for public institution submission purposes by Korea Enterprise Data
Local governments	Partial support for installment to Daejeon Techno Park Mutual Aid	Providing support for prepayment of six-month installments for mutual aid for local registrants through an agreement with Daejeon Techno Park
Private sector	Discount in accounting platform fees	Providing a voucher for the Smart Bill (electronic tax invoice) platform by Business On Communication



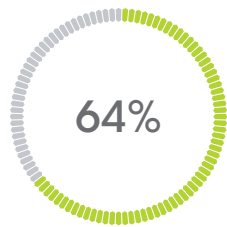
Among survey-target SMEs for the past five years

644 (7.8%) out of a total of **8,219** enterprises said they experienced technology infringement or extortion

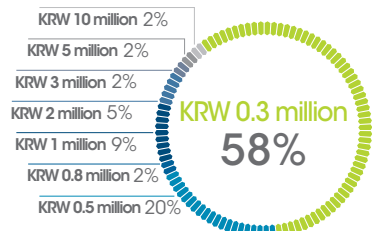
Amount of loss reached **KRW 1.1 trillion**
(2017, Ministry of SMEs and Startups)



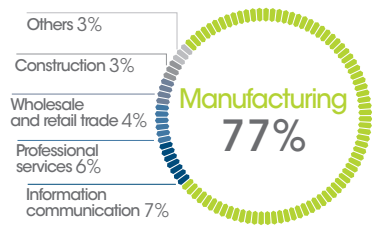
Proportion of registration through sales branches



Proportion of holding IP rights



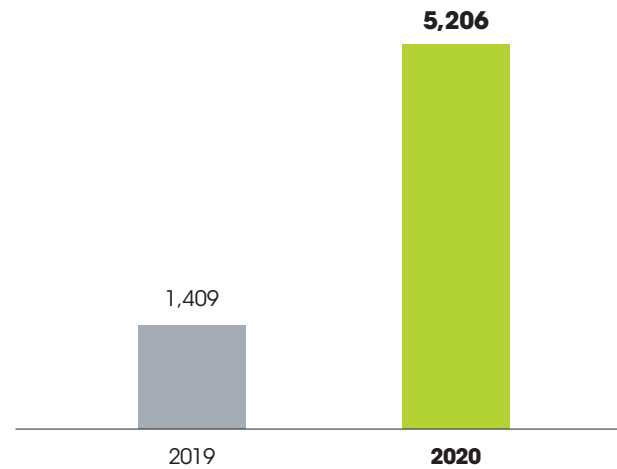
Proportion by installment amount



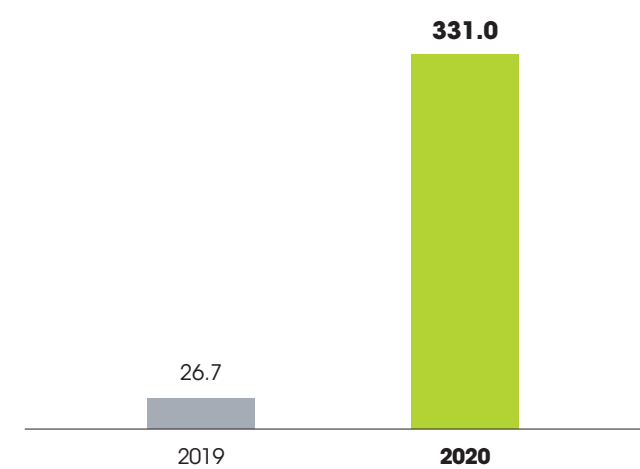
Proportion by business kind

➔ Status of IP mutual-aid registration

Number of registrants (cumulative total) (Unit: number of cases)



Paid installments (cumulative total) (Unit: KRW 100 million)



➔ Status of IP mutual-aid loans

(Unit: number of cases, number of enterprises, KRW 100 million)

Category	Number of cases (number of enterprises)	Amount
Loan for IP expenses	7(4)	0.7
Loan for managerial expenses	16(16)	4.7
Sum	23(20)	5.4

➔ IP mutual-aid asset management

(Unit: KRW 100 million, %)

Category	Average balance	Proportion	Rate of return
Short-term asset	59.3	28.8	1.43
Mid- and long-term asset	146.6	71.2	2.81
Sum	205.9	100.0	2.35

7. Support for Venture Innovation

Investment-linked Guarantee

By operating an investment-linked guarantee system integrated through all stages of investment, KOTEC responds actively to the investment-oriented financial policies that preemptively absorb market risks. Additionally, by providing follow-up support for growth funds according to the investment stage of private investment-attracting enterprises, it promotes their scaling-up.

Status of investment-linked guarantee products according to the size of private investment attraction

Category	Angel Plus (A+) program		Venture investment linked guarantee	Special guarantee for VC investment matching	Special guarantee for preliminary unicorns
	Angel investment linked guarantee	Post angel guarantee			
Overview	For fast growth of startups that attract angel investment, provide special guarantees for up to twice the angel investment amount	For excellent startups that have grown thanks to angel investment and guarantee support, provide financing to enable their continuous further growth	For vitalization of venture investment, in cooperation with venture investment related institutions, for enterprises with attracted investment, provide funds for R&D and commercialization	When a VC carries out a large-scale investment, provide a similar scale guarantee for the enterprise to encourage large-scale investments	Discover preliminary unicorn enterprises meeting requirements for innovativeness, growth potential, and proven marketability and support their growth as a future unicorn enterprise
Guarantee target (investment amount)	Among enterprises that attract angel investment, enterprises recommended by angel partners* (KRW 30 million or more)	Among enterprises that attract angel investment and receive linked guarantees, enterprises showing excellent performance	Enterprises that attract venture investment (including innovative venture funds) (no limit)	Among enterprises that attract venture investment, enterprises recommended by KOTEC's VC partners** (KRW 2 billion or more within six months)	Enterprises that attract venture investment (KRW 5 billion or more)
Operation years	Seven years or less	No limit	No limit	No limit	No limit
Guarantee limit	KRW 3 billion	KRW 3 billion	KRW 3 billion	KRW 5 billion	KRW 10 billion
Special calculation of guarantee amount	Special calculation up to KRW 300 million (within twice the angel investment amount)	Special calculation up to KRW 300 million (within the estimated sales amount up to the predefined limit of KRW 3 billion or within the attracted investment amount)	Special calculation up to KRW 1 billion (attracted investment amount or half the estimated sales amount)	Special calculation up to KRW 2 billion (attracted investment amount or half the estimated sales amount)	Special calculation up to KRW 3 billion (attracted investment amount or half the estimated sales amount)

* Professional private investors and startup planners registered under the Ministry of SMEs and Startups, those selected by KOTEC (139 agencies)

** Among member venture capitals (VC) of the Korean Venture Capital Association (61 agencies)

Support results

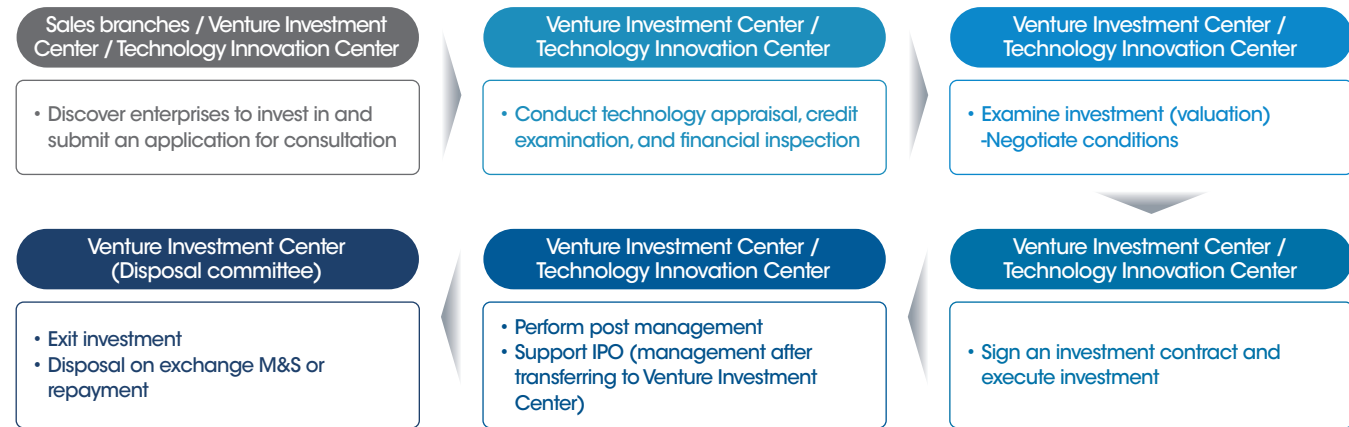
(Unit: number of cases, KRW 100 million)

Angel investment linked guarantee		Venture investment linked guarantee		Special guarantee for VC investment matching		Special guarantee for preliminary unicorns	
Number of cases	Amount	Number of cases	Amount	Number of cases	Amount	Number of cases	Amount
65	212	165	2,503	24	384	30	1,865

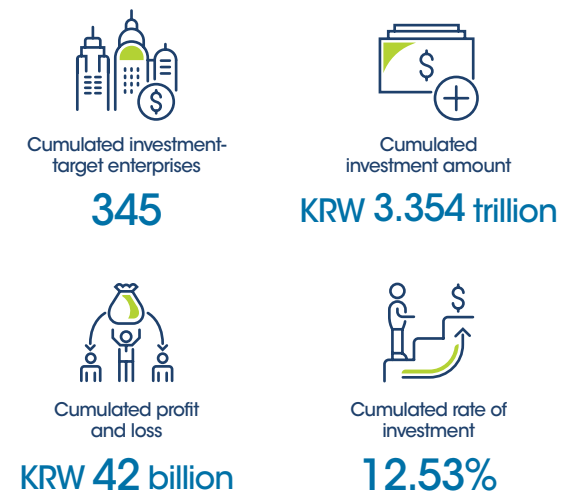
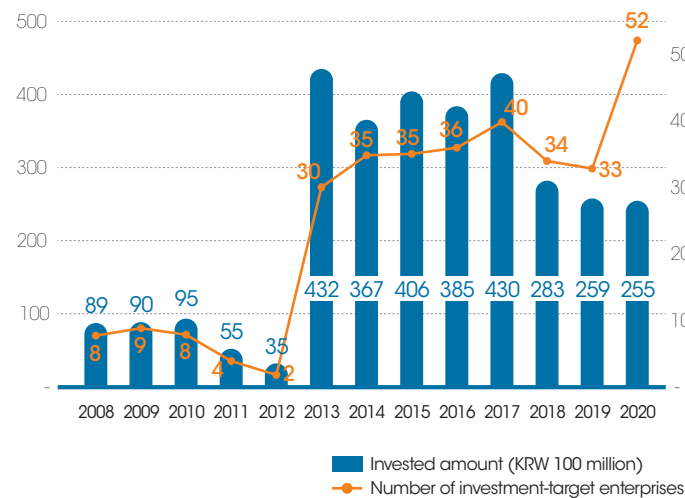
Guarantee Linked Investment

For technically-innovative enterprises with excellent technical competitiveness and great growth potential, KOTEC is making direct investments linked with guarantees aiming at providing direct opportunities for financing and supporting the improvement of the financial structure. By concentrating the investment on venture businesses in their earlier stages who can easily become alienated in the VC market due to high investment risks, it has backed up the private investment sector. As a result, KOTEC invested KRW 335.4 billion in 345 enterprises from 2005 (when the investment system was introduced) to 2020. Among these, 27 enterprises have managed to be listed on the KOSDAQ. As such, KOTEC has been working on helping venture businesses' scaling-up efforts.

Work process for guarantee linked investment



Operation results for guarantee linked investment



Social Venture Support Program

Business agreement for vitalization of social ventures with Yonsei University's Institute for Higher Education Innovation



Business agreement for realization of social values and support for social ventures with Chungcheongnam-do, etc.



Social ventures are enterprises that try to solve social issues by connecting innovative technologies and ideas with sustainable business models. They are distinguished from venture businesses or social enterprises as they pursue both economic values and social values at the same time. Lately, to resolve socio-economic challenges, such as balanced development among regions, resolution of polarization, and job creation for the youth with the power of the private sector, the role of social ventures is gaining importance. In line with this trend, KOTEC is developing diverse projects to foster social ventures and provide impact guarantee support, contributing to building infrastructure for social ventures and supporting their establishment and growth.

Projects to foster social ventures

Project	Brief description
Factual survey on social ventures	Conducting a survey on the overall status of social ventures, including their general status and managerial achievements
Operation of an evaluation system	Implementing and operating an open platform that enables determination (self-examination) and evaluation of social ventures and provides information
Fostering social ventures in the capital area and in other regions	Building hubs for establishing and growing social ventures and encouraging social ventures through base regions
Raising awareness of social ventures	Producing a video about social ventures and operating promotional programs for the public

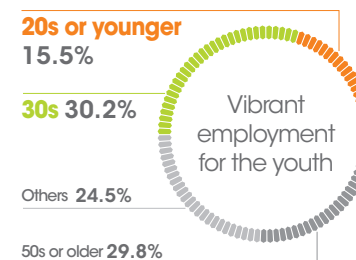
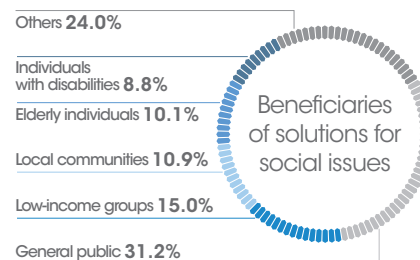
Key achievements
- Secured information on the status of social ventures in 2019 and 2020
- Implemented a social venture map
- Implemented a dedicated social venture platform* *Social Venture Square (http://sv.kibo.or.kr)
- Provided support for capability development by vitalizing investment into social ventures, etc.
- Facilitated networking between the capital area and other regions and ran specialized programs through an intermediate support group
- Produced a promotional video about social ventures (YouTube)
- Held a result-sharing session about social venture fostering projects

Status of impact guarantees for social ventures

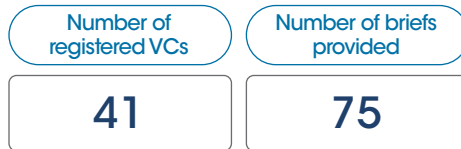
(Unit: KRW 100 million, number of enterprises)

Category	2018	2019	2020	2021	2022	Sum
Support plan	300	700	1,150	1,350	1,500	5,000
Support result	685	841	1,239	-	-	2,765
Number of enterprises	118	196	321	-	-	635

Necessity of fostering social ventures (result of 2020 Factual Survey on Social Ventures)



Provision of Information for Investment Examination



By operating the investment information platform website openly, KOTEC discloses investment examination reports (briefs) for enterprises where KOTEC has invested in private venture capitals. By doing so, it helps private venture capitals make investment decisions and gives enterprises where KOTEC has invested opportunities to get follow-up investments, promoting vitalization of the private venture capital market.

Disclose investment examination information (brief) to the public sector



KOTEC Innovation Forum for Startups

KOTEC held 'KOTEC Innovation Forum for Start + Up' for startups hoping to enter Silicon Valley. Through this event, KOTEC provided participants with a chance to look into changes and prospects in Silicon Valley, including changes to the industry and startup environments in Silicon Valley, new trends in investment and incubation, case analyses for successful startups and lessons to learn from them, etc., under the unprecedented Covid-19 pandemic situation and shared best practices to help domestic startups enter overseas markets.



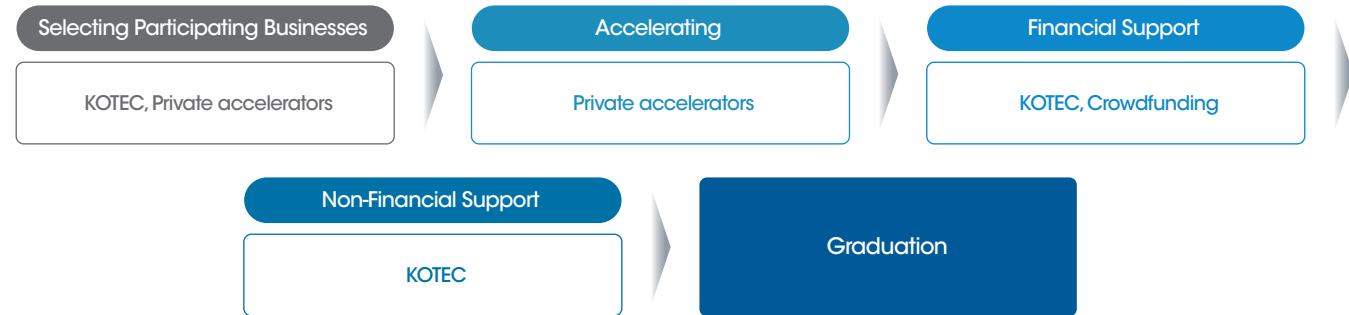
Kibo Venture CAMP*

* **CAMP(Competitiveness Accelerating Management Program)**: Program to help newly-established startups strengthen their competitiveness

KOTEC Venture CAMP



KOTEC Venture CAMP is an accelerating program meant to lead successful startups and create quality jobs by providing concentrated nurturing and support services for new and promising venture businesses through cooperation with the private sector, including private accelerators and crowdfunding brokers, using the technology-appraisal infrastructure held by KOTEC. A total of 852 enterprises applied for the 6th and 7th KIBO Venture CAMPs nationwide. Through the 1st round of document evaluation and 2nd round of presentation evaluation, 103 enterprises were selected for participation.



Status of KOTEC Venture CAMP operation

(Unit: number of persons)

Category	2017 (1st graduates)	2018 (2nd and 3rd graduates)	2019 (4th and 5th graduates)	2020 (6th and 7th graduates)
Applicants	239	393	801	852
Graduates	30	96	105	103

Implementing a system to create synergy by providing comprehensive financial and non-financial support

Category	Key Support Details
Private Accelerators	Provided advanced acceleration skills, such as incubation, mentoring, business skill development, market segmentation strategies, etc.
Crowdfunding Brokers	Crowdfunding brokerage for participants
Woori Bank	Arranged a loan product exclusively for KOTEC Venture CAMP participants and provided guarantee fee support, etc.
Korea Broadcast Advertising corp. (KOBACO)	Supported marketing activities by providing support for advertisement production and advertising expenses

KOTEC Venture Startup Class

1st KOTEC Venture Startup Class in 2020



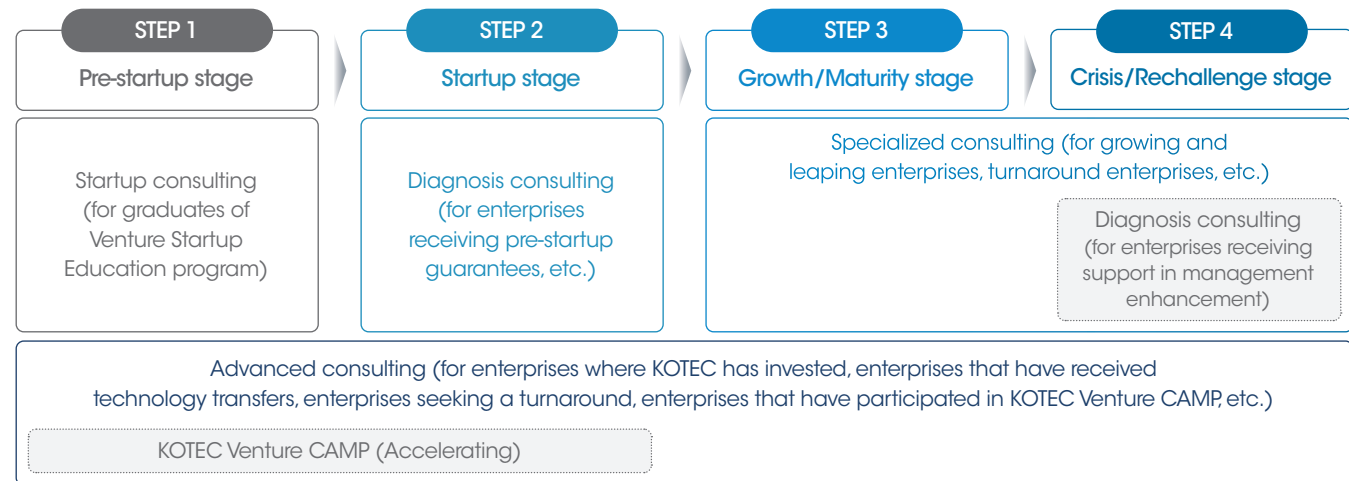
For preliminary entrepreneurs who are preparing technology startups or are in their earlier stage, KOTEC provided an educational program on technology startup practices in a systematic manner, including financing strategies, marketing, and IP rights, building the circumstances for encouraging startups, promoting startups, and improving awareness of startups. By providing customized consulting services according to each development stage from preparation to crisis/retrial, it helps strengthen the competitiveness and streamline management.

