
KOTEC 2019 ANNUAL REPORT

KOREA TECHNOLOGY
FINANCE CORPORATION

2 0 1 9 A N N U A L R E P O R T

KIBO 기술보증기금

Address 33 Munhyeongeumyung-ro, Nam-gu, Busan, Republic of Korea 48400

Telephone +82-51-606-7317

Website www.kibo.or.kr

Design/editing/printing CCA

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Korea Technology Finance Corporation (KOTEC)
Shapes the Future of the Fourth Industrial Revolution.

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CEO'S MESSAGE

KOTEC will establish itself as the No.1 partner for innovative growth that tightly joins hands in developing a strong venture ecosystem and supporting the growth of SMEs and startups.



KOTEC is a public institution comprehensively supporting ventures and innovation, leading the innovative growth and technological competitiveness of SMEs and startups for the creation of sustainable new growth engines of the national economy.

The year 2019 brought several difficulties for Korean SMEs and startups due to export restrictions imposed by Japan and the trade dispute between the US and China. With this backdrop, KOTEC selected 'Small Giants 100' in the materials, components, and equipment industries in order to improve technological competitiveness and independence of SMEs and startups, and launched a 'special guarantee for aspiring unicorns' to nurture global unicorn companies by propping up the second venture boom. Also, KOTEC provided technology guarantees totaling KRW 21.8 trillion to support innovation in SMEs and startups.

In addition, KOTEC has built a comprehensive technology protection support system, including Technology Trust, Technology Data Transaction Record Registration, Technology Bailment, and Patent Mutual Aid services, for the protection and fair transaction of technologies, so that SMEs and startups can focus on technology development without the risk of technology theft. KOTEC also provided new guarantees more actively for enterprises with demonstrated technological competitiveness and growth potential regardless of no sales history or poor credit rating, and pursued the creation of social values as a public institution, such as discovering and fostering social ventures that have both social and innovative aspects in their nature.

KOTEC will concentrate its capabilities on preparations for the 'post COVID-19' era, ensuring that SMEs and startups can capture new markets and turn the COVID-19 crisis into an opportunity.

Having been recognized for these efforts by the government and the public, KOTEC was selected as a most excellent institution (Grade A) in the management performance evaluation of public institutions for two consecutive years, also awarded with the 'Presidential Citation in Financial Support for SMEs and Startups.' Such achievements made 2019 a meaningful year for KOTEC, as it has diligently fulfilled its role for innovative SMEs and startups, despite both internal and external difficulties.

In 2020, our economy faces the era of a new normal driven by damaged global supply chains and the contactless culture amid the unprecedented economic crisis following the 'COVID-19 pandemic.'

KOTEC will concentrate its capabilities on preparations for the 'post COVID-19' era, ensuring that SMEs and startups can capture new markets and turn the COVID-19 crisis into an opportunity. Meanwhile, KOTEC will assume the role of a safety net for SMEs and will focus on supporting startups and venture businesses to overcome this crisis by quickly introducing financial support programs such as 'COVID-19 Special Guarantee for SMEs and Micro-enterprises' and 'Special Guarantee for Startups and Venture Businesses'.

Furthermore, KOTEC will continue supporting innovative growth of SMEs and startups by providing technology guarantees worth more than KRW 22 trillion in order to assist domestic SMEs and startups on their sustained technological innovation amid the difficulties surrounding domestic and global circumstances.

In particular, with a view to realizing the digital economy and the 'Smart Korea', more than 40% of the total guarantee amount will be channeled into key sectors such as DNA (Digital, Network, AI), BIG3 (system semiconductors, biohealth, future mobility), smart factories, and materials/components/equipment. Also, new measures for making KOTEC more customer-oriented and smarter, such as the development of a new technology rating system based on big data and artificial neural network and the implementation of an electronic agreement system for expanding contactless online services, are underway.

In addition, by introducing new guarantee programs such as 'leverage guarantee' and 'special guarantee for IP ventures', expanding the provision of special guarantees for aspiring unicorns, and discovering more 'Small Giants 100', KOTEC will establish itself as the No.1 partner for innovative growth, tightly joining hands in developing a strong venture ecosystem and supporting the growth of SMEs and startups.

I would like to extend my thanks to everyone from SMEs, startups, and all other related institutions for trusting and supporting KOTEC throughout these endeavors. This year, as in previous years, KOTEC will do its utmost to support SMEs and startups in overcoming domestic and global crises to realize their innovative growth.

April 2020

Jeong Yoon-mo

Chairman & President

INNOVATION

01

Creating values through continuous innovation,

KOTEC will become a global leader in technology finance.

For the last 30 years, KOTEC has pioneered the way and led the national technology finance market from the very beginning 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 to the global market as the leader of technology finance by disseminating the Korean technology finance system abroad.

INTRODUCTION OF KOTEC

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1. Role and Purpose

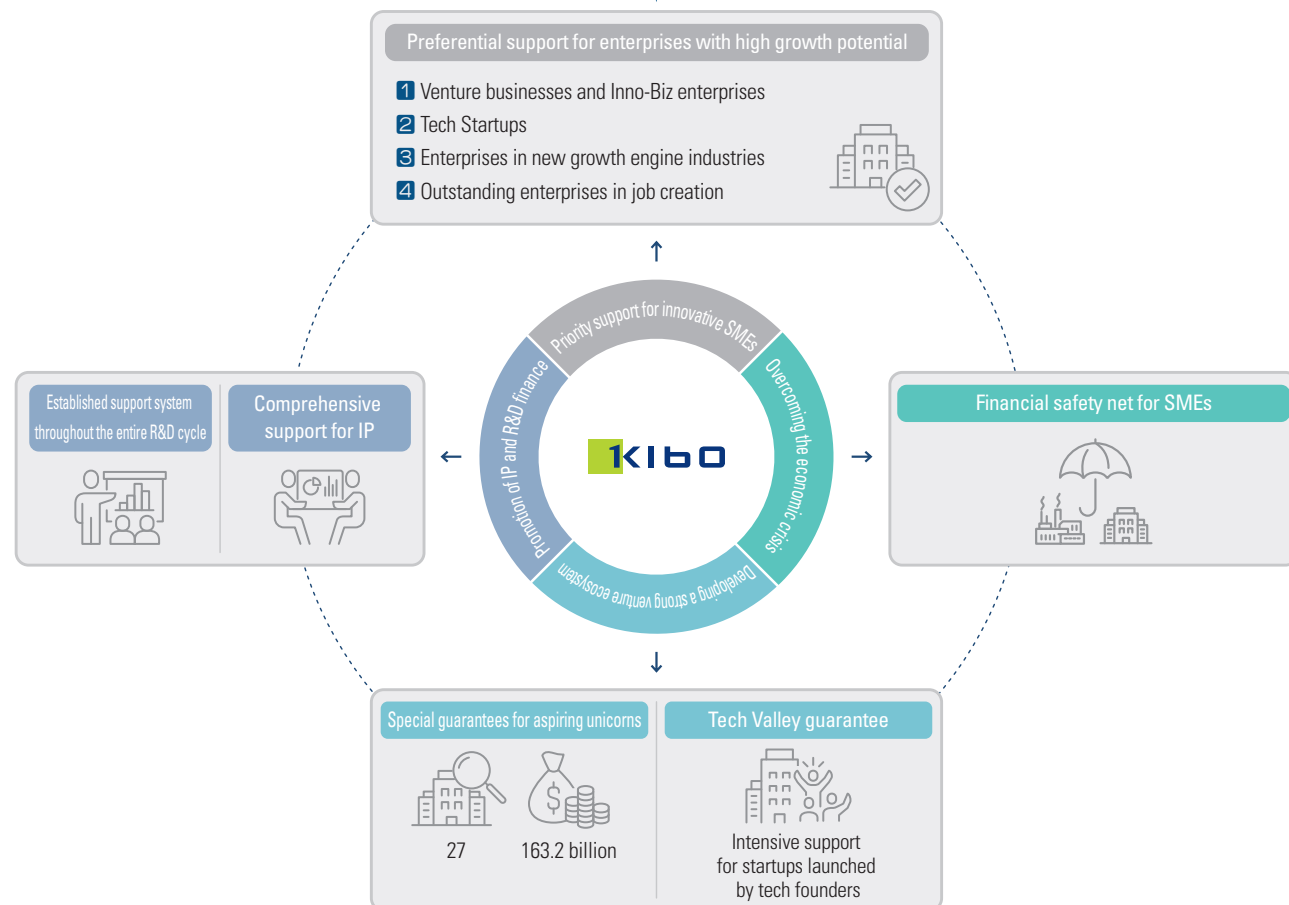
The Role of KOTEC

Since its establishment in 1989, KOTEC has led the improvement of technological competitiveness of SMEs and the implementation of technology finance by providing about KRW 367 trillion of technology guarantee for tech-based SMEs that have promising technology and business potential but lack the ability to provide collateral. KOTEC has also built the foundation for its comprehensive technology finance support platform, through expanding the discovery and promotion of innovative technology enterprises such as tech startups with high growth potential, venture businesses and Inno-Biz enterprises, and providing a variety of services, such as investment based on technology appraisal, technology transfer and protection, and technology/management consulting.

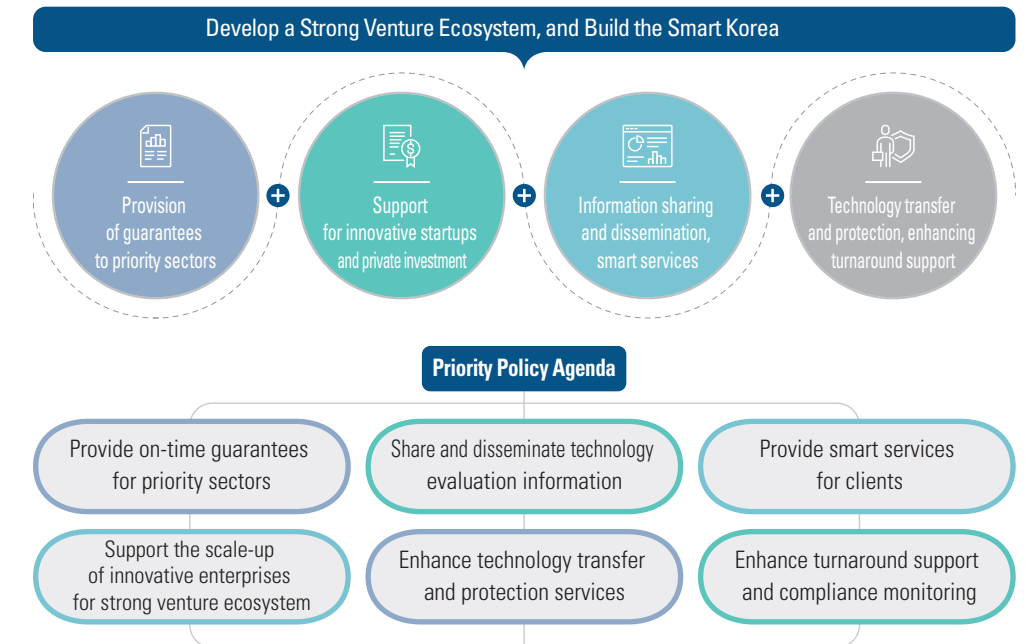
Additionally, KOTEC has mainly worked to support technically competitive enterprises by establishing a technology guarantee system based on the future value of a technology as an intangible asset, such as the intellectual property held by an enterprise, while concentrating its capabilities on the provision of guarantees for enterprises with growth potential, such as tech startups, in an effort to create quality jobs.