Status of KOTEC Venture Startup Class' operation

(Unit: number of times, number of persons)

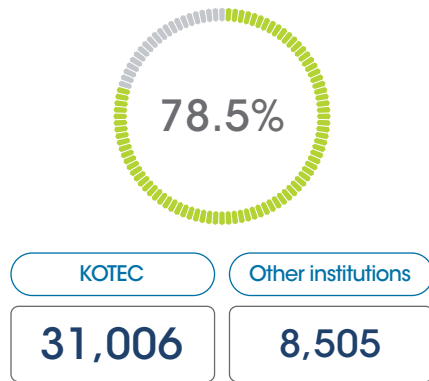
Category	2001-2005	2006-2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Sum
Number of times	17	12	2	2	3	2	2	2	2	2	2	3	51
Graduates	641	775	133	168	194	191	194	128	143	152	113	153	2,985

Building a Technology and Management Consulting-Support System throughout the Entire Cycle of Enterprise Development



Assessment for Venture Business Certification

Proportion of venture businesses certified by KOTEC among all venture businesses



Aimed at certifying enterprises with excellent technical competitiveness and great growth potential as a venture business and granting them diverse tangible and intangible benefits, such as funds, technology, workforce, and location, and to create engines for future growth, the government introduced the venture business certification system in 1988 based on the 「Act on Special Measures for the Promotion of Venture Businesses」. With this base, KOTEC has certified enterprises with excellent technical competitiveness and great growth potential as venture businesses and has granted them diverse tangible and intangible benefits, such as funds, technology, workforce, and location, creating engines for future growth.

→ Venture care program

The venture care program is a comprehensive consulting program for enterprises failing to get venture business certification. By presenting a diagnosis and solution based on the venture certification result, it helps them strengthen their capabilities and encourages growth. The program is divided into two customized paths of pre-venture care and intensive care, depending on the result of venture certification's return or failure. In 2020, there were 2,323 cases in the pre-venture care path and five cases in the intensive care path.

	Pre-venture care	Intensive care
Category	<ul style="list-style-type: none"> • (Target) Enterprises returned from venture certification • (Content) Mentoring based on reasons for return, etc. • (Method) Mentoring through face-to-face talks or over the phone • (In charge) Staff in charge of sales branches 	<ul style="list-style-type: none"> • (Target) Enterprises failing in venture certification • (Content) Reasons for failure, guidance on how to supplement, etc. • (Method) Professional consulting through onsite visits • (In charge) External consultants

(Unit: number of cases)

Category	2018	2019	2020	Sum
Pre-venture care	1,213	2,347	2,323	5,883
Intensive care	37	5	5	47

What are hundred-billion venture businesses?

Among businesses that have received venture business certification, businesses whose sales amount increased to KRW 100 billion or higher

→ Support for hundred-billion venture businesses

Aiming at laying the groundwork for venture businesses to grow as middle-standing enterprises, KOTEC provides hundred-billion venture businesses with technology appraisal and guarantee services. As of the end of 2019, KOTEC had helped 563 (91.2%) out of a total of 617 hundred-billion venture businesses.

(Unit: number of enterprises, %, as of the end of 2019)

Hundred-billion venture businesses (A)	No trading with KOTEC	Trading with KOTEC			
		Guarantee	Technology appraisal	Sum (B)	Proportion (B/A)
617	54	507	535	563 **	91.2

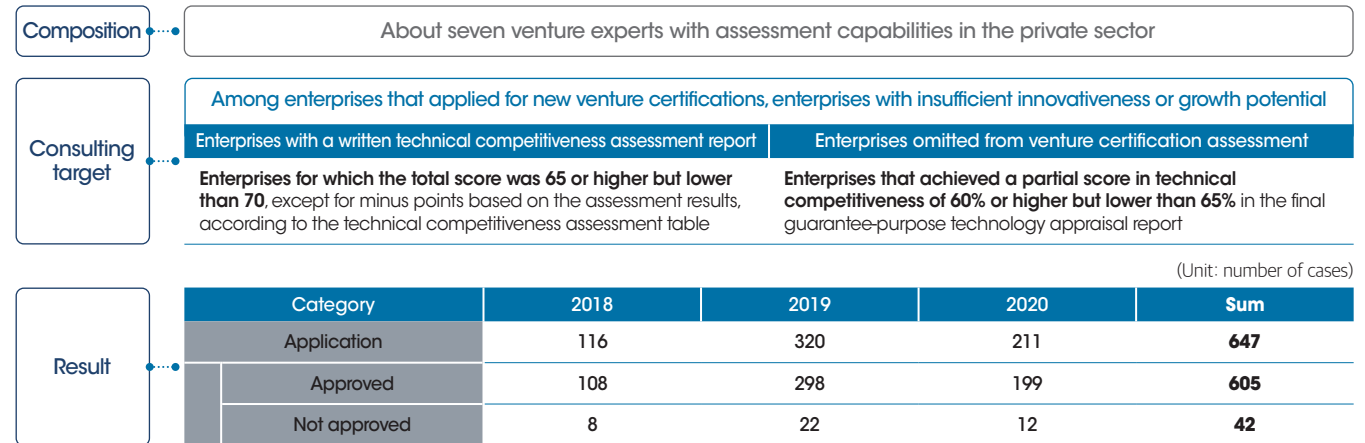
* 중소기업본부(2021), 2020년 벤처창업기업조사

** Considering 479 duplicates existing both in guarantee and in technology appraisal

Assessment for Venture Business Certification

➔ Private consulting system for venture certification

The purpose of the private consulting system for venture certification is to strengthen the capabilities to select venture businesses and supplement assessment of a technology's innovativeness and a business' growth potential. To that end, opinions from experts in the private sector are reflected in the selection of venture businesses.



Assessment for Technically-Innovative SMEs (Inno-Biz) Certification

To respond to the environmental changes following globalization and open trends in the global economy in the 21st century, and to enhance national competitiveness, fostering technically-innovative SMEs to take the lead of the Korean economy became an urgent task for the government. As such, the government established a plan for 'discovering and fostering technically-innovative SMEs,' based on the 'Act on the Promotion of Technology Innovation of Small and Medium Enterprises,' in 2001. KOTEC has certified SMEs with excellent technical competitiveness and potential for future growth as technically-innovative SMEs (Inno-Biz) and provided support for technology, funds, and sales channels in turn, helping them grow into global-scale enterprises.

- KOTEC is the only assessment institution (and as of the end of 2020), having certified 18,920 enterprises as Inno-Biz through its technology appraisal.

(Unit: number of enterprises)

Category	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Number of enterprises	16,944	17,298	17,080	16,878	17,472	17,708	18,091	18,093	18,345	18,920

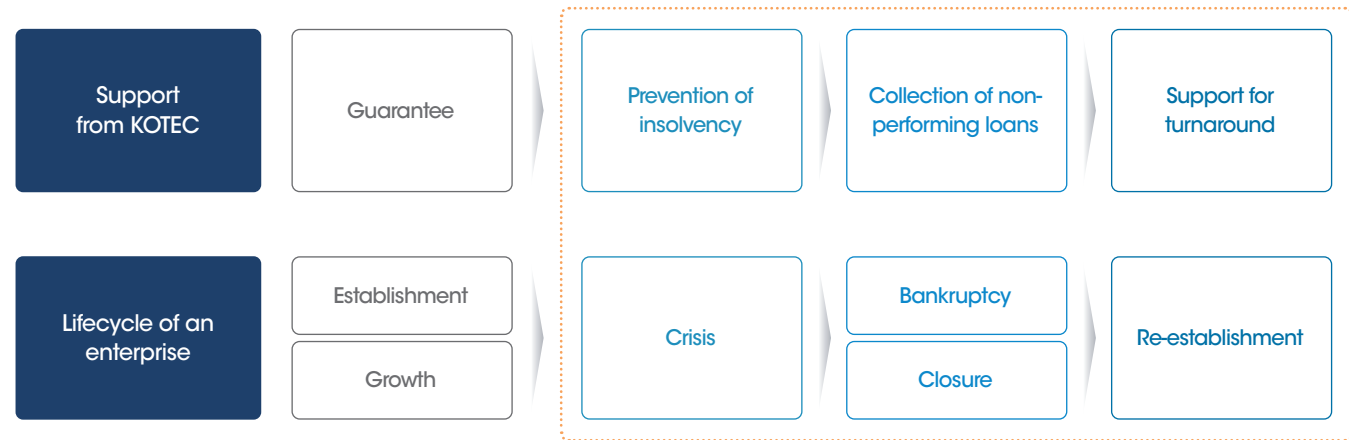
- In 2020, KOTEC certified total 6,356 enterprises certified through assessment for Inno-Biz certification.

(Unit: number of enterprises)

Category	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Annual certifications	5,464	5,936	5,717	5,293	6,494	5,831	5,545	6,559	6,121	6,356
New	2,242	2,208	1,739	1,506	1,793	1,335	1,250	1,151	1,220	1,430
Extended	3,222	3,728	3,978	3,787	4,701	4,496	4,295	5,408	4,901	4,926

8. Prevention of Insolvency, Collection of Non-Performing Loans, and Turnaround Support

To help guaranteed enterprises suffering from difficulties brought on by the Covid-19 crisis, KOTEC implemented a preventive insolvency response system and is focusing on measures to prevent insolvency. Meanwhile, by advancing the loan collection system, it has sped up the collection of non-performing loans and quickly settled remaining loans to build an 'inclusive financial environment' where diligent-but-failed entrepreneurs that have nevertheless demonstrated technical competitiveness can make a fast turnaround.

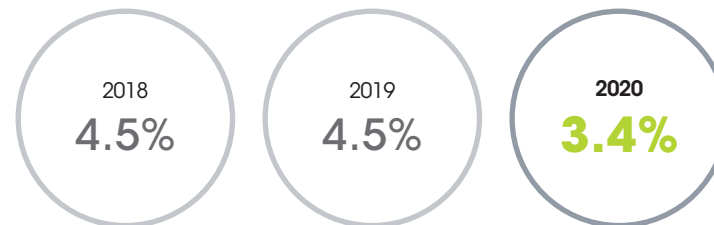


➔ Preventing insolvency for SMEs suffering a temporary managerial crisis

For SMEs suffering a temporary managerial crisis due to the spread of Covid-19 in 2020, KOTEC explored a proper and constructive way for running the non-performing loan management system for SMEs and implemented an insolvency prevention system for stable incident rate management.

Specifically, KOTEC reinforced risk management by operating an incident prediction system where rapidly-changing economic conditions (such as disasters) are reflected. Meanwhile, by carrying out 'special actions for incidents of temporarily closed enterprises' and other various incident handling exemption programs, including incident exception measures in response to a growing number of enterprises facing drastic managerial difficulty, KOTEC provided support for 420 enterprises in total and enabled 316 enterprises (accounting for 75.2%) to normalize their operations.

Annual incident rate



Annual number of enterprises experiencing incidents

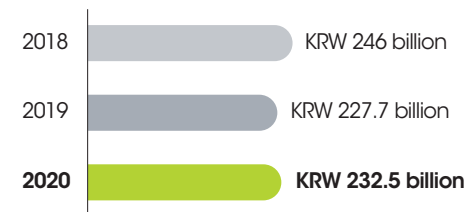


➔ **Quick collection of non-performing loans to supplement permanent property and prepare the foundation to support a turnaround**

Through early collection of non-performing loans that occurred due to bankruptcy of the enterprise and quickly settling remaining loans through burning-up, sale, etc., KOTEC resolved debtors' long-term outstanding debts and focused on preparing the foundation to support a turnaround.

To that end, KOTEC improved the system, such as by improving the current price repayment system, giving incentives for diligent debtors, and streamlining the sales procedures for debt-for-equity stocks, sold non-performing loans amounting to as much as KRW 681.3 billion among its remaining loans, and burnt up KRW 107.7 billion work loans, all while laying down the foundation to support debtors' turnaround efforts. Thanks to such measures, KOTEC managed to collect non-performing loans of KRW 232.5 billion and improve its financial stability, which has led to the groundwork for providing new guarantees, such as the Covid-19 special guarantee (worth KRW 7.8 trillion).

Non-performing loan collection amount



Sold amount of special loans

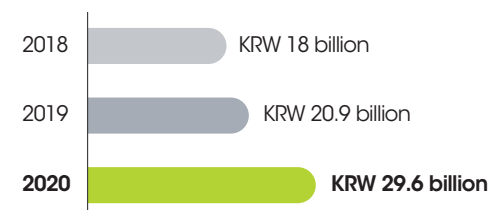


➔ **Reinforcing turnaround support for diligent failures to realize an inclusive financial environment**

For enterprises in the process of rehabilitation or joint surety which were formerly in the blind spot of the turnaround support guarantee system, KOTEC expanded the turnaround support guarantee from 2020 and, as a result, nine enterprises received guarantees worth KRW 5.5 billion. Also, to alleviate the burden of incidental expenses following guarantee support, the fixed guarantee fee rate of 1.0% was applied, and their technologies were exempt from the technology appraisal fee. Through these systematic efforts, a total of KRW 29.6 billion was given out to 172 enterprises in support of their turnaround.

Meanwhile, to prevent enterprises that made a comeback from experiencing a second failure, KOTEC invited 146 returning entrepreneurs into a training program composed of preliminary sessions and professional lectures and, by concluding a support agreement with 'Gyeonggi-do Business & Science Accelerator,' recommended five enterprises to receive the turnaround support guarantee from the 'Gyeonggi Rechallenge Fund' as follow-up investment targets. By carrying out such follow-up programs for 25 enterprises holding excellent technologies to get back into operation, KOTEC lowered the incident rate of turnaround support guarantees to 8.7%.

Amount of turnaround support guarantees



Incident rate of turnaround support guarantees



PASSION

KOTEC promises a brighter tomorrow for our clients
through untiring passion and efforts

KOTEC has been strengthening its technology appraisal organization to actively respond to the advancement and integration of technologies. It will continue to foster sustainable innovation in management through diverse efforts, including improving its technology appraisal capabilities, enhancing risk management and policy research, and expanding social contributions.

03

Management Support

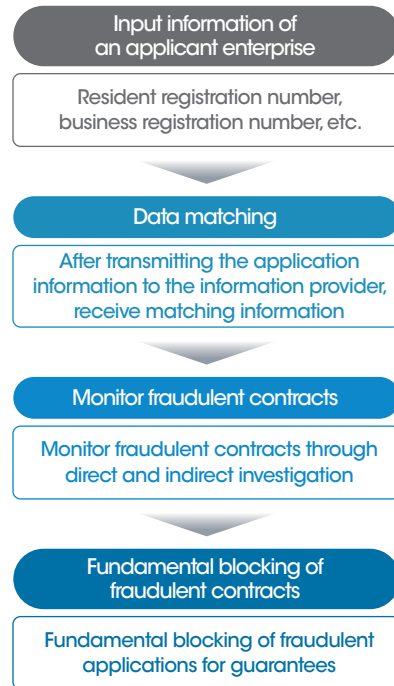
- ① Risk management 056
- ② Policy research 058
- ③ Digitalization 060
- ④ International exchanges and cooperation 065

1. Risk Management

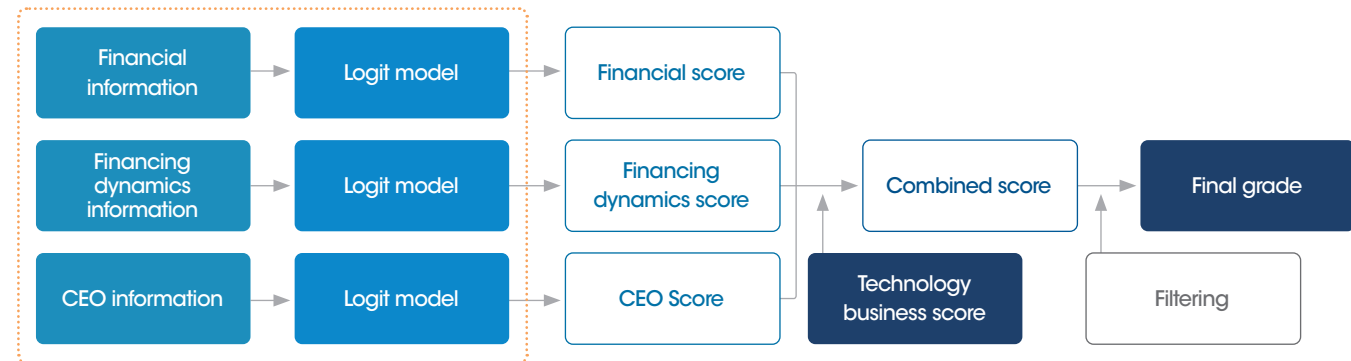
KOTEC's risk management aims at preemptively identifying sources of potential losses due to future uncertainties, such as domestic and global economic situations and changes to the management environment in an effort to reduce insolvency risks by initiating measures in advance. The risk compliance office is calculating and managing the degree of risk by the total guarantee assets held by KOTEC using the quantified risks of individual enterprises, and to calculate the risk amount of an individual enterprise, KOTEC is running a comprehensive risk assessment model in which the probability of an accident is examined in terms of finance, financial dynamics, representative, and technology appraisal. Additionally, using the deep-learning technique called the 'convolutional neural network,' KOTEC has developed an AI-based risk assessment model and combined it with the existing risk assessment model to form a complementary dual-core model.

Furthermore, by operating a fraud transaction alert system, KOTEC manages fraud risks due to fraudulent or false applications for guarantees, such as false entry of personal information and intentional entry of another person's information, preventing false applications for guarantees from the outset.

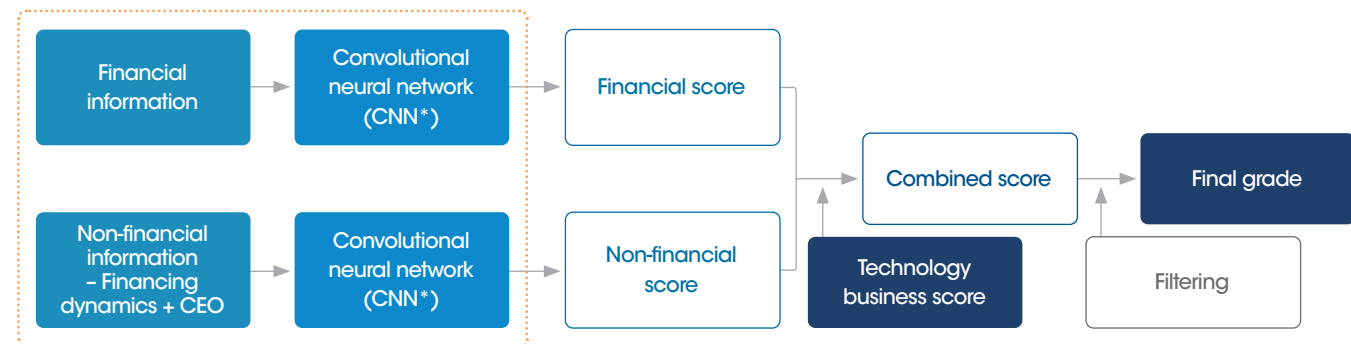
Fraudulent-Contract Warning System



Structuring of Risk-Assessment System Using Risk-Assessment Model



Structure of Risk-Assessment System Using AI-Based Model



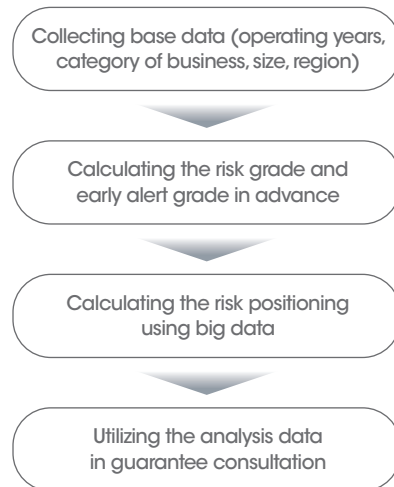
* Convolutional Neural Network

Risk Management

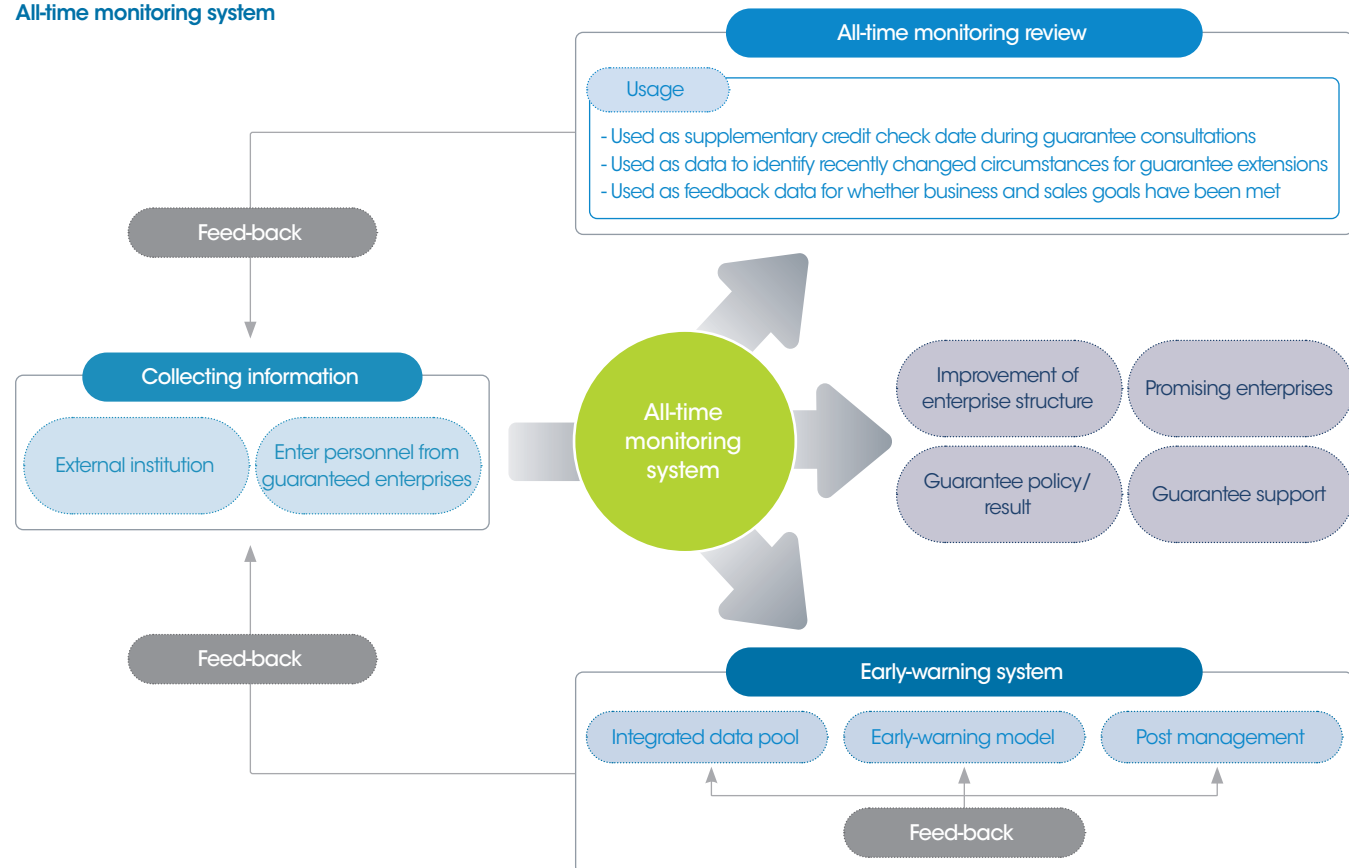
KOTEC is operating a continuous monitoring system to conduct post management for guarantee recipient enterprises, support successful growth for promising enterprises, and provide support for management-improvement activities for enterprises experiencing temporary managerial difficulties. For this, it classifies a guarantee enterprise using the accumulated enterprise information and prepares a suitable support method in line with their characteristics. By using an early-warning model composed of sub models - finance, financing dynamics, and CEO - and using filtering as a statistical means to quantify the possibility of insolvency for a guaranteed enterprise, KOTEC calculates the early-warning model grade for the guaranteed enterprise, classifies enterprises into general enterprises and enterprises with vulnerable business stability, and takes follow-up measures for enterprises showing vulnerable business stability.

To respond preemptively to future risks, KOTEC is running a big data-based risk positioning system. Using the base data of guarantee applying enterprises (operating years, category of business, size, region), the risk positioning system determines the similar enterprise group by comparing the enterprise with all other guaranteed enterprises and provides its position within the similar enterprise group in terms of risk grade and early alert grade, contributing to improving the stability of guarantee assets.

Risk positioning system



All-time monitoring system



2. Policy Research

KOTEC is conducting timely and scalable research on its own based on the advanced quantitative data analysis technique, with the research results used as a reference for awakening changes in the managerial environment and for making future decisions. In 2020, KOTEC carried out independent research projects as well as joint research projects with external institutions and, based on the research results, applied for patents, submitted papers, and participated in conferences, contributing to invigorating research on technology financing and strengthening its related network.

→ Independent research projects on its own

Category	Research Paper	Brief Report
Project name	<ul style="list-style-type: none"> - Study on how to select post angel guarantee recipient enterprises - Empirical study on characteristics of fast-growing enterprises - AI guarantee cancellation prediction model - Result analysis for excellent technology commercialization support (Tech-Valley) recipient enterprises through propensity score matching (PSM) and factual surveys - Study on 「Influential factors of satisfaction with a performance evaluation system」 through structure equation model analysis - Study on how to improve questions for a 「survey about satisfaction with a performance evaluation system」 through factor analysis and AHP - Study on 「Influential factors of a sales branch's guarantee accident amount」 through the panel data analysis method - Research on an AI-based follow-up investment probability prediction model 	<ul style="list-style-type: none"> - Details of how to respond to the revision of the three major data-related laws - Plans to deal with the post-Covid-19 era - Research on how to expand the scope of guarantee recipient enterprises - Plans to reform KOTEC's operation system for effective execution of new projects - Research on how to add accounts for consignment for effective execution of new projects

→ Joint research between KOTEC and the Korea Small Business Institute

- Plan for implementing an investment platform to facilitate innovative growth for new industries and accelerated scaling-up

→ Applications for patents

- Method to recommend enterprises for investment (applied for patent, application number: 10-2020-0027435)
- Sales credit insurance management system (applied for patent, application number: 10-2020-0103114)

→ Implementing a system that creates synergy by providing comprehensive financial and non-financial support

Title of paper	Empirical study on characteristics and decision factors of fast-growing technical SMEs
Name of journal	Credit card review (KCI registered journal)
Brief description	<ul style="list-style-type: none"> - Examined and analyzed preceding research on SMEs' growth characteristics, fast-growing enterprises, etc. - Analyzed characteristics of fast-growing enterprises and non-fast-growing enterprises in the two to three years following receipt of technology guarantees - Discovered that the enterprise's capability for technology commercialization has a greater impact on whether it can grow or not than the characteristics of the technology it owns (technical competitiveness, securing of patent, etc.)



2020 Korean Society of Intellectual Property Education & Research Fall Symposium



2020 Korea Productivity Association Autumn Symposium



→ Presentations at the symposium

Category	Date	Title
2020 Korean Society of Intellectual Property Education & Research Fall Symposium	Oct. 29 - 31, 2020.	AI based technology appraisal and transfer system
2020 Korean Society of Strategic Management Fall Symposium	Nov. 06, 2020	New AI based technology appraisal and patent valuation system
2020 Korea Productivity Association Autumn Symposium	Nov. 14, 2020	Study on how to improve questions for a survey about satisfaction with a performance evaluation system
2020 Korean Association for Local Government Studies Fall Symposium	Nov. 27, 2020	Analysis on influential factors on satisfaction with a performance evaluation system

→ Research Result Sharing Seminar

• Overview

- **Purpose** By sharing the results of key independent research projects, explore how to put the results into practice and make further improvements
- **Main participants** Executives in charge of research projects (including non-standing executives), heads of departments and team leaders, working-level staff in charge

• Agenda

- **Consumer-oriented research** Verify achievements and prepare a plan for improvement for ongoing or planned projects (systems) through empirical analysis, etc.
- **Joint research between KOTEC and the Korea Small Business Institute** To share policy issues and utilize collective intelligence, carried out joint policy research through cooperation with institutions under the Ministry of SMEs and Startups

• Details

Agenda	Presented by
Plan for implementation of a venture investment platform * Joint research by KOTEC and the Korea Small Business Institute	Dr. Choi Jong-min (Research Commissioner, Korea Small Business Institute) Yun Hyeong-deok, Team Leader
Research on the investment determination and follow-up investment prediction model * Investment-target enterprise deal sourcing model	Moon Jeong-hun, Deputy Department Head
Analysis of influential factors for accident amounts by different sales branches * Plan to improve accident target allocation factors for sales branches	Kim Eun-kyeong, Assistant Researcher Yun Hyeong-deok, Team Leader
Study on how to improve questions for a survey about satisfaction with a performance evaluation system and analysis of influential factors on satisfaction * Using factor analysis and AHP	Lee Gi-sun, Deputy Department Head
Result analysis of Tech-Valley guaranteed enterprises * Results of financial and non-financial achievement and status (survey) investigation	

3. Digitalization

Digital innovation plan

In preparation for the digital transformation era, KOTEC has been continuously evolving to provide smart customer services through digital innovation across its work areas. To that end, it assigned a Chief Digital Innovation Officer (CDIO) and organized a digital innovation committee for the first time among financial institutions. Moreover, it newly established a dedicated digital innovation group (digital strategy office) to accelerate a company-wide digital transformation.

Execution system



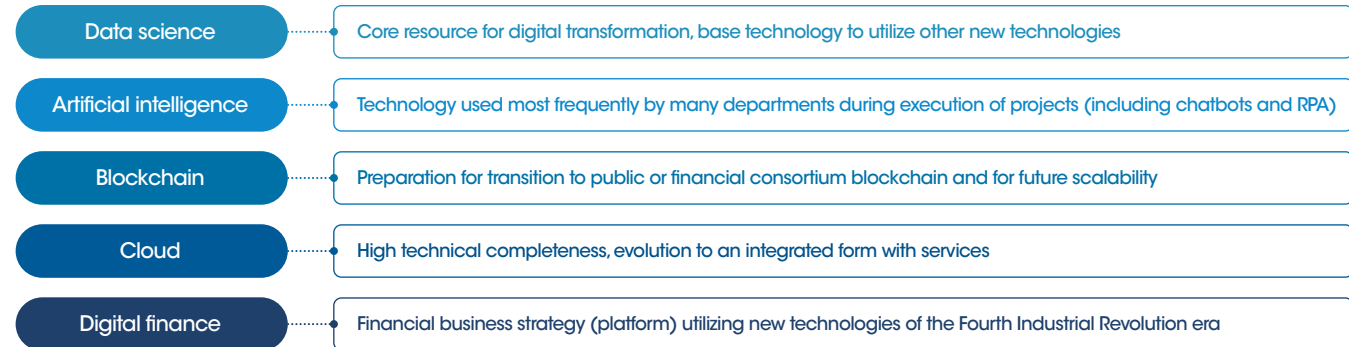
Expectations from six key digital technologies selected by KOTEC



Digital Innovation Plan

Purpose	Strategic task
Digital KOTEC Non-contact Automation	Implementing a digital workplace
	Realizing automation using new technologies
	Normalizing through sharing and connection
Digital-based new projects Platform Automation	Implementing big data infrastructure
	Providing digital technology integrated services
	Designing digital innovation groups and fostering workforce

Fostering digital professionals

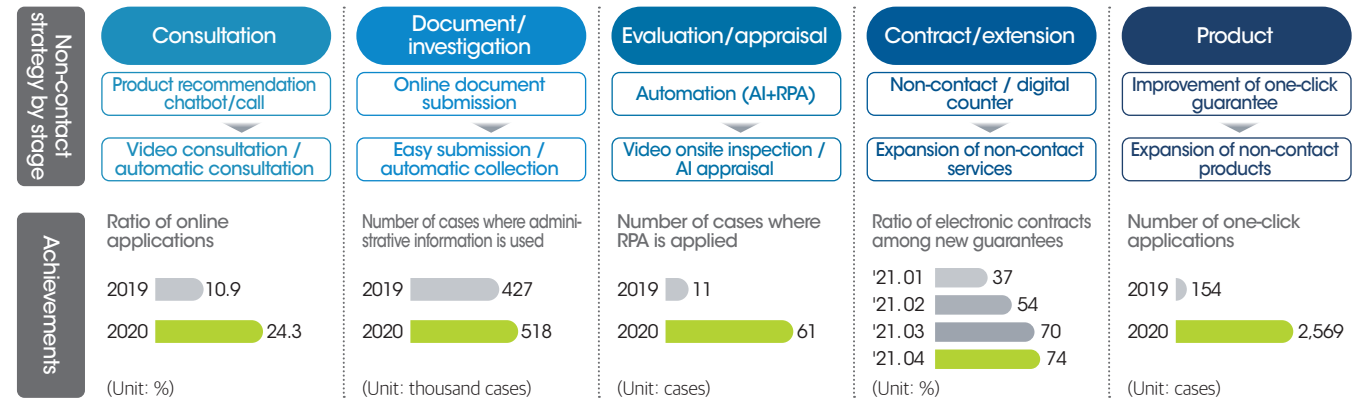


* Fostering professionals in five new technology areas by newly establishing DT and an academy (43 digital professionals were cultivated in 2020, and the goal is to cultivate 150 professionals by 2024)

Transition to Non-Contact Based Financial Services

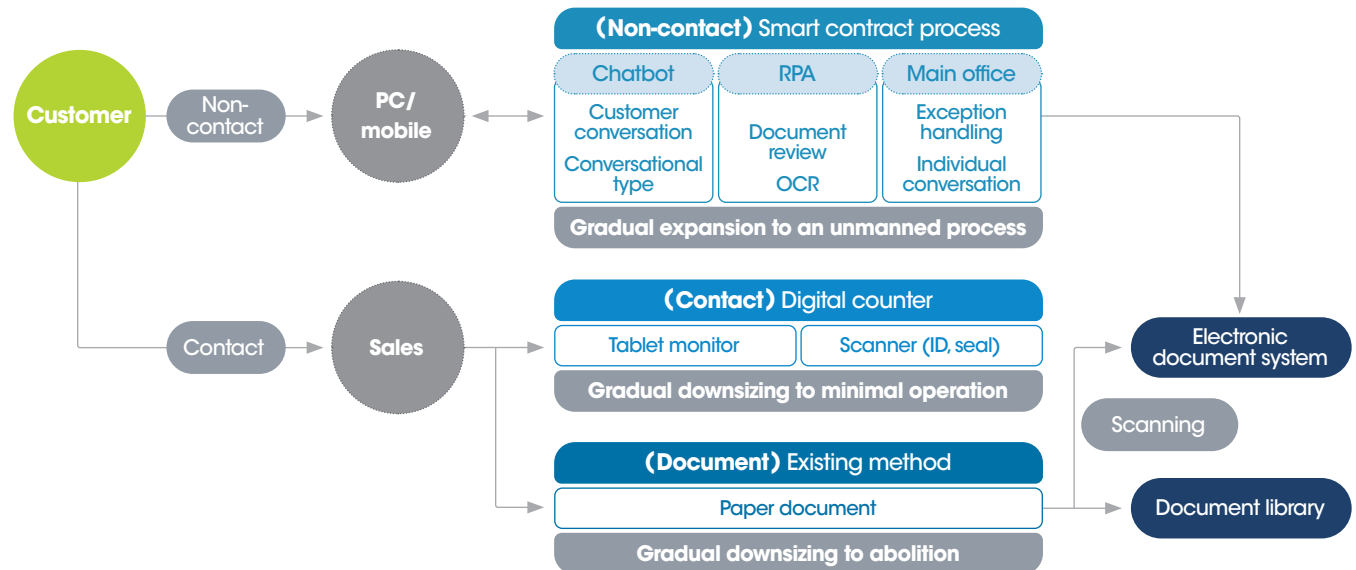
For the first time among public financial institutions, KOTEC started providing non-contact guarantee support services. With this, customers can get a consultation service for an issued guarantee certificate contactlessly, without the need to inconveniently visit a sales branch. Furthermore, KOTEC implemented an electronic library that is based on electronic document notarization using blockchain technology and automated its document collection process, allowing customers to immediately submit their information in financial and public institutions with self-authentication. As a result, the time required to process a guarantee has been reduced, and the number of times a customer has to visit a sales branch is minimized, which brings great improvements in terms of customer convenience.