In particular, KOTEC has put in place specialized programs to promote the technological competitiveness of SMEs and create new growth engines for the national economy, such as the increased financial support for R&D and its commercialization in order to invigorate investment in technology development, the matchmaking service for technology transfers from universities and research institutes to SMEs, and the provision of financial and non-financial support to encourage the establishment of tech startups by experts such as professors and researchers.

Since its establishment, KOTEC provided KRW 367 trillion of technology guarantee to enterprises with creative ideas and technologies.



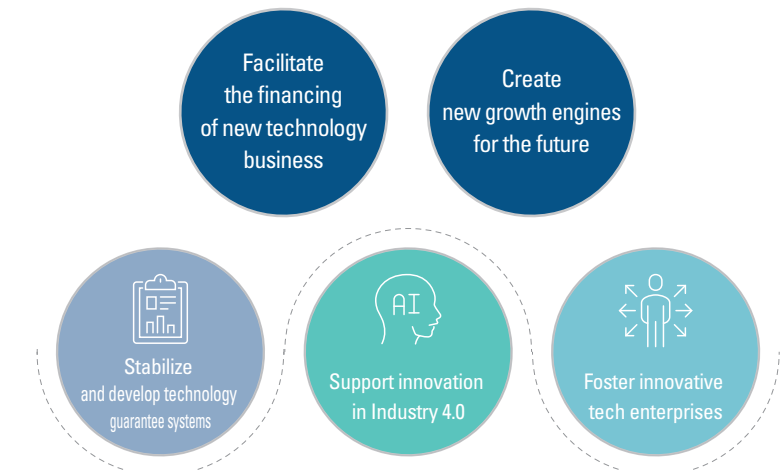
KOTEC will continue to implement new programs and expand scale-up programs for the growth of innovative enterprises and unicorn companies. Furthermore, with an effort to make KOTEC's technology appraisal information widely accessible to both the public and private sectors, KOTEC will disclose the criteria for and results of technology appraisals to encourage innovation for enterprises, joining hands in developing a strong venture ecosystem while striving to build the Smart Korea.



The Purpose of Establishing KOTEC

- ① Facilitate the financing of new technology business by stabilizing and developing technology guarantee systems, and further contribute to the development of the national economy. <Article 1 of the Korea Technology Finance Corporation Act>
- ② Make funds more readily available for enterprises which lack security solvency by guaranteeing the liabilities which may be incurred by such enterprises. <Article 12 of the Korea Technology Finance Corporation Act>

Contribute to the Development of the National Economy



2. Brief History



APR. 1989.

KOTEC was established
(The fund was set up in Dec. 1986)



MAR. 1997.

First 'Technology Appraisal Center'
was opened in Korea



FEB. 1999.

'Technology Appraisal Guarantee
System' was launched



JUL. 2005.

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



JUN. 2006.

KOTEC was authorized to certify
Venture Businesses



JAN. 2007.

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

Adding Value to Technology



DEC. 2018.

Cumulative amount of guarantees,
provided to more than 78,000 companies,
reached KRW 345 trillion with
guarantee balance of KRW 22.4 trillion



JUL. 2017.

Change of competent authority
Financial Services Commission
→ Ministry of SMEs and Startups



SEP. 2016.

Change of legal name
Korea Technology Credit Guarantee Fund
→ Korea Technology Finance Corporation



JAN. 2015.

Established support system for technology
transfer and commercialization
(Operation of Technology Convergence
Centers and KTMS)



JUN. 2012.