Transition to non-contact customer services by different guarantee support stages



For customers
187,240 hours
are to be saved

Implementing a blockchain based electronic contract platform

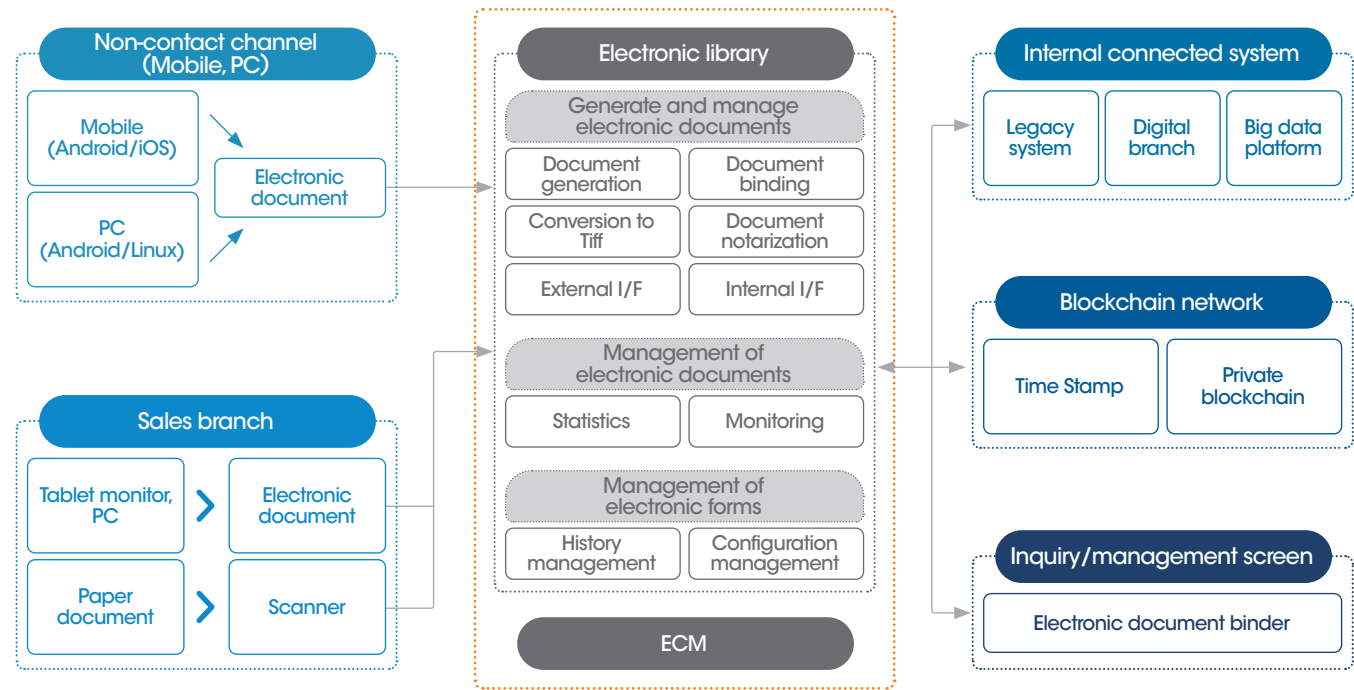


Transition to Non-Contact Based Financial Services

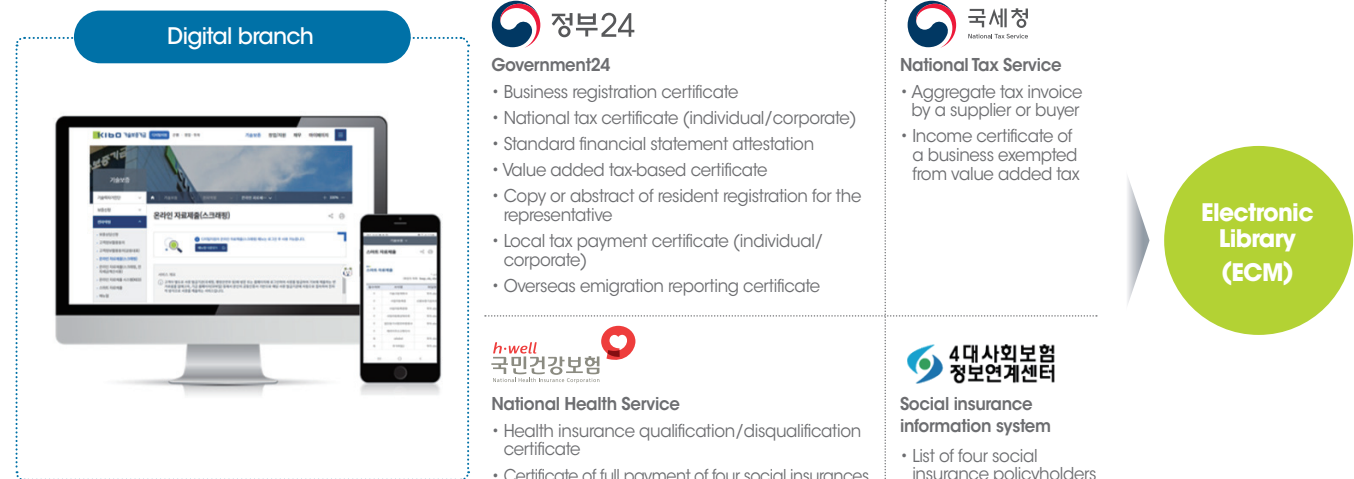
Libraries at sales branches
About 1,800 pyeong

Enhancing space utilization

Implementing a blockchain based electronic library and automating the document collection process using the scraping technique



On the digital branch, submit documents easily through scraping



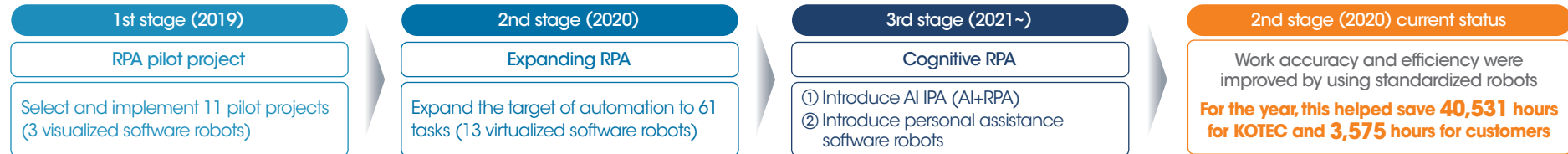
What is Scraping?

A technology for collecting customer information scattered across different websites, such as financial institutions, public institutions, and governments, with a single authentication process

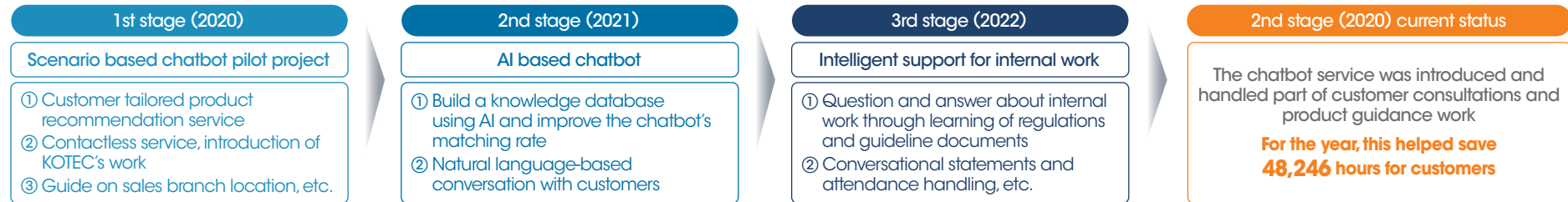
Digital Based Work Process

The year 2020 was one in which KOTEC's efforts for work innovation through digital based work process upgrades brought successful outcomes. As working from home became the norm, KOTEC quickly implemented a remote work system and prepared a stable IT environment to match that of an office. As a result, KOTEC was able to meet the guarantee goal for its sales branches under the Covid-19 pandemic circumstances. Furthermore, through various digital innovation efforts, it streamlined procedures and improved work accuracy and efficiency at the same time.

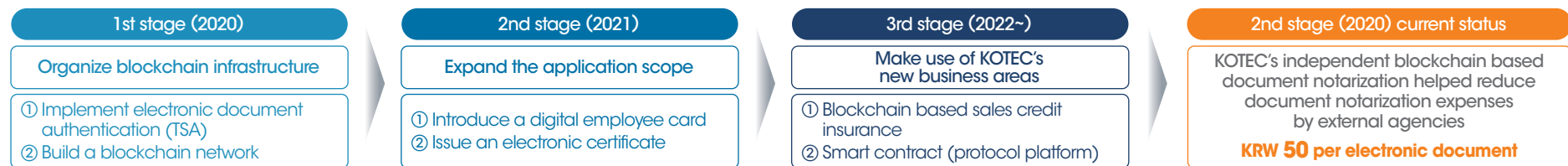
Improving the work process overall by setting up a roadmap for advancing robotic process automation (RPA) and expanding it (2nd stage)



Setting up a roadmap for advancing the chatbot and implementing a product recommending chatbot 'smart KOTEC' (1st stage)



Setting up a roadmap for advancing blockchain and implementing internal private blockchain infrastructure (1st stage)



Streamlining procedures and improving work efficiency by digitalizing complicated manual written work

Program	Brief description
Smart property investigation	Enhancing the efficiency of management thanks to one-stop registration inquiries and auto entry of property investigation
Smart price consultation	Using robotic process automation (RPA), automating reception of price consultation results and entry of received results
Smart IP rights	By integrating real-time patent information API, increasing productivity through one-stop IP rights utilization
Smart registration inquiry (for investigation purpose)	Thanks to one-stop telegraphic registration inquiries and automatic enterprise investigation data entry, shortening the time for processing

By integrating new technologies, shorten the existing five-stage process to a one-stop process / Through automation of simple repetitive work, build an environment in which employees can focus on key tasks
Saves 43,672 hours per year

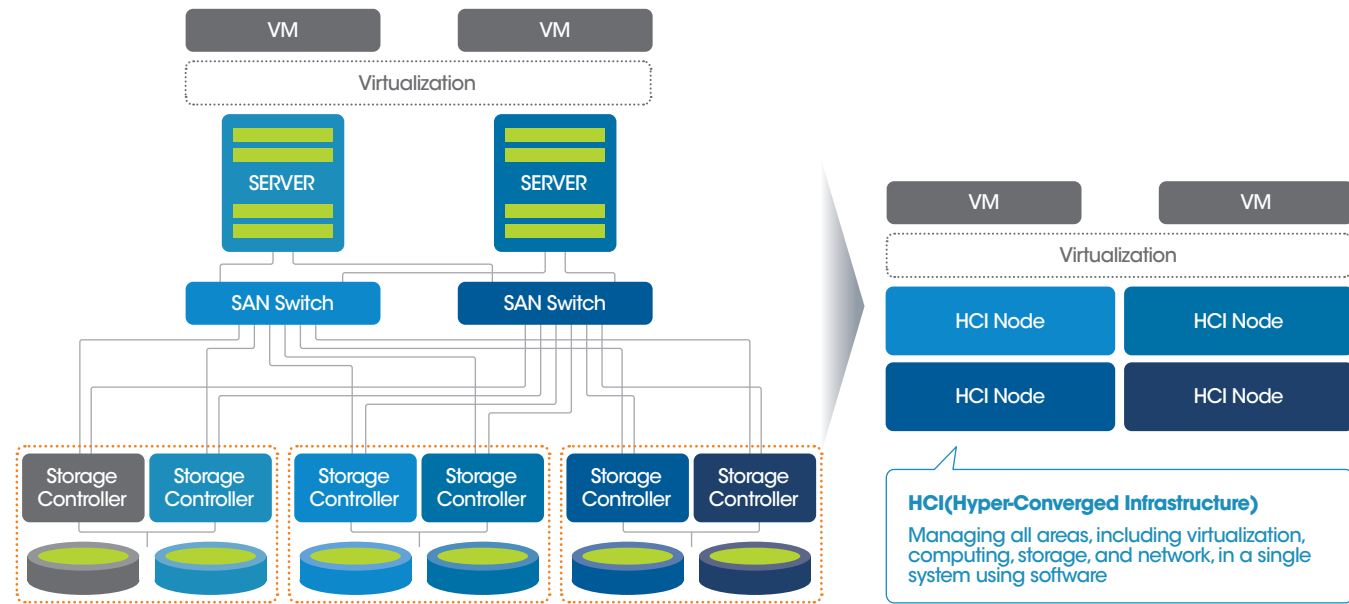
Implementing Digital Innovation Infrastructure



What is a private cloud system?

It is a technology with which a user can access a virtual desktop (PC) from a PC, laptop, or mobile device through a high-performance large-capacity server and access data, the operating system, applications, etc. It allows users to access systems for work any time, any place. As such, it represents a core system to implement smart office infrastructure.

Implementing a private cloud system



Allocating needed resources (CPU/memory/disk) and implementing virtualization-based servers which can be instantly implemented

Implementing a digital video conference platform

Accessible from diverse digital devices	Supporting various forms of meetings, such as discussions and presentations	Environments accessible from any place, such as a meeting room or on location during a business trip
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- ① Mobile device
- ② Tablet PC
- ③ PC, laptop



- Implemented a contactless video conference environment accessible any place, any time, using digital devices
- Applicable to contactless video conferences among employees, video consultations with customers, contactless information sharing in real time, etc.

4. International Exchanges and Cooperation

International Exchanges and Achievements

➔ Expanding technology financing overseas to Latin America

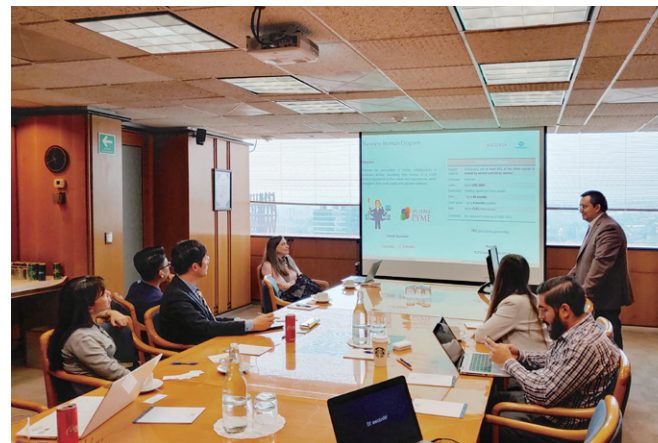
In cooperation with Inter-American Development Bank (IDB), KOTEC held global workshops for public officials in Mexico who are in charge of making policies for SME support, such as in the Ministry of Finance, for NAFIN, the national development bank, and Bancomext, the national export and import bank of Mexico.



⚡ **KOTEC Global Workshop**
Mexico's national development bank (NAFIN) (Feb. 13, 2020)



⚡ **KOTEC Global Workshop**
Mexico's national development bank (NAFIN) (Feb. 13, 2020)



⚡ **Technology knowledge exchange and business consultation between KOTEC and Mexico**
NAFIN-Bancomext (Feb. 14, 2020)



⚡ **Headquarters of IDB**
Technology cooperation seminar and business consultation (Feb. 19, 2020)

International Exchanges and Achievements

➔ Spreading technology appraisal know-how in the US, the shrine of innovative startups

KOTEC was invited to 'Korea Innovation Week,' held in the headquarters of World Bank (in Washington D.C., US), and shared technology appraisal know-how and global transfer cases.



⚡ VIP Booth Tour: KOTEC promotional booth
Korea Innovation Week 2020 (Feb. 18, 2020)



⚡ World Bank Finance, Competitiveness and Innovation Global Practice (FCI GP)
Knowledge exchange and business consultation on technology appraisal (Feb. 18, 2020)



⚡ World Bank Group International Finance Center (IFC)
Knowledge exchange and business consultation on technology appraisal (Feb. 18, 2020)

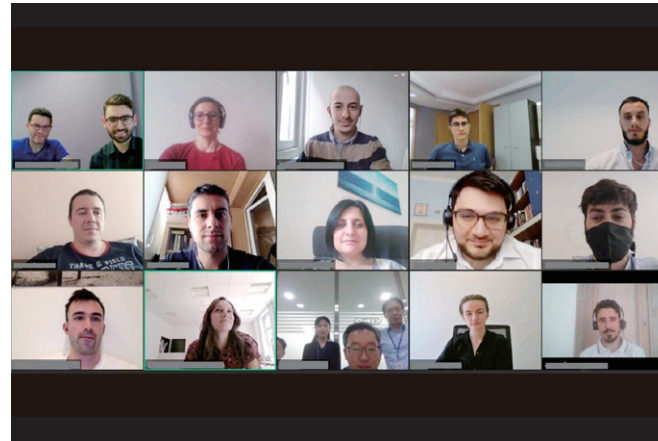


⚡ Workshop on 'Promotion of Innovation and Entrepreneurship'
Korea Innovation Week 2020 (Feb. 19, 2020)

International Exchanges and Achievements

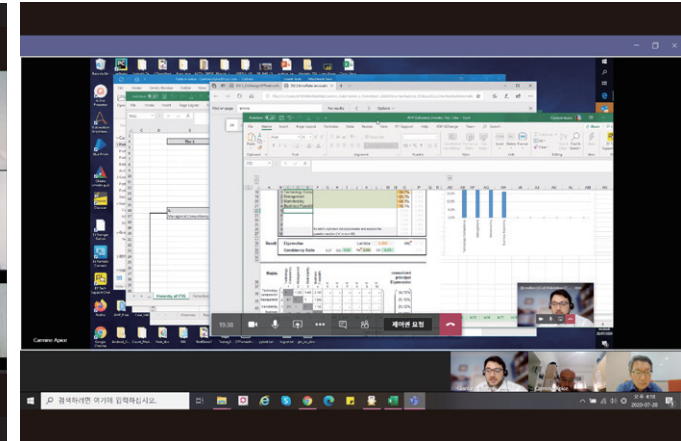
➔ Expanding non-contact and digital networking for global businesses

KOTEC expanded non-contact and digital networking activities to overcome the contraction of international businesses following the worldwide spread of the Covid-19 pandemic and to take the lead in global business in the post-Covid-19 era.



⚡ EC InnoRate Consortium

The 4th regular meeting for the InnoRate project (May 5, 2020)



⚡ Participation in the EC InnoRate project

European technology appraisal model development meeting (July 28, 2020)



⚡ Europe Investment Bank (EIB)'s digital congratulatory message 2020 Technology Appraisal Seminar (Nov. 25, 2020)



⚡ World Bank Group (WBG)'s digital congratulatory message 2020 Technology Appraisal Seminar (Nov. 25, 2020)

NEW VALUE

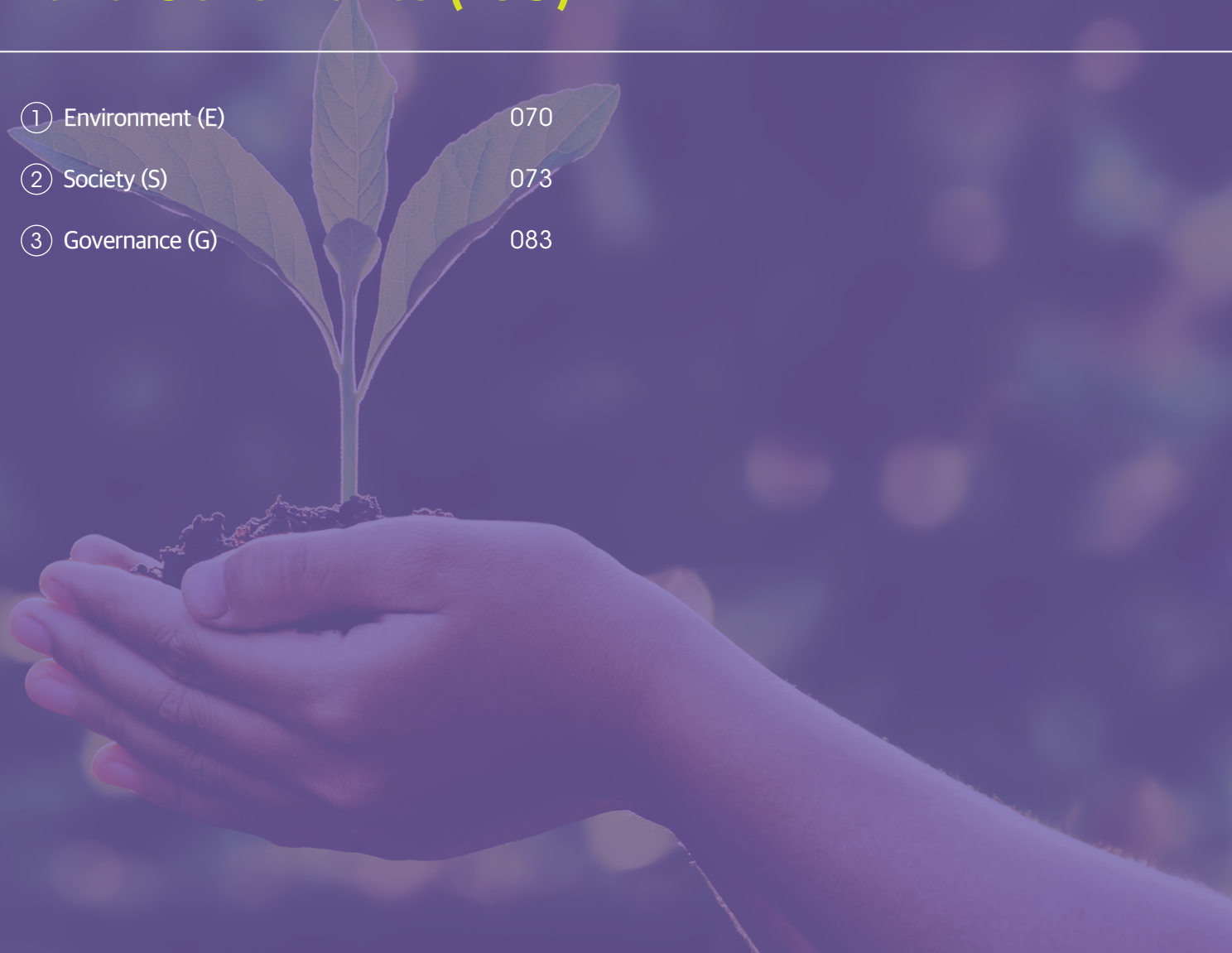
We form new progress every day
to make a better future

Amidst diverse changes that are ongoing across society, new values are requested for enterprises' activities. For this, KOTEC will continue to fulfill environmental and social responsibilities and establish transparent management practices through improvement of governance and will pursue sustainable development and contribute to building up a new value culture.

04

Environment, Society, and Governance (ESG)

① Environment (E)	070
② Society (S)	073
③ Governance (G)	083



1. Environment (E)

What is carbon neutrality?

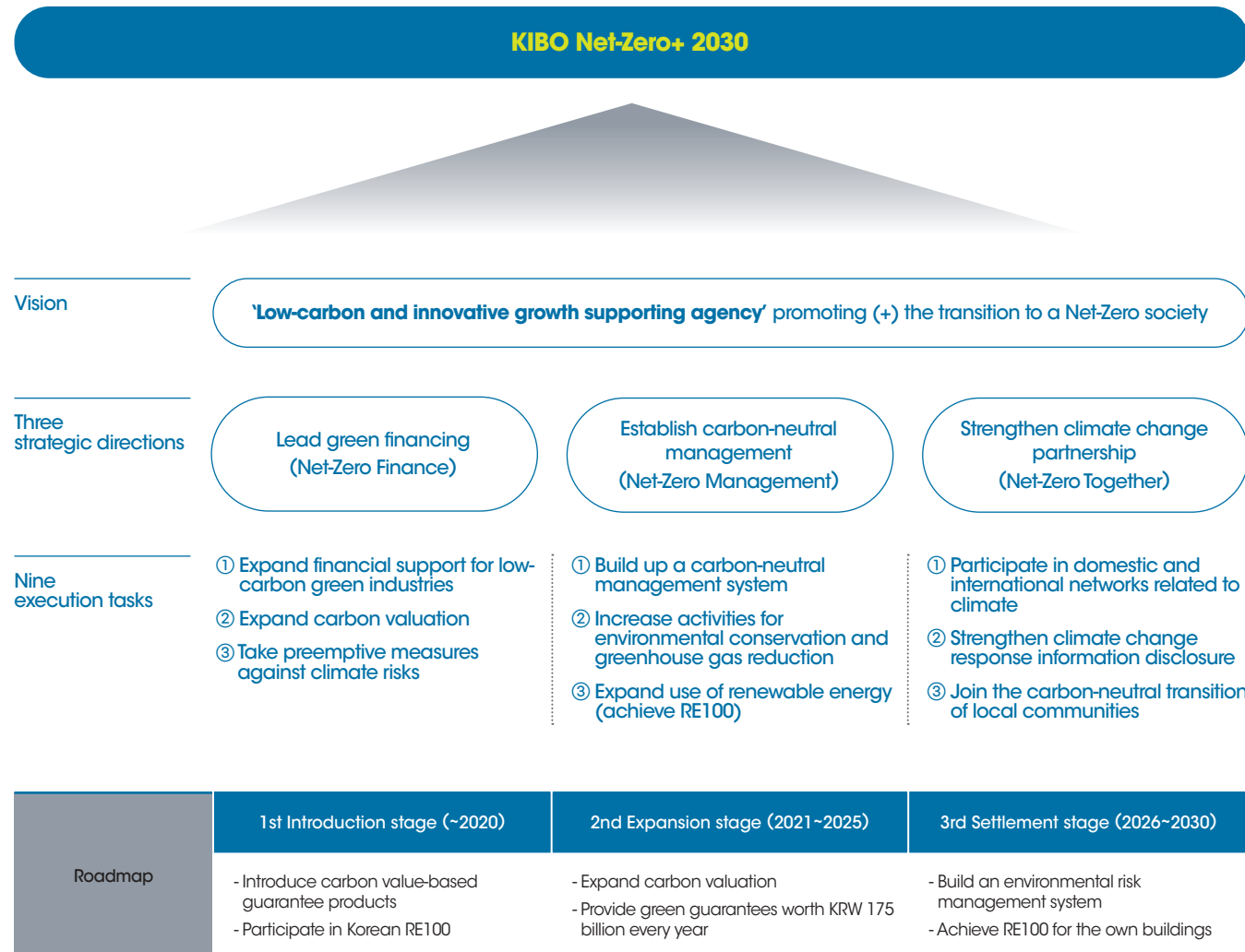
By building measures to absorb as much carbon dioxide as is emitted, make actual emissions of carbon dioxide equal '0'

What is RE100?

Campaign for turning 100% of electric energy used by an enterprise into renewable energy, such as solar photovoltaic energy and wind energy

President Biden of the US rejoined the Paris agreement and pledged to realize zero carbon emissions by 2050 and, as a result, carbon neutrality has become a global trend.

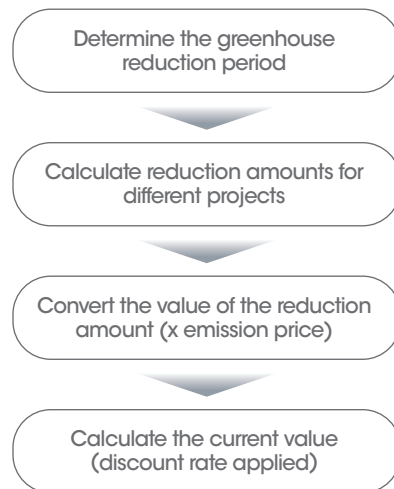
As 2050 carbon neutrality is emerging as the new global economic order, competition among nations to take the lead in the new carbon neutrality related market is expected to be fierce. In line with the movements of the global society, the Korean government is also seeking a shift to a new paradigm by carrying out the Korean New Deal policy and declaring the nation's carbon neutrality. To support the government's '2050 carbon neutrality execution strategy,' KOTEC is leading the transition to a carbon-neutral society by establishing a vision for carbon neutrality and executing nine tasks.



1. Environment (E)

KOTEC composed a dedicated organization to build a carbon neutrality promotion system and carbon neutrality promotion group, and established KOTEC's carbon neutrality response principles under its chief carbon officer. It developed the carbon valuation model in 2019 on its own and advanced it to form the foundation for the green guarantee project in 2020. A green guarantee is a product that appraises a new renewable energy enterprise using the carbon valuation model and provides a guarantee based on that, where KOTEC integrated the value of carbon with financing for the first time in the nation. By doing so, it presented a new milestone for green financing. Being acknowledged for the reliability of its carbon valuation model, KOTEC will work as the only specialized financial support agency for green SMEs and startups. It will act as a policy control tower for both financial and non-financial support measures necessary for carbon-free managerial innovation and, simultaneously, as a hub for various connected supports.

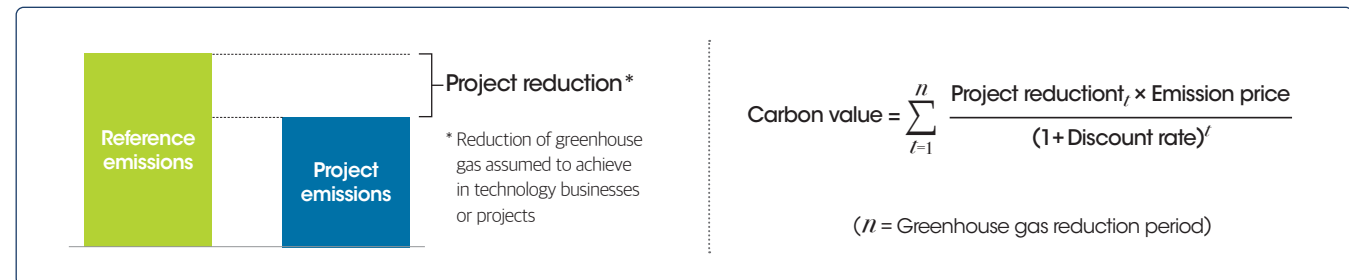
Carbon valuation process



Organization of carbon neutrality promotion group

Team	Key tasks
Carbon neutrality team	Planning and work administration related to carbon neutrality
New renewable financing team	Operation of green guarantee projects and carbon valuation

Carbon valuation model



Reliability of KOTEC's carbon valuation model was acknowledged



- (SoXXX Inc.) KOTEC attracted KRW 0.5 billion from SK Group based on its carbon valuation results
- KOTEC was selected from among 40 key budget execution projects (2021) by the Ministry of Economy and Finance → It will receive KRW 275 billion every year for four years to come
- KOTEC is expanding use of the carbon valuation model → It contributes to expanding private ESG financing
- KOTEC was the only designated 'specialized financial support agency for green SMEs and startups'

1. Environment (E)

Developed a valuation model that calculates emission reduction effects as a currency

Carbon value in technology appraisal

- Designated eco-guards and managed environmental conservation activities
- Shared environmental conservation content (executed 'Green Project' every month)
- Conducted training on the mandatory green product purchase rule

Expanding awareness of environmental conservation

Increasing purchases of green products

Achieved a green product purchase rate of 84.3%

Low-pollution vehicles

100% of new vehicles were low-pollution vehicles

Work digitalization

Built a paperless office environment through work digitalization and reduced use of paper

Installing solar energy generation facilities

Installed additional solar energy generation facilities (50KW) in Incheon's main branch office building

ESG credit investment

- Invested KRW 50 billion in ESG credits
- Contributed to success of the government's Korean New Deal

Managing greenhouse gas

Carried out energy use reduction activities, such as replacing office lights with LEDs, refraining from using hot water, and turning off lights during lunch time

Green premium

Conducted bidding and purchasing of the KEPCO Green Premium as a means for implementing Korean RE100

Strengthening partnership

- Provided preferred guarantees of KRW 12.8 billion for water related enterprises in Incheon
- Performed transfer of technology for examining carbon emissions in water supply and sewage

Green guarantee

Provided new green guarantees worth KRW 151.3 billion for enterprises in the new renewable energy area



2020 greenhouse gas reduction rate **31.3%**

2020 renewable energy use rate **5.4%**

2. Society (S)



→ Eradicating irregularities in recruitment

KOTEC strengthened the operation of its 「Recruitment Irregularity Monitoring Group」 to fundamentally remove the possibility of irregularities in recruitment. With this, it has discovered recruitment improvement tasks, such as extending the promotion restriction period for a person who committed irregularities in the recruitment procedures (3 months → 6 months) and raising the level of disciplinary actions, and made additional innovations. KOTEC complies with the guidelines, inspects and monitors the recruitment procedures, and performs cross-inspections with other institutions. Furthermore, by operating the 「Recruitment Corruption Report Center」 and the external examination committee and by conducting continuous monitoring and inspection, it is making zero errors in recruitment procedures.

→ Socially-balanced recruitment

KOTEC has overachieved on its goal for recruitment of the job-vulnerable by putting much effort into expanding employment. Looking into the socially-balanced recruitment efforts in different categories, for recruitment of local talent, it has adopted a recruitment target system by granting additional points and has been conducting promotional activities through joint recruitment events with relevant regional institutions. Moreover, it is putting its efforts toward post management, such as by assigning local talent in relevant areas and making regionally-balanced arrangements. For recruitment of individuals with disabilities, it conducted separate recruitment for individuals with disabilities, expanded granting of additional points, and carried out promotional activities actively through links with the Korea Employment Agency for Persons with Disabilities (KEAD) and online communities. Following the recruitment, it provided online training programs for self-improvement and assistive technology devices for their settlement. For social consideration recipients, granting of additional points for members of low-income or multi-cultural families was expanded, and KOTEC is working to build a fair working environment without discrimination against the socially-vulnerable. For veteran's benefits recipients, KOTEC conducted separate recruitment for veterans, granted additional points, co-worked for promotion with regional veterans offices, and used the veterans' recruitment website. Furthermore, to help veteran's benefits employees transition into the organization, KOTEC is providing care and attention after recruitment by assigning them wherever they choose. For women, KOTEC has strengthened the blinded recruitment process, adopted a recruitment target system, and published promotions through regional women recruitment centers and recruitment sites for women. It also held training programs to help female employees improve their capabilities.

Category	Efforts for socially-balanced recruitment by category	Post management
Local talent	<ul style="list-style-type: none"> Adopted a recruitment target system and granted additional points Held joint recruitment events with relevant regional institutions 	Put efforts into assigning local talent in relevant areas and making regionally-balanced arrangements
Individuals with disabilities	<ul style="list-style-type: none"> Conducted separate recruitment of individuals with disabilities and expanded granting of additional points Worked alongside the KEAD for promotion and used online communities 	Provided online training programs for self-improvement and assistive technology devices
Social consideration recipients	<ul style="list-style-type: none"> Granted and expanded additional points (for low-income or multi-cultural families) Used online communities 	Built a fair working environment without discrimination against the socially-vulnerable
Veteran's benefits	<ul style="list-style-type: none"> Conducted separate recruitment for veterans and granted additional points Worked alongside regional veterans' offices for promotion and used the veterans' recruitment website 	To help veteran's benefits employees fit into the organization, assignment preferences were given full consideration
Women	<ul style="list-style-type: none"> Adopted a recruitment target system and strengthened the blinded recruitment process Published promotional materials through regional women recruitment centers and recruitment sites for women 	Held training programs for female employees to help them improve their capabilities

Achieved 122.0% of the non-capital area talent recruitment target rate

Achieved 110.0% of the mandatory disabled employment rate

Employed 14 social consideration recipients

Achieved 116.6% of the moving-in regional talent recruitment target rate

Achieved 106.3% of the mandatory veterans employment rate

Achieved 107.6% of the female employee recruitment target rate

2. Society (S)

➔ Fostering of talented female workers

KOTEC is providing comprehensive support for the growth of female workers, such as by increasing recruitment, fostering talents, and expanding promotional activities. To improve gender equality in recruitment, the gender equality target system (35% or higher) is continuously ongoing, while regulations that prohibit gender discrimination, which deteriorates gender equality, are stipulated. Moreover, the group of interviewers is composed in a way that the proportions for interviewers are equal in terms of which group they belong to (internal/external) and their gender, and the number of female members in the human resources committee has grown (two in 2019 → four in 2020). To help female workers' growth and capabilities, more female employees are assigned to key departments in the headquarters, such as the Management and Planning Department, Human Resources Department, and Technology Guarantee Department. The number of female employees at the headquarters is on an upward trend, going from 50 in 17 departments in 2019 to 63 in 19 departments in 2020. KOTEC is consistently carrying out customized capability improvement training programs for female personnel and is making further efforts toward foster female workers' talents, such as by increasing entrance to domestic and global graduate schools and by expanding consigned training programs to professional institutions. Furthermore, KOTEC has shortened the period for a female employee's promotion to manager (3rd or higher grade) from 12 years 7 months to 9 years 7 months and has expanded the proportion of preliminary female managers (4th grade) preparing to become managers.



Category	Brief description	Achievements
Improving gender equality in recruitment	<ul style="list-style-type: none"> Continuously operating the gender equality target system (35% or higher) Stipulated regulations that prohibit gender discrimination, which deteriorates gender equality Organized the group of interviewers so that the proportions of interviewers are equal in terms of which group they belong to (internal/external) and their gender Increased the number of female members in the human resources committee (two in 2019 → four in 2020) 	<ul style="list-style-type: none"> Every year since 2012, the proportion of female employees among new regular employees has been 35% or higher: (2020) 37.3% The proportion of female employees in new posts was maintained at 40% or higher: (2020) 41%
Fostering talents in female workers	<ul style="list-style-type: none"> To help female employees grow their capabilities, more were assigned to key departments in the headquarters <ul style="list-style-type: none"> Expanded assignment to key departments, such as the Management and Planning Department, Human Resources Department, and Technology Guarantee Department The number of female employees in the headquarters: 50 in 17 departments in 2019 → 63 in 19 departments in 2020 Consistently carrying out customized capability improvement training programs for female workers To foster talents in female employees, increased entrance to domestic and global graduate schools and expanded consigned training programs to professional institutions 	<ul style="list-style-type: none"> Assignment rate of 3rd or higher-grade female employees 100% * Assigned female team leaders in the headquarters: (2020) three persons Expanded support for female employees for entrance to graduate schools and participation in external consigned training programs (38 persons in 2019 → 70 persons in 2020)
Increasing promotions of female managers	<ul style="list-style-type: none"> Gradually shortened the period for a female employee to be promoted to manager (3rd or higher grade) <ul style="list-style-type: none"> 12 years 7 months till 2018 → 9 years 7 months from 2020 Included excellent-capability female employees in candidate requirements in the case of special promotion Increased the portion of preliminary female managers (4th grade) set to become leaders 	<ul style="list-style-type: none"> Number of female employees promoted to 3rd grade was zero persons in 2019 → two persons in 2020 Proportion of female employees among preliminary managers was 29.3% in 2019 → 33.9% in 2020

2. Society (S)

➔ Removing discrimination against non-limited term contract employees, etc.

KOTEC is increasing workers' motivation to work by improving treatment of minority positions. High-school graduate employees are assigned as 5th grade, the same as university graduates, if recruited to a regular position. They are provided with support for strengthening individual capabilities through the entry-after-employment course (to university), and customized programs (blockchain, coding, etc.) for those in their 20s or the millennial generation were newly established. Additionally, for non-limited term contract workers, the granted selective welfare points were raised to KRW 200,000. They were included in the group of multilateral evaluation targets and participated in the evaluation of upper-grade employees. By promoting flexible working hours and work-from-home measures, KOTEC is helping workers handle both work and home responsibilities. For female employees, more customized education and training programs were provided. Furthermore, KOTEC is fostering a pool of preliminary female managers (4th grade) and providing them with emotional healing programs (stress diagnosis, personal counseling). It has also been putting in practice improvements in the working environment based on communication and cooperation with employees from affiliated companies (joint labor and management committee among the parent company and affiliated companies) and increased consignment service costs to improve treatment for affiliated companies' employees. Furthermore, for separate positions (salary peaks), KOTEC discovered direct support jobs in SMEs, such as Sherpa (7) and dispatch (3), and provided them with customized training programs on business establishment and support for consultation fees for up to six months from resignation.

Category	Performance	Achievements
High-school graduate employees	<ul style="list-style-type: none"> Assigned them as 5th grade, the same as university graduates, if recruited to a regular position Provided support for strengthening individual capabilities through the entry-after-employment course (to university) Newly established customized programs (blockchain, coding, etc.) for those in their 20s or the millennial generation 	<ul style="list-style-type: none"> No discrimination compared to university graduate employees Those who entered the undergraduate course (four persons in 2019 → five persons in 2020) Number of completions (52 in 2019 → 62 in 2020)
Non-limited term contract employees	<ul style="list-style-type: none"> Raised the granted selective welfare points to KRW 200,000 (the same limit as regular employees) Included them in the group of multilateral evaluation targets for them to participate in the evaluation of upper-grade employees Promoted flexible working hours and work-from-home measures to help them stably handle both work and home 	<ul style="list-style-type: none"> Same as regular employees (welfare limit, participation in evaluation) Increased flexible working hours (44.2% in 2019 → 86.1% in 2020)
Female employees	<ul style="list-style-type: none"> Provided more education and training programs customized for female employees Fostered a pool of preliminary female managers (4th grade) Held emotional healing programs (stress diagnosis, personal counseling) 	<ul style="list-style-type: none"> Expanded support for entrance to graduate schools and participation in external consigned training programs (38 persons in 2019 → 70 persons in 2020) Preliminary female managers (119 persons in 2019 → 130 persons in 2020)
Affiliated companies, etc.	<ul style="list-style-type: none"> Improved the working environment based on communication and cooperation (joint labor and management committee among the parent company and affiliated companies) Increased consignment service costs to improve treatment for affiliated companies' employees 	<ul style="list-style-type: none"> Shortened work hours (54H a week → 47H a week) 8% increase in consignment service costs
Separate positions (salary peaks)	<ul style="list-style-type: none"> Discovered direct support jobs in SMEs, such as Sherpa (7) and dispatch (3) Provided customized training programs regarding business establishment and support for consultation fees for up to six months from resignation 	<ul style="list-style-type: none"> Improved employee satisfaction in salary peaks (7.0 in 2019 → 7.3 in 2020)



2. Society (S)

➔ Assisting stable settlement of both work and home responsibilities

KOTEC is working on building a family-friendly working environment by improving the motherhood assistance system for each stage from pregnancy, childbirth, and childcare. During pregnancy, maternity protection hours (shorter working hours during pregnancy) policy is available, meaning pregnant employees can reduce their workloads by two hours a day for the entire period of pregnancy. Additionally, they can use a total of 10 days of leave for medical checks during pregnancy without any limitation per month. A leave of absence for a miscarriage or stillbirth is expanded from five days to 10 days, even within 11 weeks of the pregnancy, and a leave for a miscarriage or stillbirth became available for spouses, as well (three days, can be divided once). At the time of childbirth, the period for a spouse's leave increased (five days → 10 days) and became available for separate use. For employees who have a child to care for, they can divide their parental leave on two occasions, increased from one time, within three years, and those who have a child under the age of eight can use the childcare hours (shorter working hours during the childcare period) policy to reduce their workloads by two hours a day.