Legislation of guarantee-linked
investment of KOTEC

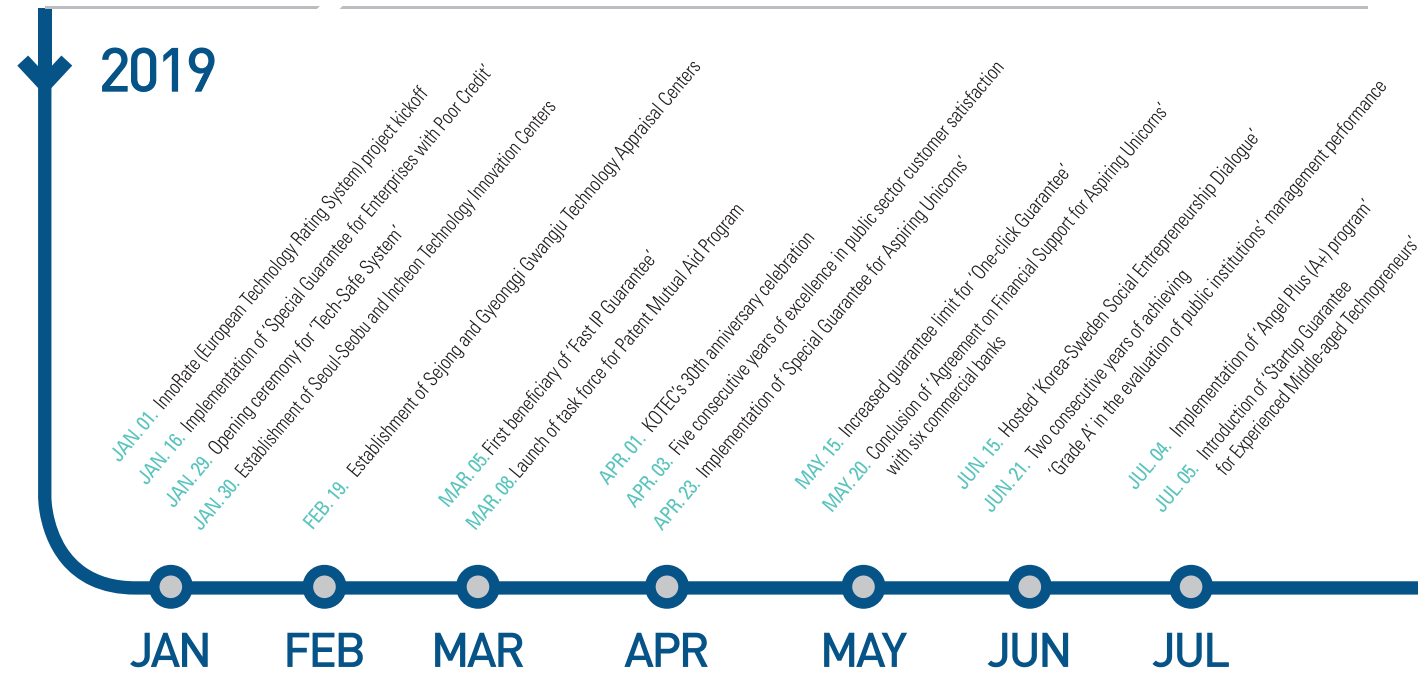


MAY. 2011.

Relocated Headquarters to Munhyeon
International Finance Complex in Busan

The No.1 Innovation Partner for SMEs and Startups

3. Accomplishments in 2019



AWARDS

Oct. 29.
Prime Minister's Citation (Ministry of the Interior and Safety)
 2018 Best Practice in Work Process Innovation
 In recognition for building a big data platform to launch the One-Click Guarantee Program



Nov. 21.
Grand Prize for Social Value Pursuing Institutions (The Institute of Internal Auditors)
 2019 Korea Auditors Conference
 In recognition for considering the socially disadvantaged, creating quality jobs, and strengthening mutually beneficial cooperation between large conglomerates and SMEs

Nov. 28.
Minister's Citation from the Ministry of SMEs and Startups (Ministry of SMEs and Startups)
 Information security management assessment by the Ministry of SMEs and Startups
 In recognition for excellence in the information security management system and technical security measures

Nov. 24.
Minister's Award from the Ministry of the Interior and Safety (Ministry of the Interior and Safety)
 2019 Governmental Innovation Best Practice Award
 In recognition for building the Tech-Safe system



Dec. 10.
Grand Prize in public discipline/integrity and ethics (Association of Public Institution Auditors of Korea)
 Grant Prize in public discipline/integrity and ethics
 In recognition for excellence in establishing public discipline and ethical management activities



Award from the President of the Korea Venture Business Association (Korea Venture Business Association)
 Achievement award for supporting venture businesses
 In recognition for having the best venture policy, as chosen by venture entrepreneurs in 2019



Dec. 12.
President's Citation (Ministry of SMEs and Startups)
 24th SME and Startup Financial Support Award
 In recognition for disseminating the 2nd Venture Boom, building the recharge ecosystem, and strengthening support for sectors to create social value, such as social ventures



EVENTS

Apr. 01.
 Celebrated the 30th anniversary of KOTEC
 KOTEC, the first in Korea to introduce technology appraisal system with a new paradigm 'technology finance', celebrated its 30th anniversary since foundation and presented strategies for future growth such as 'focused support for startups and innovative growth SMEs,' 'technology appraisal open platform,' and 'SME technology protector.'



Jun. 15.
 Held 'Korean-Swedish Social Ventures Entrepreneurship Dialogue'
 KOTEC and Norrskan Foundation held an event under the theme of 'Plans to Invigorate Social Ventures for Inclusive Growth' to share the experiences of both countries and discuss plans to further expand social ventures in the future at the Norrskan House in Stockholm, Sweden.



Sep.09.
 Implemented Patent Mutual Aid Program
 Patent mutual aid program provides loans up to five times of the deposited amount at lower interest rates for expenses related to patent disputes or overseas patent applications for SMEs. This is expected to provide a strong support for overseas expansion and IP protection of SMEs.