Category		Key improvements	Achievements
Pregnancy	Maternity protection hours (shorter working hours during pregnancy)	• Work reduced by two hours a day for the entire period of pregnancy	<p>More employees are using the maternity protection hours policy</p> <p>5 persons (2019), 7 persons (2020)</p>
	Leave of absence for medical checks during pregnancy	• Total of 10 days of leave during pregnancy without limitation per month	
	Leave of absence for a miscarriage or stillbirth	<ul style="list-style-type: none"> • Even within 11 weeks of pregnancy, leave of absence is expanded for a miscarriage or stillbirth, from five days → 10 days • Leave of absence for a miscarriage or stillbirth for the spouse (three days, can be divided once) 	
Childbirth	Leave of absence for spouse's childbirth	• Leave of absence for the spouse increased (five days → 10 days) and became available for separate use	• More employees are taking leave for their spouse's childbirth, nine persons in 2019 → 17 persons in 2020
Childcare	Parental leave	• Can be divided twice, which used to be one time, within three years per child	<ul style="list-style-type: none"> • Rate of male employees taking parental leave is 14% for two consecutive years • More employees are using the childcare hours policy (three in 2019 → seven in 2020)
	Childcare hours (shorter working hours during the childcare period)	• Those who have a child under eight years of age can work two hours fewer a day	



In addition, by invigorating flexible working hours, including work-from-home measures, KOTEC is taking the lead in overcoming difficulties brought on by the Covid-19 pandemic. It provided the flexible working hours notice (KakaoTalk, SMS) service and operated Q&A for flexible working hours, and is also working on building a cloud based smart office (VDI) for all employees.

Category	Improvements	Result
Flexible working hours	• Provided the flexible working hours notice (KakaoTalk, SMS) service and operated Q&A for flexible working hours	<p>Rate of using flexible working hours (%)</p> <p>51.7% (2019), 96.2% (2020)</p>
Working from home	• Working on building a cloud based smart office (VDI) for all employees, for which development and commercialization are expected to be completed in 2021 (budget of KRW 1.73 billion secured in 2021)	

(Unit: number of persons)

Category		Selection of hours	Differentiated attendance	Selection of working hours	Smart work	Working from home	Sum
2019 (Total 1,453 persons)	Number of persons	11	716	149	4	15	751
2020 (Total 1,489 persons)	Number of persons	19	1,228	188	8	969	1,432

2. Society (S)

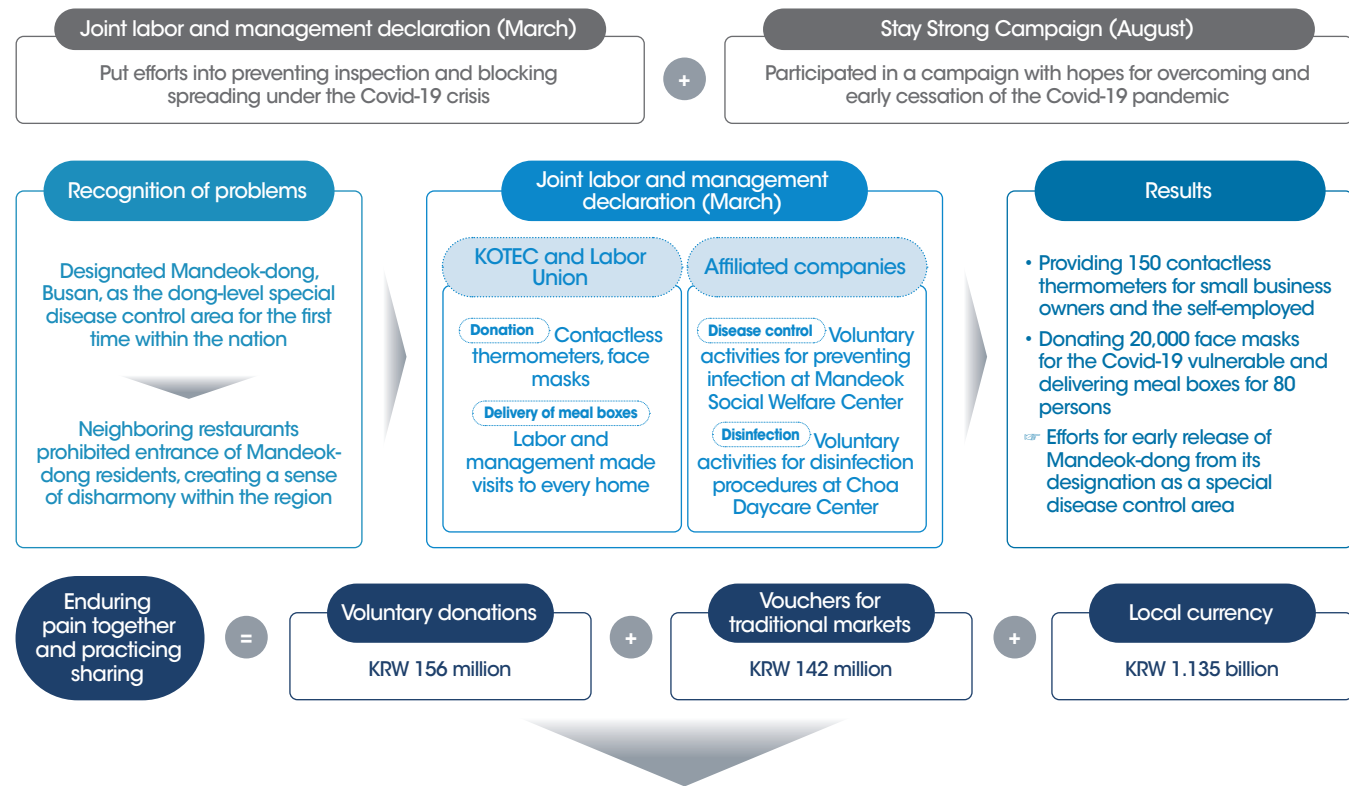
→ Establishing reliability-based cooperative labor-management relations

KOTEC is practicing mutually-beneficial labor-management relations to realize social values. Labor and management joined hands in preparing preemptive company-wide responsive measures through bi-directional open communication and made diverse efforts, such as announcing the joint labor and management declaration for preventing inspection and blocking spreading under the Covid-19 crisis (March) and running the Stay Strong Campaign with hopes for overcoming and early cessation of the Covid-19 pandemic (August). Moreover, by carrying out the Covid-19 overcoming project (October), labor, management, and affiliated companies joined together to realize mutually-beneficial cooperation and social values. Activities like providing 150 contactless thermometers for small business owners and the self-employed, donating 20,000 face masks for the Covid-19 vulnerable, and delivering meal boxes for 80 persons were put in place and, in the process of a collective wage agreement in December, labor and management reached a win-win settlement without negotiation under the Covid-19 crisis to endure the pain with a united front.

Joint Labor and Management Declaration to overcome the Covid-19 crisis



Stay Strong Campaign



- As a preemptive company-wide responsive measure to quickly overcome the crisis, **KOTEC provided support worth KRW 7.8 trillion (1.6 times greater than the previous year) for enterprises suffering through the Covid-19 pandemic**
- **By protecting employees and customers from danger of Covid-19 infection, zero patients violated quarantine guidelines**
- **By realizing social values through collective efforts by labor, management, and affiliated companies, an award was granted from the Minister of Health and Welfare for social contribution**

2. Society (S)

Discovering demands and hearing opinions

Discovering those in alienated positions

Seongseo Elementary School, Cheol-dduk Market, Jayu Market, Busanjin Market

Hearing opinions from those with demands

- Education and guidance on daily safety
- Requested removal of safety vulnerabilities

Promoting sharing projects

- Execution of customized safety activities
- Continuous expansion of safety culture

➔ Safety and protection activities for the public

To share its safety management capabilities, KOTEC has expanded the scope of safety management from the inside to the outside and fulfilled social responsibility for safety-vulnerable groups and regions. First of all, KOTEC concluded a 「Social safety value practicing agreement」 with Seongseo Elementary School in Busan and conducted the daily safety examination program. Through the program, dangers were examined in classrooms at the elementary school, rescue handkerchiefs were placed, safety cushions were attached at corners, and safety goods were provided, such as safety helmets and finger safety gloves. Furthermore, together with Busan Jin Fire station and KAMCO, KOTEC signed a 「Social safety value practicing agreement」 and installed independent sensing and alarm devices in the traditional market, all in the efforts to prevent fires in this safety vulnerable region.

Selecting an elementary school that requires mutual cooperation and assistance in the region and carrying out safety activities together



Social safety value practicing agreement



Classroom safety examination activities

Expanding the capabilities for and practice of fire prevention activities for safety-vulnerable regions



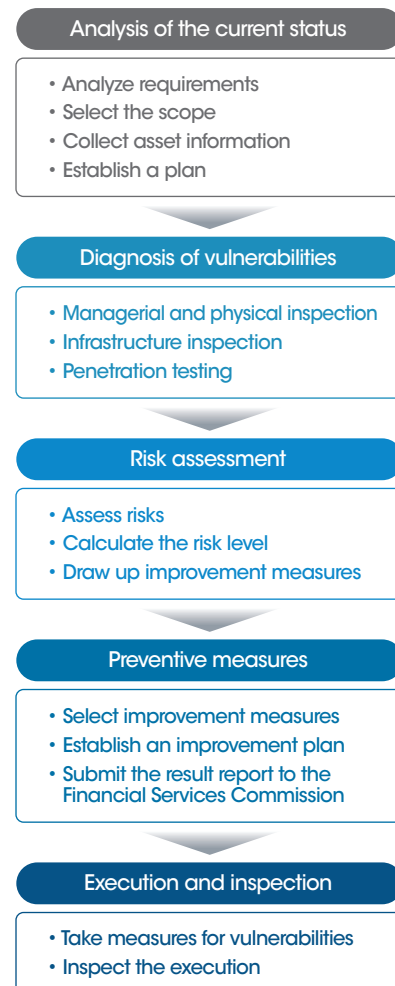
Agreement with the fire station, etc.



Safety activities in the traditional market

2. Society (S)

Analyzing and improving information and security vulnerabilities to protect KOTEC's information assets from cyber attacks



To systematically manage the valuable personal information of customers, KOTEC implemented a system with managerial and technical protective and preventive measures against infringement accidents throughout the entire lifecycle of personal information, including collection, creation, retention, management, use, provision, and destruction, thereby laying the foundation to secure financial safety. Furthermore, to raise awareness of security and expand the information protection culture, it conducted infringement accident correspondence training programs, inspection of consigned personal information processing work, etc., and made employees take three or more organized training programs for seven hours or longer per year, contributing to greater protection of citizens' information.

→ Strengthening personal information protection and cyber security

Implementing a system to manage personal information in stages to protect personal information for the public

Personal information	Managerial protective measure	Technical protective measure	Preventive measures against infringement accidents
Collection and creation	Inspection of consigned personal information processing work (13 companies)	Personal information impact assessment for new systems (July)	Update SSL security certificate (July)
Retention and management	Held personal information protection quiz contest (Nov. 6)	Improved prevention of information leakage at the time of personal information inquiry (one case)	Revised the infringement correspondence manual (May)
Use and provision	Updated personal information processing guidelines (June 17)	Developed computer programs to examine personal information access records (Dec. 7)	Established the access rights management policy (May)
Destruction	Overall arrangement of personal information files (38,374 cases)	Conducted restriction of personal information files on the website (one case)	Examined appropriacy of personal information destruction (Oct.)

Holding customized training program for target attendees to expand the information protection culture

Category	Training target	Description
Employees	All employees	<ul style="list-style-type: none"> Held quiz contests for staff in charge of information protection in different departments, offices, and branches (two times) Made each employee complete a cyber training program by the Financial Security Institute (three hours a year) Held on-site information protection training programs for departments, offices, and branches (55 times a year)
	New recruits	<ul style="list-style-type: none"> Held the information protection program for 2020 new recruits (online training program)
Staff dedicated to information protection		<ul style="list-style-type: none"> Provided professional training programs for 40 or more hours a year (AI based security control, etc.) Conducted advanced persistent threat (APT) correspondence training
External workforce		<ul style="list-style-type: none"> Conducted personal information protection training programs for consignment companies Conducted separate information protection training programs for outsourced workers Conducted unannounced personal information protection inspections on outsourced workers

2. Society (S)

Amidst the fast-changing digital environment, including work-from-home, non-contact training, and video conferencing among employees, the importance of information security is gaining more and more attention. By taking preemptive cyber security measures, KOTEC is maintaining airtight security and, at the same time, by providing employees with a convenient working environment where they are free from any inconveniences working from home, it fast-tracked guarantee support under the situation of Covid-19. In addition, by being recognized for its highest-level information protection and management, it took the first place in the information security assessment among public institutions, under the Ministry of SMEs and Startups and won the Ministerial Citation from the Minister of SMEs and Startups (December). It also gained higher grades in assessments by external agencies, such as the National Intelligence Service.

→ Improving capability to respond to cyber threats

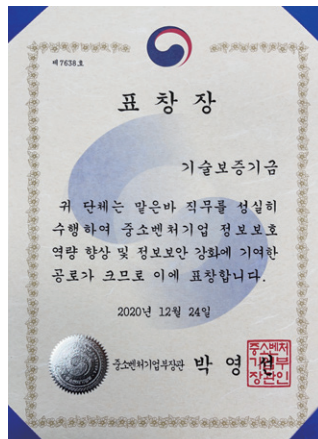
Enabling work-from-home measures quickly by implementing the information protection policy and technical support in response to the Covid-19 pandemic

Category	Brief description	Improvements
Policy establishment	<ul style="list-style-type: none"> Access control policy for PCs used for working from home, data leakage prevention policy, etc. Operating information protection help-desk to support work-from-home 	<ul style="list-style-type: none"> Enabled work-from-home measures in quick response to the Covid-19 pandemic (Feb. 25) Realized the work-from-home environment successfully with high satisfaction levels among employees Achieved zero information leakage cases during the work-from-home period Improved reliability with the public by successfully responding to a disastrous situation
Technical support	<ul style="list-style-type: none"> Supplementing protected remote connection solution (SSL VPN) equipment Implementing a computer environment for video conferences among employees and online training programs 	

Upgrading all KOTEC PCs to Windows 10 OS to remove security vulnerabilities in advance

Brief description	Improvements
<ul style="list-style-type: none"> Applied and started operating Windows 10 company-wide for work PCs and network separation solutions Implemented a centralized management system for security patches by introducing a patch management system 	<ul style="list-style-type: none"> Blocked personal information leakage threats fundamentally by applying the latest OS Improved customer reliability by building a safe information security environment

Selected as best information protection institution by the Ministry of SMEs and Startups (Ministerial Citation)



Results of information security and cyber threat correspondence assessments run by external agencies

Category	Run by	Assessment result	Remarks
Information security assessment of affiliated institutions	Ministry of SMEs and Startups	96.8 (out of 100)	Highest grade (1st place, for three consecutive years)
Assessment of information security management	National Intelligence Service	74 (out of 100)	Higher than the average of 67 among institutions
Infringement accident correspondence training	Financial Security Institute	Excellent	Defended all types of cyber attacks

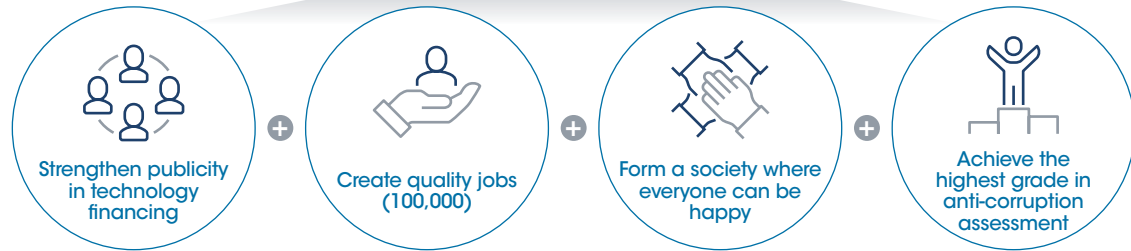
2. Society (S)

➔ KOTEC's social value strategy map

Mission

Happiness for the public by pursuing technology and human values

Objectives (K-SVI 200)

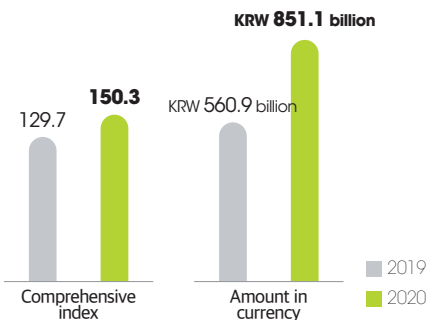


Education strategy

Strategic tasks

Key achievements in 2020

Public interests realized by pursuing technology and human values	<ul style="list-style-type: none"> Implement KOTEC's own social value promotion system Strengthen publicity in technology financing projects Improve information protection capabilities Help strengthen competitiveness for SMEs and socioeconomic enterprises 	<ul style="list-style-type: none"> Fully re-established the mid- and long-term managerial goals in reflection of social values Provided KRW 2 trillion in good-job guarantees, KRW 1.6 trillion in Fourth Industrial Revolution guarantees, and KRW 47.9 billion in debt settlements Took 1st place in the information security assessment among affiliated institutions and achieved a 'Very Excellent' grade for three consecutive years Provided KRW 123.9 billion in social venture impact guarantees and KRW 34.7 billion in social enterprise preferred guarantees
Increasing, sharing, and joining jobs	<ul style="list-style-type: none"> Create quality jobs Realize equal opportunities and social integration Enhance quality of life for workers 	<ul style="list-style-type: none"> Created private jobs for 13,643 persons and achieved a support rate of 7.1% for quality job enterprises Overachieved the socially-balanced recruitment rate for local talent, female employees, and individuals with disabilities Usage rate of flexible working hours reached 96.2%, and the labor-management cooperation index was raised (86.3)
Society where everyone is happy through mutually-beneficial coexistence and growth	<ul style="list-style-type: none"> Vitalize regional development Expand win-win growth Strengthen safety and environmental conservation 	<ul style="list-style-type: none"> Provided support worth KRW 3.9 trillion for local enterprises and won an award from the Ministry of Health and Welfare for contributions to the local community Purchased 100% SME products and concluded 1,522 technology bailment contracts Recorded zero safety accidents, established the carbon neutrality vision, and increased the greenhouse gas reduction rate by 5.3%
Responsible management with respect to the public	<ul style="list-style-type: none"> Improve participation of and communication with the public Implement a company-wide ethical management system Establish a system for respecting human rights and internal checks 	<ul style="list-style-type: none"> Earned 88.7 in public communication index and a grade of 'very excellent' in the comprehensive information disclosure assessment Achieved the 2nd grade in the comprehensive anti-corruption assessment for three consecutive years and recorded zero corruption incidents Built a preventive environment against human rights infringement and won the highest award in preliminary consulting, given by the Board of Audit and Inspection of Korea



Comprehensive index (K-SVI)

Achieved 150.3 in the comprehensive social value index (15.9% higher than the previous year)

Amount in currency

Created an annual social value worth of KRW 851.1 billion (51.7% higher than the previous year)

2. Society (S)

➔ Key social contribution activities

KOTEC is taking the lead in realizing social values and supporting stakeholders, such as SMEs, the socially vulnerable, and alienated neighbors, contributing to building a welfare community. Furthermore, it sets its goal of social contribution activities as the realization of a public financial institution that contributes to the growth of the community. In 2020, it carried out activities to share and provide support for vulnerable sectors in response to the Covid-19 era and promoted practical policies for local residents by discovering and resolving local issues and conducting local innovation projects based on solidarity and cooperation, all in an effort to share improvements with the public.

Non-contact contributions to local communities

- Provided contactless thermometers for small business owners and the self-employed
- Donated face masks and delivered meal boxes for the vulnerable
- Held online daily science classes for 40 classes, 469 students
- Provided voluntary food trucks for contactless free meal services (Busan Lunch Service Associate)

Increased purchasing of local products, such as agricultural products

- Made purchases worth KRW 1.946 billion of local products (159% higher than the previous year)
- Increased the amount of purchases of local agricultural products by cafeterias in the main branch and human resources development center

Efforts to vitalize the innovation city and traditional market

- Opened the facility at the main branch, such as the KOTEC Science and Technology Experience Center
- Held 'Market-going Day,' a day to visit the traditional market, and provided dealers with face masks

Strengthening support and exchanges for local and international events

- Provided guarantees of KRW 8 billion for the MICE industry, such as conventions (20% higher than the previous year)
- Officially supported Busan Brand Festa and Korea Sale Festa

Brand

Hope platform KOTEC

Strategic goals

Build a foundation for the vulnerable to stand on their own

Prepare a groundwork to foster future talents

Conduct customized and locally-bonded social contribution activities

Execution tasks

- Expand the Hope Handcart Project
- Provide jobs for the elderly and disabled

- Make education donations through the Science and Technology Experience Center
- Increase business establishment training for university students

- Plan social contribution activities customized for recipients
- Provide support for alienated members of the region

Leading organization

Department in charge of social contributions

KOTEC love practicing committee

KOTEC Love volunteer group

Feedback

Listen to opinions through internal and external satisfaction surveys → Set the direction for social contributions

Program name	Description	Achievements
Held 'Cha Together,' a drive-thru bazar	Planned a charity event to encourage local residents' participation and expand the sharing culture and purchased and sold agricultural products from socioeconomic enterprises to help regional industries grow while providing them with a sales channel	<ul style="list-style-type: none"> • The profits from sales were used to support 100 children • Certified as an agency contributing to the local community
Expanded Busan Hope Handcarts for mutually-beneficial coexistence	The Hope Handcart Project started by KOTEC in Busan expanded to other public institutions, like the Korea Water Resources Corporation in Chungcheongbuk-do and Small Enterprise and Market Service in Daejeon (Service), along with private enterprises	<ul style="list-style-type: none"> • Operating 49 handcarts • Won a Ministerial Award from the Minister of Health and Welfare
Opened a 'Children's Library' in Busan Innovation City	Provided support for establishment of the 'All Mom Social Cooperative' and 'Children's Library' in the Daejeon innovative residential area in Busan	<ul style="list-style-type: none"> • 17,531 children used the library • Won the Education Mecenat award
Participated in 'Non-contact Busan Science Festival'	Provided science experience kits and video content for local residents to experience science	<ul style="list-style-type: none"> • 200 participated, and 567 viewed the video • Certified as a career experience center by the Ministry of Education

3. Governance

(G)

➔ Preparing a framework for continuously improving integrity by developing and operating an anti-corruption and ethics index (K-IEI)

Background	Performance	Achievements
<p>Internal Comprehensive diagnosis of awareness on integrity and ethics among employees and systematic management of vulnerabilities</p> <p>Feedback To achieve 1st-grade external integrity, internal anti-corruption capabilities must be improved</p>	<ul style="list-style-type: none"> Conducted an assessment with 14 criteria based on internal efforts and external assessment indexes ➔ Diagnosed the level of ethical management among employees and made improvements in vulnerable areas Reflected part of individual indexes in internal performance evaluations ➔ Encouraged employee participation and increased motivation for fulfilling the anti-corruption policy 	<p>Internalize awareness of anti-corruption and ethics among employees</p> <p>External integrity grade improved in 2020 (3rd grade → 2nd grade)</p>

➔ Advancing the anti-corruption management system (ISO 37001) that guarantees transparent management

Background	System implementation (2019)	System advancement (2020 post management)
<ul style="list-style-type: none"> Introduced an international-level standard process for preventing, discovering, and processing corruption ➔ Improved overall integrity of the institution's projects 	<ul style="list-style-type: none"> Established an anti-corruption policy (decided by the Board of Directors) Standardized the anti-corruption system ➔ Established one operation standard and nine procedures 	<ul style="list-style-type: none"> Conducted training programs on corruption risk assessment and for internal examiners Anti-corruption risk assessment, internal examination Managerial review (report to the chief director and the Board of Directors), etc.

Achievement

By advancing the clean management infrastructure in line with global standards, improved reliability outside the institution

➔ Improving ability to execute compliance and ethical management by introducing a compliance monitoring system for the first time among affiliated institutions of the Ministry of SMEs and Startups

Background	Performance	Achievements
<ul style="list-style-type: none"> Make employees comply with laws and strengthen internal control Improve the effectiveness of the compliance management system 	<ul style="list-style-type: none"> Newly established a compliance support team (dedicated to compliance reviews, legal support, and regulation management) Established operation standards for compliance support work ➔ Prepared procedures for fair and transparent work processing in accordance with laws Set up compliance officers and the compliance support committee 	<ul style="list-style-type: none"> Shared and expanded the system to affiliated institutions under the Ministry of SMEs and Startups* * Korea SMEs and Startups Agency, Small Enterprise and Market Service, and Korea Federation of Credit Guarantee Foundations Removed probability of corruption in advance Compliance reviews and 34 legal consultations for new projects, etc.

➔ Expanding the anti-corruption public service culture by invigorating corruption reports and improving the system

Category	Brief description	Achievements
Comprehensive anti-corruption report center	<ul style="list-style-type: none"> Nine report centers for anti-corruption and ethical management, audit reports, etc. ➔ Integrated into a comprehensive anti-corruption report center and strengthened protection of reporters 	<ul style="list-style-type: none"> Improved convenience for reporters ➔ Enhanced the institution's self-correction capability
Mock training for reporting violations of the solicitation prohibition law	<ul style="list-style-type: none"> Virtual situation of violating the solicitation prohibition law that may happen at work ➔ Self-diagnosis and online reporting 	<ul style="list-style-type: none"> Cultivated the ability to respond to a violation ➔ Developed the awareness of integrity within the organization
Reform of disciplinary action processing instructions	<ul style="list-style-type: none"> Strengthened criteria to determine disciplinary actions for violation of prohibition of accepting bribes ➔ If the amount of a bribe is over KRW 1 million, dismiss regardless of type of corruption 	<ul style="list-style-type: none"> Strengthened the one-strike-out policy ➔ Prevented corruptions in advance

3. Governance (G)

→ By running anti-corruption habituation programs, internalizing the awareness of anti-corruption among employees and raising external integrity to a higher level

(All-time) Non-contact unsupervised learning	(Communication) Education on anti-corruption led by higher-level employees
<ul style="list-style-type: none"> Clean KOTEC day (monthly) Anti-corruption notice (monthly) Online anti-corruption training (irregular) 	<ul style="list-style-type: none"> Anti-corruption communication conference (auditors, executive directors, standing directors) Non-contact anti-corruption conference (audit)
(Participation) Internalization through participation	(Customized) By public officer's lifecycle and by duty
<ul style="list-style-type: none"> Ethical management quiz contest (all employees) Anti-corruption slogan contest (all employees) Anti-corruption agreement (customer participation) 	<ul style="list-style-type: none"> Anti-corruption education for new recruits Education for all employees, those promoted within departments, offices, and branches Education for staff in charge of corruption-vulnerable tasks

→ 'No Corruption' campaign with local residents amidst the Covid-19 situation

Campaign	Performance	Achievements
Anti-corruption volunteer work	Conducted anti-corruption and human rights activities, such as 'Delivery of love meal boxes to the vulnerable' and 'Delivery of food to the designated Covid-19 crisis region and environmental clean-up'	<ul style="list-style-type: none"> Realized mutually-beneficial and cooperative social values With anti-corruption as a medium, realized communication and sympathy across generations Shared and spread anti-corruption awareness to local communities
Anti-corruption education	Anti-corruption education Injoy (Integrity+Enjoy) for future generations (elementary-, middle-, and high-school students)	
Anti-corruption culture	'Anti-corruption' orchestra concert together with local residents	

→ By putting a solid anti-corruption policy in place, achieving an excellent grade in the comprehensive integrity index for three consecutive years

Category	Achievement	Result analysis and feedback
Comprehensive anti-corruption index	Achieved the grade of excellent for three consecutive years [Highest (9.06) since 2012, 0.28 points higher than 2019]	<ul style="list-style-type: none"> External integrity was improved, such as getting perfect scores in all 'corruption experience' survey questions (Future) To expand the anti-corruption internalization programs
External integrity	Achieved the 2nd grade [a grade higher than in 2019 (3rd grade), 0.35 points higher than 2019]	
Internal anti-corruption index	Achieved the 1st grade for two consecutive years [KOTEC stood alone among the public-service related institutions II group]	
Corruptions	Zero corruption cases for three consecutive years	

3. Governance

(G)

➔ Strengthening protection of human rights by advancing human rights impact assessments and improving procedures for relief in the case of a human rights infringement

Category	Performance
Advancing human rights impact assessment	Institution-led human rights impact assessment [1 more index than in 2019] [37 items fulfilled among 39 examination criteria]
	Human rights impact assessment for key projects [8 more indexes than in 2019] [30 items fulfilled among 33 examination criteria]
Improving the procedure for relief in case of a human rights infringement	Counseling and reporting Receive counseling from and report to the human rights distress counseling center
	Infringement investigation Conduct investigation (Protect reporter)
	Infringement investigation Deliberation committee Mandatorily present to the human rights infringement deliberation committee
	Report of result Report to executives in charge (investigation results, countermeasures)
	Disciplinary action and prevention of recurrence Take disciplinary actions against violators (corrective actions, disciplinary actions, etc.)

Achievement

• Created social values for human rights protection by actively discovering areas with human rights vulnerabilities and removing the probability for human rights infringements

➔ Conducting customized education programs for internalization of human rights awareness among employees

Program	Brief description	Achievements
Education through watching human rights related movies	Watching human rights related movies produced by the National Human Rights Commission of Korea and sharing feedback	<ul style="list-style-type: none"> Improving understanding on human rights management and gender sensitivity among employees Building a human rights friendly company culture
Education to improve human rights sensitivity	Education based on cases from the National Human Rights Commission of Korea, such as discrimination in employment and discrimination against the disabled	
Non-contact human rights management quiz contest	Improving understanding about overall human rights management among employees	
Self-education on human rights for departments, offices, and branches	Strengthening human rights related capabilities through self-driven offline education programs	

➔ Realizing social values with respect to human rights through participation and communication

Program	Brief description	Achievements
Activities as a member of UNGC Network Korea	Discussed human rights management issues and goals among public institutions	<ul style="list-style-type: none"> Built an internal environment for preventing human rights infringements Shared and expanded the culture of respecting human rights in local communities
Participation in and support for Busan Human Rights Film Festival	Employees participated in the Human Rights Day Celebration Event, Human Rights Forum, etc.	

COMMUNICATION

KOTEC will happily accompany its customer through communication.

Real communication starts with listening.

KOTEC will listen to voices in the field, stand in the shoes of its customers, and share their worries for better communication.

05

Appendix

appendix

① Board of Directors/Auditor	088
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④ Branch Network	092

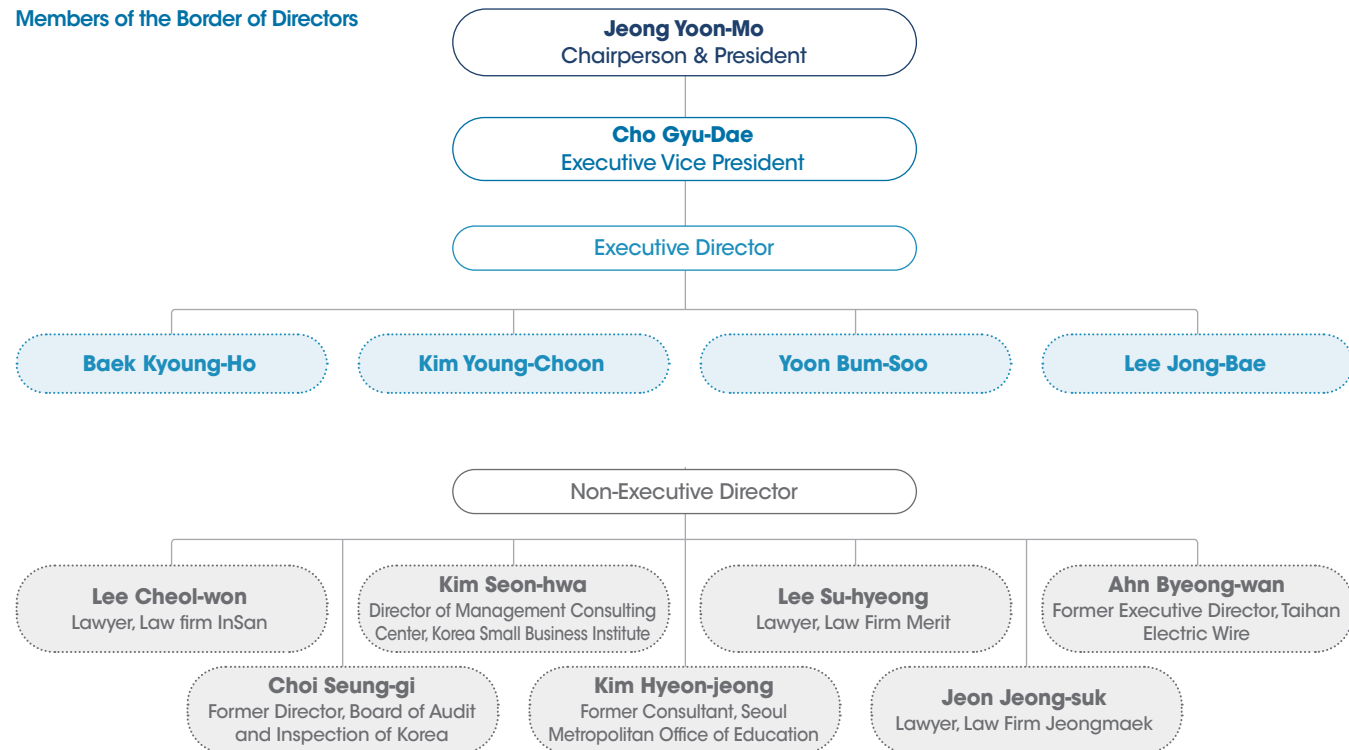
1. Board of Directors/ Chief Audit Executive

The Board of Directors comprises the highest executive body that deliberates and decides on important matters regarding KOTEC's work, such as changes to the articles of association, enactment of and changes to the operation manual, and establishment of and changes to managerial objectives and operational planning.

The Board of Directors is composed of Executive Directors, including the Chairperson & President and the Executive Vice President, along with Non-Executive Directors. In 2020, KOTEC's Board of Directors rearranged its operating system to be able to respond to fast-changing internal and external environments. The criteria to allow a written board meeting if unavoidable due to a disaster or urgency were clarified, meaning decisions could be made quickly and effectively in response to an emergency. Moreover, by introducing a task activity evaluation where the attendance rate, suggestions for management, contributions, etc., of non-executive board members are reflected, it encouraged active participation in management. In addition, by running a company bulletin board, the agenda and meeting minutes from board meetings were shared with employees, which improves transparency. Furthermore, by adopting a systematic procedure to manage managerial suggestions, it facilitated the development of these suggestions and reflected them in actual management, and by invigorating professional committees led by a non-executive director, its function to monitor management was strengthened.

Auditors can attend board meetings and present opinions and perform audits on work and accounting done by KOTEC. In 2020, to establish a contactless digital audit system, the e-audit system was advanced. Furthermore, to achieve the internal audit quality that meets the International Professional Practices Framework (IPPF), it is continuously working on improving the audit system through external assessment, etc.

Members of the Board of Directors





Kim Young-Choon
Executive Director

Baek Kyoung-Ho
Executive Director

Cho Gyu-Dae
Executive Vice President

Jeong Yoon-Mo
Chairperson & President

Park Se-Kyu
Chief Audit Executive

Yoon Bum-Soo
Executive Director

Lee Jong-Bae
Executive Director

2. Steering Committee

Steering Committee established based on the Korea Technology Finance Corporation Act, Article 17

Chairperson

Jeong Yoon-Mo, Chairperson & President

Appointed
Members (5)

Park Yong-soon, Venture Innovation Policy Director, Ministry of SMEs and Startups

Im Ki-geun, Economic Budget Inspector, Ministry of Economy and Finance

Lee Se-hoon, Director General for Financial Policy, Financial Services Commission

Kim Yeong-joo, Vice-President, Industrial Bank of Korea

Kim Un-tae, Vice-President, KB Kookmin Bank

Commissioned
Members (7)

Shin Yeon-sik, Vice-President, Shinhan Bank

Shin Kwang-chun, Vice-President, Woori Bank

Park Ji-hwan, Vice-President, Hana Bank

Woo Tae-hee, Executive Vice-President, Korea Chamber of Commerce and Industry

Seo Seung-won, Executive Vice-President, Korea Federation of SMEs

Ma Chang-hwan, Executive Vice-President Korea industrial technology association

Kang Byeong-sam, President Innopolis Foundation

3. Financial Statements

Summary of Statement of Financial Position 2020

As of Dec. 31, 2019 (Unit: KRW million)

Assets		Liabilities and Net Assets	
Item	Amount	Item	Amount
I. Current Assets	2,289,011	I. Current Liabilities	189,942
Cash and Cash Equivalents	10,558	Deferred Revenue	170,914
Short-term Financial Instruments	1,154,021	Others	19,028
Short-term Investment Securities	1,064,022	II. Long-term Liabilities	1,229,928
Other current assets	60,410	Reserves for Claim Payment	1,170,032
II. Investment Assets	831,722	Reserves for Paying Claims on P-CBO Guarantee	15,784
Long-term Financial Instruments	410,000	Accrued Liability for Retirement Allowance	44,112
Long-term Investment Securities	222,962	III. Other Non-Current Liabilities	808
Other investment assets	198,760	Total Liabilities	1,420,678
III. Tangible Properties	153,382		
Land	60,151	I. Basic Net Assets	10,360,891
Buildings	81,950	Basic Fund at the Time of Foundation	21,768
Machinery	2,402	Contributions	10,339,123
Furniture, fixtures, and transport equipment etc.	8,879	II. Accumulated Reserves and Surpluses	(8,240,997)
IV. Intangible Properties	5,775	Retained Earnings Carried Over from the Previous Year	(8,710,865)
Industrial Property Rights	5,775	Other Changes in Net Assets	488,280
V. Other Non-Current Assets	291,175	Financial Operation Results	(18,412)
Claim for Indemnity	240,496	III. Net Asset Adjustment	30,493
Preserved Claim	65	Gain and Loss on Investment Valuation	30,493
Deposit and others	50,614	Total Net Assets	2,150,387
Total Assets	3,571,065	Total Liabilities and Net Assets	3,571,065

Summary of Statement of Financial Position 2020

As of Dec. 31, 2019 (Unit: KRW million)