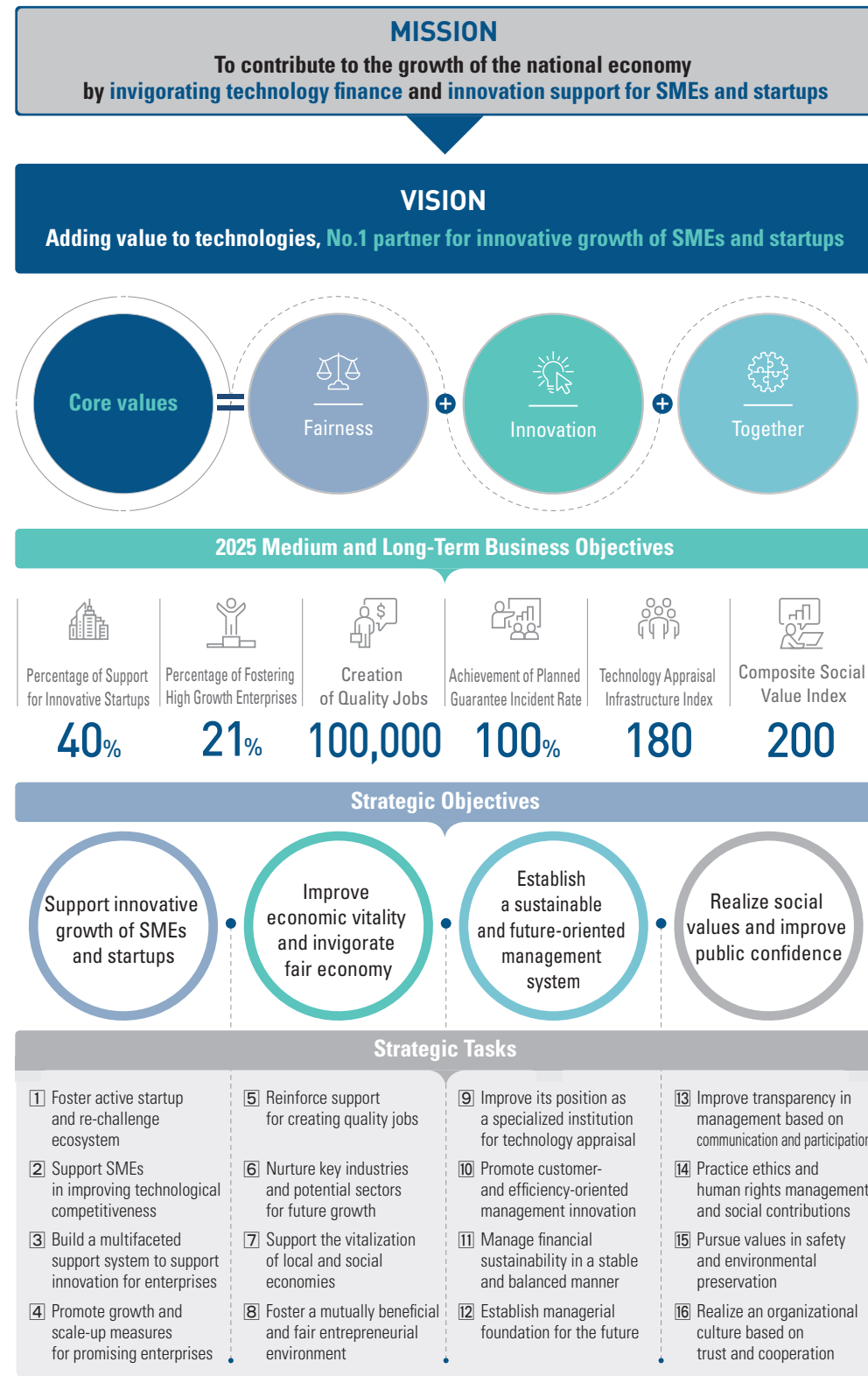
Dec. 11.
 Selected Aspiring Unicorns
 In order to maintain the momentum of the Second Venture Boom, KOTEC selected 27 aspiring unicorns (13 in the first half and 14 in the second half of 2019) showing high growth potential.



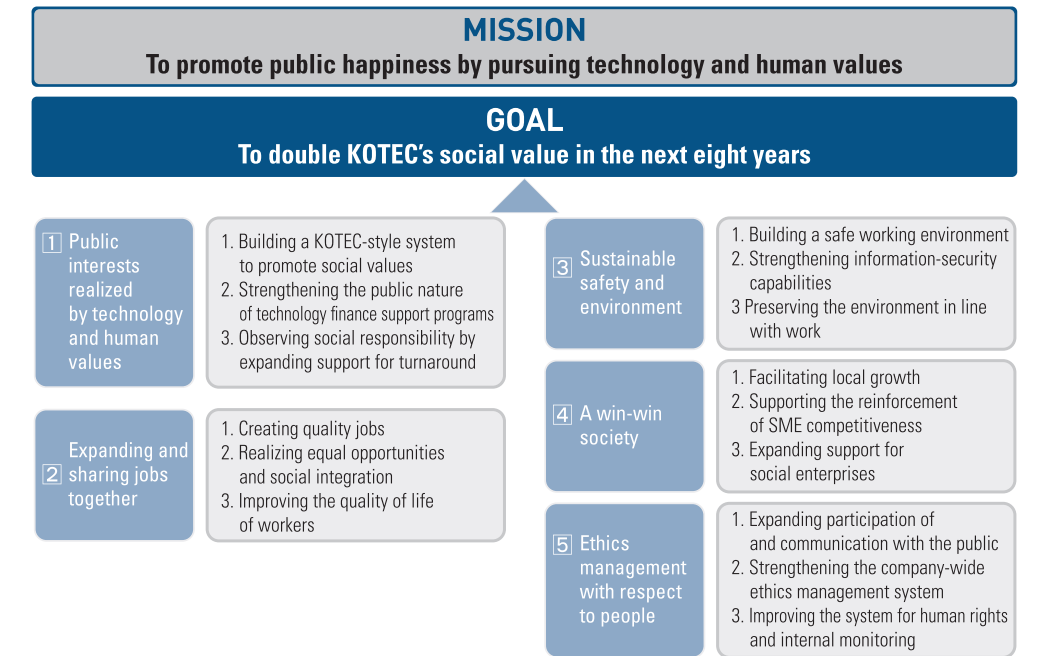
Dec. 17.
 Selected 'Small Giants 100' in materials, components, and equipment industries
 KOTEC selected promising Small Giants in materials, components, and equipment industries, which are capable of improving technological independence of materials, components, and equipment industries and contributing to the creation of new future industries.



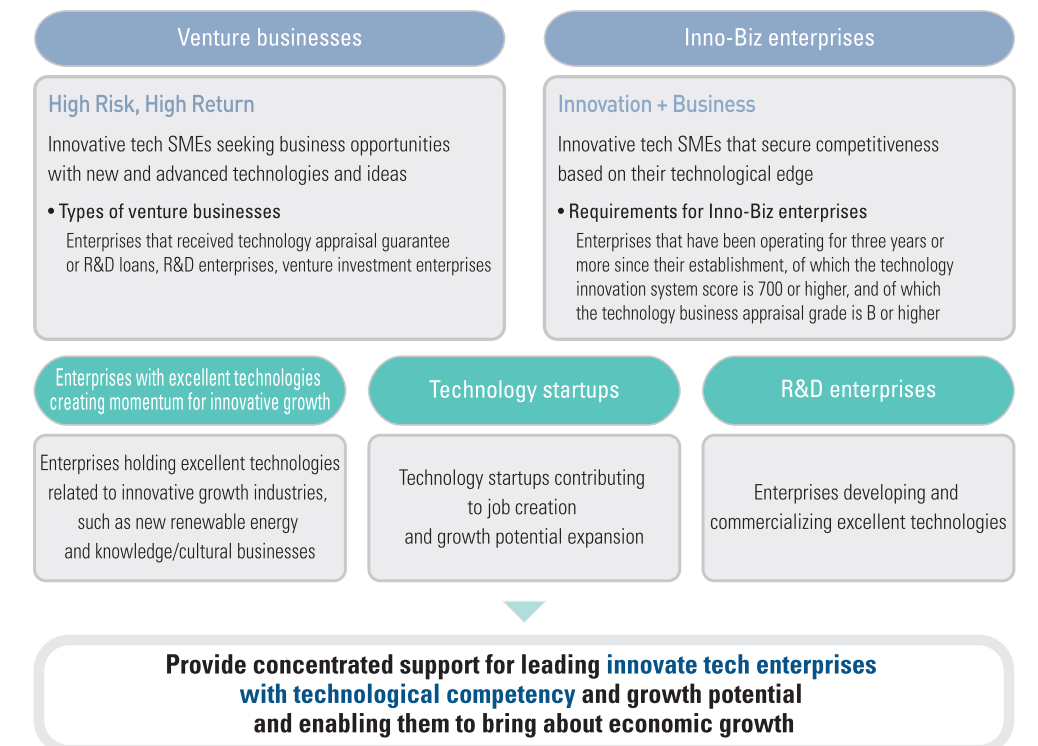
4. Medium and Long-term Business Strategy



5. Social Value Promotion Strategy



6. Key Clients



CHALLENGE

02

KOTEC is by your side to help you

spread your wings and take on new challenges

Amid the recent depression in the global economy, greatly accelerated by the COVID-19 outbreak, KOTEC is providing emergency support, such as the 'COVID-19 special guarantee,' to aid SMEs and venture businesses overcome 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.

MANAGEMENT STATUS OF KOTEC

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1. Overview



In 2019, as the global economy experienced a slowdown in growth rates due to the US-China trade dispute, the Korean economy suffered a serious depression, such as decreased private consumption and reduced investment due to recessions in core industries, including shipbuilding and automaking. Consequently, the management environments and financial conditions of SMEs were exacerbated.

To overcome this situation, KOTEC provided guarantees amounting to as much as KRW 22 trillion, alleviating financial difficulties for SMEs and startups demonstrating technology competitiveness. In particular, KOTEC led the invigoration of business establishment by concentrating its support on technology startups. It discovered and supported enterprises that have outstanding technological competency, but lack the access to the private financial market because of low credit rating due to poor sales records. KOTEC invested actively in new startups and local enterprises struggling to receive financing from private financial institutions, supplementing the blind spot in private venture investment, which is KOTEC's public functionality as a financial safety net for SMEs. Additionally, alongside its patent mutual aid program, KOTEC achieved success with new projects, such as Tech-Safe, special guarantee program for aspiring unicorns, and the selection of Small Giants 100, taking the first step toward diversifying its businesses.

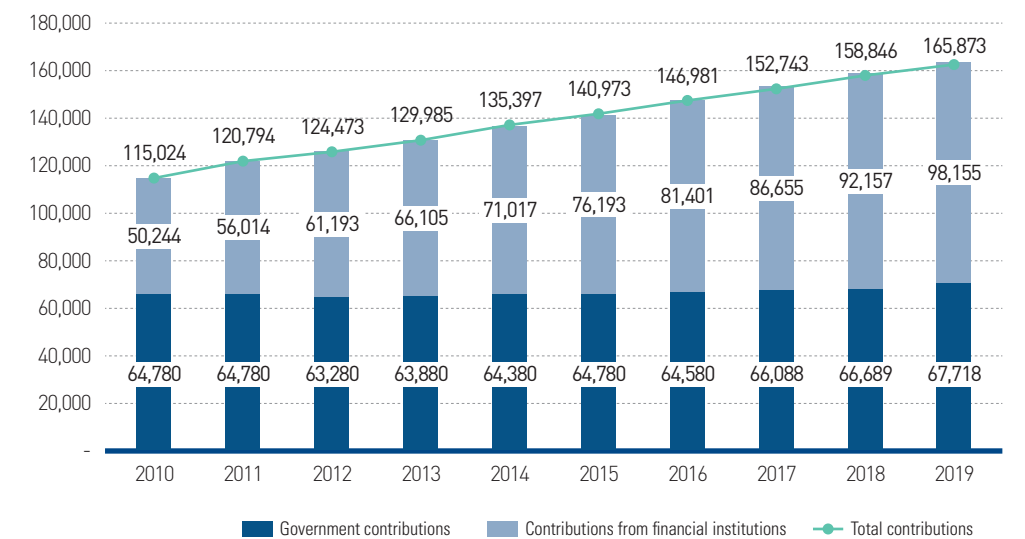
Fundamental Property and Operation Multiple

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 it is set up through contributions from the government and financial institutions.