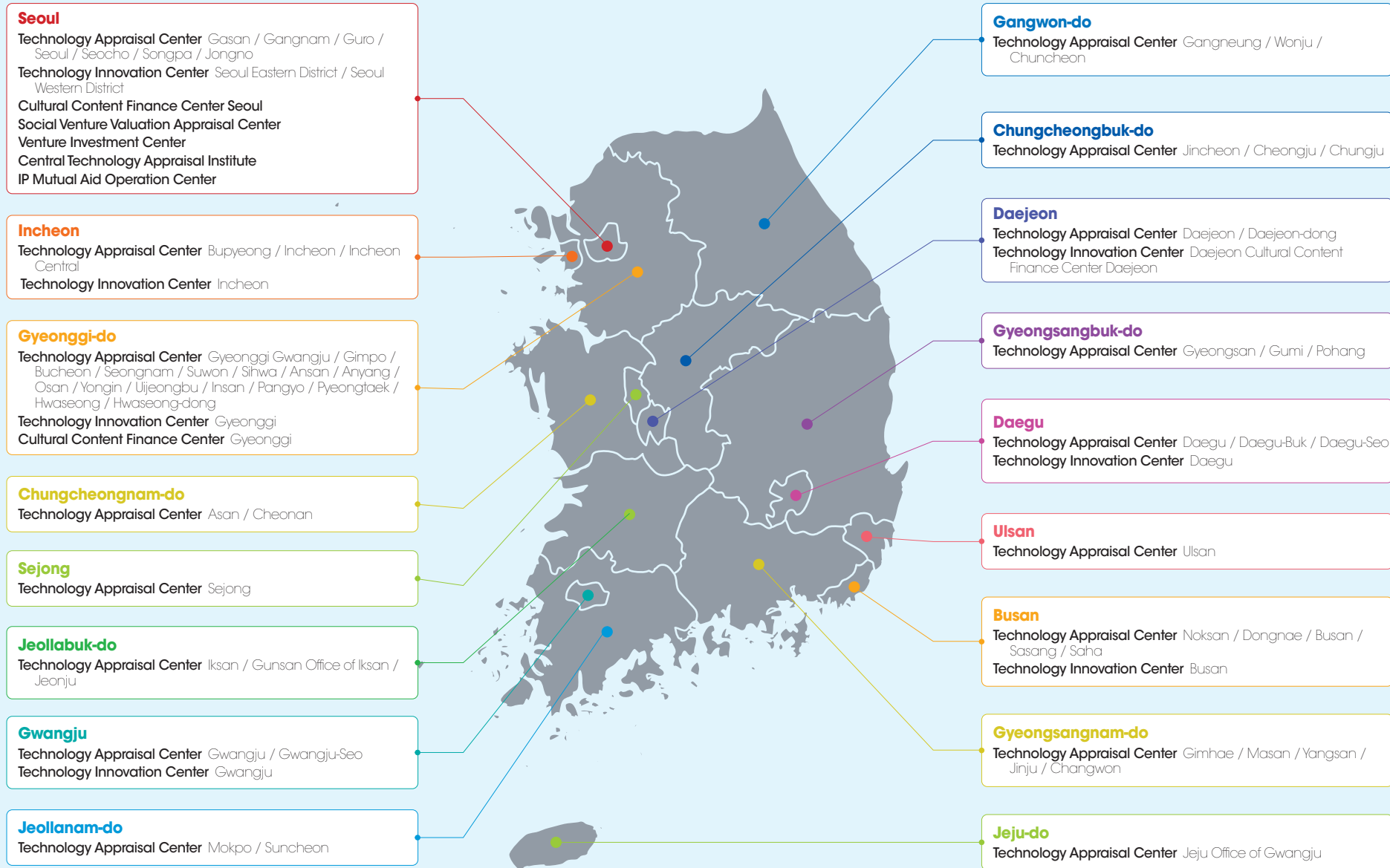
Item	Amount		
	Total Cost	Income	Net Cost
I. Program Net Cost	1,002,580	(319,697)	682,883
Industrial Financial Support	1,002,580	(319,697)	682,883
II. Management Cost			61,095
Labor Cost			31,715
Expenses, other			29,380
III. Non Allocated Expenses			3,450
Asset Impairment Loss and others			3,450
IV. Non Allocated Income			57,700
Interest income and others			57,700
V. Net Operation Cost (I + II + III - IV)			689,728
VI. Non Exchange Revenue			671,316
Contribution Revenue			545,968
Other Sourcing and Transfer			125,348
VII. Operation Result (= V - VI)			18,412

Summary of Statement of Financial Position 2020

From Jan. 1 to Dec. 31, 2019 (Unit: KRW million)

Item	Amount			
	Net Asset	Accumulated Reserve and Surplus	Net Asset Adjustment	Total
I. Basic Net Asset	10,360,891	(8,710,865)	25,030	1,675,056
Reported Amount	10,360,891	(8,710,865)	25,030	1,675,056
II. Statement of Operation	-	18,412	-	18,412
III. Adjustment Accounts	-	488,280	5,463	493,743
Gain and Loss on Investment Securities Valuation	-	-	(260)	(260)
Gain on Asset Revaluation	-	-	5,723	5,723
Other Gain and Loss on Net Asset	-	488,280	-	488,280
IV. Ending Balance of Net Asset (I - II + III)	10,360,891	(8,240,997)	30,493	2,150,387

4. Branch Network



Center	Address	Tel.	
Regional Headquarters	Gyeonggi	9th Fl., 199, Gwongwang-ro, Paldal-gu, Suwon-si, Gyeonggi-do (1038-2, ingye-dong, Seyoung B/D)	031-8006-1590
	Gyeongnam Ulsan	3rd Fl., IBK Changwon Branch B/D, 38, Yongji-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do (Jungang-dong)	055-210-4091
	Daegu	10th Fl., S-Cube B/D, 2598, Dalgubeol-daero, Suseong-gu, Daegu (Manchon-dong)	053-251-5672
	Busan	2nd Fl., annex of KOTEC B/D, 33, Munhyeongeumyung-ro, Nam-gu, Busan	051-606-6592
	Seoul Eastern District	5th Fl., Dongwoo B/D, 328, Teheran-ro, Gangnam-gu, Seoul	02-2016-1371
	Seoul Western District	41st Fl., 550, 63-ro, Yeongdeungpo-gu, Seoul (Yeouido-dong)	02-3215-5915
	Incheon	10th Fl., Songdo centroad B B/D, 323, Incheon tower-daero, Yeonsu-gu, Incheon (Songdo-dong)	032-830-5600
	Chungcheong	2nd Fl., 141, Dunsanse-ro, Seo-gu, Daejeon (Dunsan-dong)	042-610-2232
	Honam	6th Fl., Mudeungsan Tower, 80, Jukbong-daero, Seo-gu, Gwangju (Nongseong-dong)	062-360-4662
Central Technology Appraisal Institute	11th Fl., Living Tower of Highbrand B/D, 16, Maeheon-ro, Seocho-gu, Seoul (Yangjae-dong)	02-2155-3754	
Technology Appraisal Center	Gasan	Rm. 1906, STX-V Tower, 128, Gasan Digital-1-ro, Geumcheon-gu, Seoul (Gasandong, STX V-TOWER)	02-818-4300
	Gangnam	5th Fl., Dongwoo B/D, 328, Teheran-ro, Gangnam-gu, Seoul (Yeoksam-dong, Dongwoo B/D)	02-2016-1300
	Gangreung	8th Fl., Donga B/D, 2110, Gyeonggang-ro, Gangreung-si, Gangwon-do (114-2, Imdang-dong)	033-640-8700
	Gyeonggi Gwangju	2nd Fl., 1052, Gyeongchung-daero, Chowol-eup, Gwangju-si, Gyeonggi-do (Chowol-eup)	031-724-5200
	Gyeongsan	1st Fl., Gyeongbuk Techno Park HQ building, 27 Sampoong-ro, Gyeongsan-si, Gyeongsangbuk-do (Sampoong-dong)	053-859-9000
	Gwangju	6th Fl., Mudeungsan tower, 80, Jukbong-daero, Seo-gu, Gwangju	062-360-4600
	Jeju Office of Gwangju	3rd Fl., Small and Medium Business Support Center, 473, Yeonsam-ro, Jeju-si, Jeju	064-727-0271
	Gwangju-Seo	3rd Fl., IBK Gwangsan Branch B/D, 240, Mujin-daero, Gangsan-gu, Gwangju (1600-3, Usan-dong)	062-970-9200
	Guro	Rm. 1801-1807, JNK Digital tower, Digital-ro 26gil 105, Guro-gu, Seoul (222-3, Guro-dong)	02-6124-6400
	Gumi	2nd Fl., IBK B/D, 124, Suchul-daero, Gumi-si, Gyeongsangbuk-do (204, Gongdan-dong)	054-440-0730
	Gimpo	Rm. 805 Shinhan Plaza, 113, Gimpohangang-4-ro, Gimpo-si, Gyeonggi-do (1610, Janggi-dong)	031-980-8600
	Gimhae	Rm. 1002, I-Square Mall C, 2342, Gimhae-daero, Gimhae-si, Gyeongsangnam-do (1043, Buwon-dong)	055-330-2100
	Noksan	3rd Fl., Daemyung Plaza, 12, Myeongjigukje 8-ro 10beon-gil, Gangseo-gu, Busan (Myongji-dong)	051-970-0600
	Daegu	10th Fl., S-Cube B/D, 2598 Dalgubeol-daero, Suseong-gu, Daegu	053-251-5600
	Daegu-Buk	5th Fl., Hwaseong B/D, 130, Wondae-ro, Buk-gu, Daegu (416-4 Chimsan-dong)	053-350-9500
	Daegu-Seo	12th Fl., Grand M Tower, 141 Yongsan-ro, Dalseo-gu, Daegu (Yongsan-dong)	053-550-1400
Daejeon	1st Fl., 141, Dunsanse-ro, Seo-gu, Daejeon (934, Dunsan-dong)	042-610-2200	
Daejeon-Dong	2nd Fl., Yuanta Securities, 540, Daejong-ro, Jung-gu, Daejeon (83-11, Seonhwa-dong)	042-250-0700	
Dongnae	11th Fl., Geumjeong Tower, 1925, Jungang-daero, Geumjeong-gu, Busan (184-3, Guseo-dong)	051-510-6900	

Center	Address	Tel.
Masan	2nd Fl., Industrial Bank of Korea B/D, 323 Haeandae-ro, Masanhappo-gu, Changwon-si, Gyeongsangnam-do (Shinpo-dong 2-ga)	055-249-9799
Mokpo	2nd Fl., IBK Mokpo Branch B/D, 25, Ogam-ro, Mokpo-si, Jeollanam-do (1009-2, Sang-dong)	061-288-1500
Busan	1st Fl., annex of KOTEC B/D, 33, Munhyeon Geumyeung-ro, Nam-gu, Busan	051-606-6500
Bucheon	9th Fl., CDS B/D, 161, Sinheung-ro, Bucheon-si, Gyeonggi-do (Jung-dong)	032-620-8800
Bupyeong	2nd Fl., IBK B/D, 353, Buheung-ro, Bupyeong-gu, Incheon (Bupyeong-dong)	032-509-1700
Sasang	2nd Fl., Bosang B/D, 271, Hakgam-daero., Sasang-gu, Busan (Gamjeon-dong)	051-320-3400
Saha	10th Fl., Cheonggyung B/D, 1422, Nakdongnam-ro, Saha-gu, Busan (Hadan-dong)	051-250-7808
Seoul	41st Fl., 50, 63-ro, Yeongdeungpo-gu, Seoul (60, Yeouido-dong)	02-3215-5900
Seocho	1st Fl., 131., Bangbae-ro, Seocho-gu, Seoul (Bangbae-dong)	02-2224-3100
Seongnam	5th Fl., 346, Hwangsaewol-ro, Bundang-gu, Seongnam-si, Gyeonggi-do (Seohyeon-dong)	031-750-4800
Sejong	4th Fl., Sejong Central Tower 1219, Sejong-ro, Sejong-si (Goun-dong)	044-850-1800
Songpa	Rm. 601, IT Venture Tower East B/D, 135, Jung-daero, Songpa-gu, Seoul (78, Garak-dong)	02-3400-7900
Suwon	8th Fl., Seyoung B/D, 199, Gwongwang-ro, Paldal-gu, Suwon-si, Gyeonggi-do (1038-2, Ingye-dong)	031-8006-1500
Suncheon	4th Fl., IBK B/D, 152, Chunghyo-ro, Suncheon-si, Jeollanam-do (1317-2, Yeonhyang-dong)	061-729-9333
Sihwa	3rd Fl., KT&G Ansan Branch, 361, Okgugongwon-ro, Siheung-si, Gyeonggi-do (1784-6, Jeongwang-dong)	031-496-5911
Asan	3rd Fl., Jangho B/D, 25, Baebang-ro, Baebang-eup, Asan-si, Chungcheongnam-do (149-8, Baebang-eup)	041-538-5900
Ansan	9th Fl., Kyobo B/D, 366, Hwarang-ro, Danwon-gu, Ansan-si, Gyeonggi-do (522, Gojan-dong)	031-8084-5300
Anyang	3rd Fl., KDB B/D, 42, Burim-ro 169beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do (Gwanyang-dong)	031-450-1600
Yangsan	3rd Fl., Yangsan Business Center, 33-2, Jungang-ro, Yangsan-si, Gyeongsangnam-do	055-370-4700
Osan	4th Fl., 19, Naesammi-ro 79beon-gil, Osan-si, Gyeonggi-do (Sucheong-dong)	031-369-5500
Yongin	Rm. 302, Juneve Moonworld, 22, Dongbaek 5-ro, Giheung-gu, Yongin-si, Gyeonggi-do	031-8020-4000
Ulsan	2nd Fl., Ulsan Economic Promotion Agency B/D, 915, Saneop-ro, Buk-gu, Ulsan (758-2, Yeonam-dong)	052-220-7900
Wonju	3rd Fl., NH Bank Wonilro Branch B/D, 115, Wonil-ro, Wonju-si, Gangwon-do (Ilsan-dong)	033-730-8300
Uijeongbu	9th Fl., Samsung Life B/D, 62, Simin-ro, Uijeongbu-si, Gyeonggi-do, (Uijeongbu-dong)	031-820-0300
Iksan	7th Fl., SK B/D, 39, Iksan-daero 16gil, Iksan-si, Jeollabuk-do (175-6, Changin-dong 1-ga)	063-840-3100
Gunsan Office of Iksan	2nd Fl., Kyobo B/D, 35, Daehak-ro, Gunsan-si, Jellabuk-do	063-460-2800
Incheon	10th Fl., Songdocentroad B B/D, 323, Incheontower-daero, Yeonsu-gu, Incheon (Songdo-dong)	032-830-5600
Incheon-central	1st Fl., KOTEC B/D., 30, Yesu-ro 152gil, Namdong-gu, Incheon (Guwol-dong)	032-420-3500
Ilsan	15th Fl., M-City Tower, 195, Baengma-ro, Ilsandong-gu, Goyang-si, Gyeonggi-do (869, Janghang-dong)	031-931-7200

Technology
Appraisal
Center

Center	Address	Tel.	
Technology Appraisal Center	Jeonju	11th Fl., Jeonbuk Bank B/D, 566, Baekje Blvd., Deokjin-gu, Jeonju-si, Jeollabuk-do (669-2, Geumam-dong)	063-270-9800
	Jongno	2nd Fl., Daewoo Plaza B/D, 30, Saemun-ro 3-gil, Jongno-gu, Seoul (Naesu-dong)	02-2280-4800
	Jinju	4th Fl., Kyongnam Bank B/D, 26, Chungui-ro, Jinju-si, Gyeongsangnam-do (Chungmugong-dong)	055-750-1111
	Jincheon	3rd Fl., Daemyoung B/D, 356, Munhwa-ro, Jincheon-eup, Jincheon-gun, Chungcheongbuk-do	043-251-1500
	Changwon	3rd Fl., IBK Changwon Branch B/D, 38, Yongji-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do (Jungang-dong)	055-210-4099
	Cheonan	215, Gwangjang-ro, Seobuk-gu, Cheonan-si, Chungcheongnam-do (Buldang-dong)	041-629-5911~3
	Cheongju	6th Fl., Intem Plaza, 76, Sannam-ro, Seowon-gu, Cheongju-si, Chungcheongbuk-do (Sannamdong)	043-290-9513
	Chuncheon	5th Fl., 45, Geumgang-ro, Chuncheon-si, Gangwon-do (18-8, Yosun-dong)	033-240-2800
	Chungju	4th Fl., Hyundai Motors B/D, 10, Aehyang-ro, Chungju-si, Chungcheongbuk-do (408-1, Bongbang-dong)	043-849-8600
	Pangyo	5th Fl., 182, Pangyoyeok-ro, Bundang-gu, Seongnam-si, Gyeonggi-do (Sampyeong-dong)	031-725-7800
	Pyeongtaek	3rd Fl., Vision Plaza, 48, Pyeongtake-1-ro, Pyeongtaek-si, Gyeonggi-do (630-12, Bijeon-dong)	031-659-8700
	Pohang	3rd Fl., IBK B/D, 369, POSCO-daero, Nam-gu, Pohang-si, Gyeongsangbuk-do (104-5, Daedo-dong)	054-271-4900
	Hwaseong	2nd Fl., #C Urideul Distribution Town, 934-4, Sicheong-ro, Paltan-myeon, Hwaseong-si, Gyeonggi-do	031-299-8200
	Hwaseong-dong	Rm. 532, Premium Wonhee Castle Bongdam, 51, Donghwa-gil, Bongdam-eup, Hwaseong-si, Gyeonggi-do (564, Donghwa-ri)	031-8047-4700
Technology Innovation Center	Gyeonggi	8th Fl., Seyoung B/D, 199, Gwongwang-ro, Paldal-gu, Suwon-si, Gyeonggi-do (Ingye-dong)	031-8006-1570
	Gwangju	6th Fl., Mudeungsantower, 80, Jukbong-daero, Seo-gu, Gwangju (Nongseong-dong)	062-360-4654
	Daegu	12th Fl., Grand M Tower, 141 Yongsan-ro, Dalseo-gu, Daegu (Yongsan-dong)	053-550-1450
	Daejeon	3rd Fl., KOTEC B/D, 141, Dunsanseo-ro, Seo-gu, Daejeon (Dunsan-dong)	042-610-2279
	Busan	2nd Fl., annex of KOTEC B/D, 33, Munhyeon Geumyeung-ro, Nam-gu, Busan	051-606-6561
	Seoul Eastern District	11th Fl., Living Tower of Highbrand B/D, 16, Maeheon-ro, Seocho-gu, Seoul	02-2155-3662
	Seoul Western District	Rm. 1807, JNK Digital Tower, 111, Digitalro 26-gil, Guro-gu, Seoul (Gurong-dong)	02-6124-6930
	Incheon	4th Fl., 30, Yesu-ro 152beon-gil, Namdong-gu, Incheon (Guwol-dong)	032-420-3580
Cultural Content Finance Center	Gyeonggi	5th Fl., Korean Semiconductor Industry Association Building, 182 Pangyoyeok-ro, Bundang-gu, Seongnam-si, Gyeonggi-do (Sampyeong-dong)	031-725-7857
	Busan	11th Fl., Busan Visual Industry Center, 39 Centumseo-ro, Haeundae-gu, Busan	051-726-1300
	Seoul	41st Fl., 63 Building, 50 63-ro, Yeoungdeungpo-gu, Seoul (Yeouido-dong)	02-3215-5972
	Daejeon	8th Fl., KTGO, 81, Dunsanseo-ro, Seo-gu, Daejeon (Dunsan-dong)	042-480-1322
Venture Investment Center	2nd Fl., 30, Saemun-ro 3-gil, Jongno-gu, Seoul (Naesu-dong)	02-2280-4800	
Social Venture Valuation Appraisal Center	5th Fl., MG B/D, 89, Seongsui-ro, Seongdong-gu, Seoul (Seongsu-dong 2-ga)	02-3407-2900	
IP Mutual Aid Operation Center	10th Fl., Gangnam Finance Plaza, 419, Teheran-ro, Gangnam-gu, Seoul (Samseong-dong)	02-3484-8905	

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