In 2019, as the accumulated amount required for the subrogation payment reserve increased, the burden of expenses also increased. However, through active external activities and efforts for financial reinforcement, KOTEC secured contributions, including KRW 103 billion in government contributions and KRW 111 billion in special agreement contributions, representing a much larger figure than for the previous year. By doing so, it was able to maintain the amount of the fundamental property at KRW 1.675 trillion, similar to the previous year, and suppressed the rising trend in the operation multiple at 13.2 times.

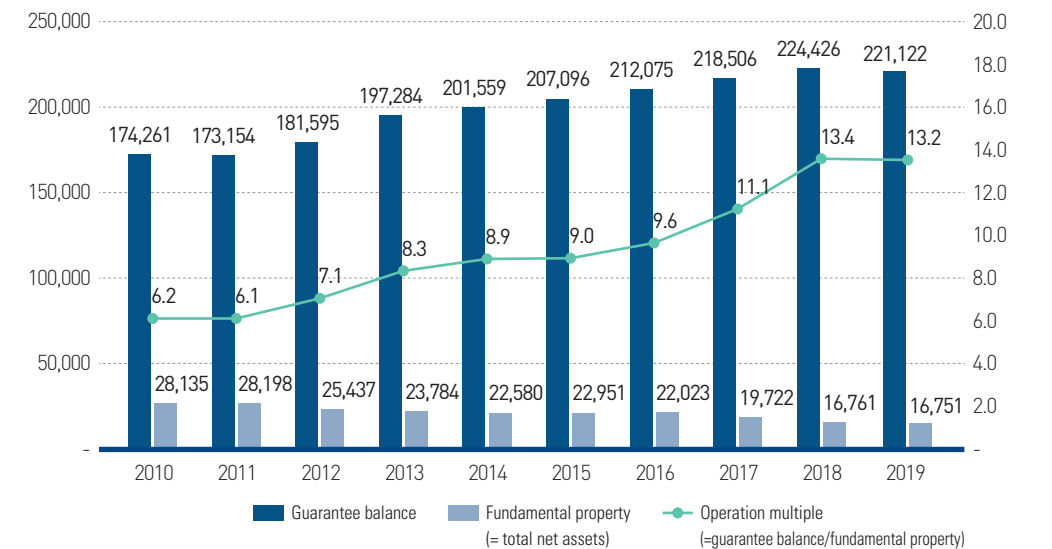
Status of Accumulated Contributions for the Past 10 Years

(Unit: KRW 100 million)



Major Management Indices for the Past 10 Years

(Unit: KRW 100 million, times)



1. Overview

Major Operations

The Major business of KOTEC's comprehensive supporting platform are comprised of core services, i.e. technology guarantees, technology appraisal, guarantee-linked investments, technology transfer, technology protection, and claim management; and supplementary services, i.e. business consulting and technology innovation support. The detailed description of these services is as follows.

Technology Guarantee
 Providing guarantees for a variety of financial debts taken on by tech-based SMEs in the process of financing business establishment, R&D, and commercialization

- ① Technology Startup Guarantee: Guarantees for tech startups less than seven years old
- ② Innovative Technology Guarantee: Guarantees for SMEs with outstanding technologies such as Venture Businesses and Inno-Biz Enterprises, SMEs engaging in new growth engine/renewable energy/knowledge-based service industries
- ③ Technology Appraisal Guarantee: Guarantees for companies with outstanding technologies based on the technology appraisal of intangible technologies and knowledge that the companies retain

Technology Appraisal

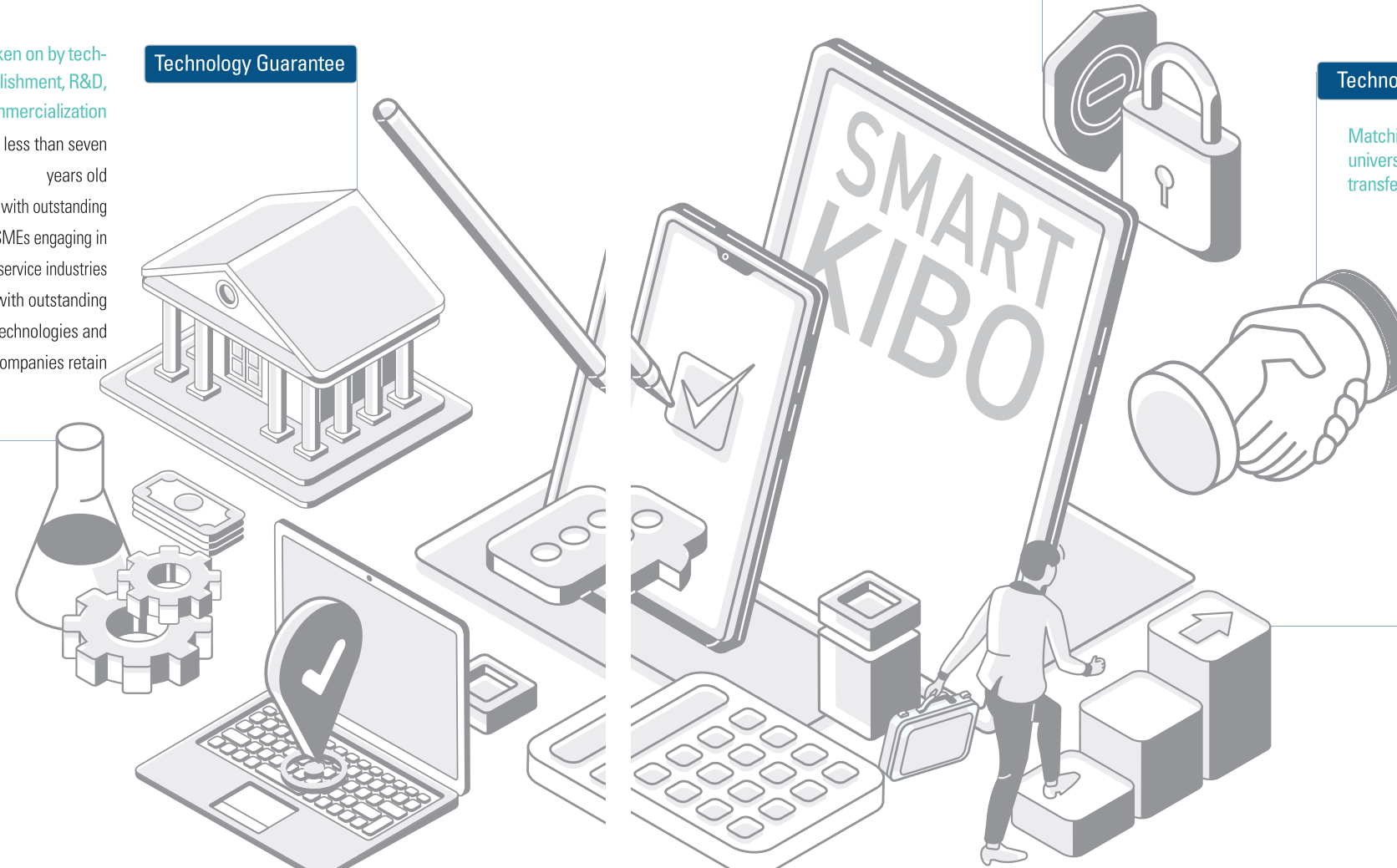
Evaluating the future value of a technology held by an enterprise and utilizing the results as a means toward technology financing for various purposes, such as guarantees and investment

- ① Technology Valuation: Appraisal of values that are being realized or can be realized in the future by the corresponding technology
- ② Technology Business Feasibility Evaluation: Assessment of technological competence and feasibility of the corresponding technology business when a company is commercializing a specific technology or idea and expanding investment into current technology business
- ③ Comprehensive Technology Evaluation: Comprehensive appraisal of all technologies that the company retains in connection with the company's mission; technologies include the management environment and business prospects

Management of Indemnity Claims Right

Exercises legal or contractual right to indemnity against technology guarantee debtor when default is incurred until the indemnity right is duly expired.

- ① Pursuing legal procedures (auctions and lawsuits) and encouraged voluntary redemptions.
- ② Expanding the support into helping credit recovery and business restart of honorable failures



Technology Protection

Protecting technologies held by SMEs legally and physically and supporting technology protection expenses to prevent technology extortion and invigorate technology trades

- Technology trust management, technology data transaction record registration, technology escrow, patent mutual aid

Technology Transfer

Matching and relaying technologies held by public research institutes or universities with SMEs in need of such technologies and financing technology transfers and commercialization

Guarantee-linked Investment

Direct financing in line with guarantees for technology enterprises demonstrating excellent technology competitiveness and business potential

Other Businesses

Management Consulting and Technology Advisory

Management and technology consulting to improve efficiency and competitiveness

- Management and technology diagnosis and consulting, startup education and training, marketing channel development, mentoring, restructuring and M&A, etc.

Technology Innovation Support

- Certification of Venture Business & Inno-Biz, Certification of Green Technology & Green Enterprise

2. Technology Guarantee

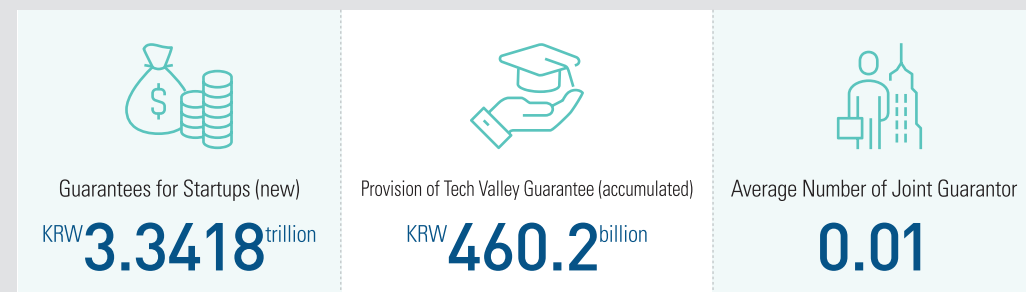
Support for Technology Guarantees



Expanding Support for Job-Creating Enterprises and Fostering a Startup-Favorable Culture



Strengthening the Startup Support System and Building a Safety Net for Business Establishment



Supporting 4th Industrial Revolution Enterprises



Technology Guarantee Support

→ Amount of guarantee provision

By preemptively resolving SMEs' financial difficulties arising from uncertainty in the domestic and global economies, KOTEC is actively fulfilling its role as a public technology guarantee institution that supports tech-based SMEs grow stably and secure competitiveness.

While concentrating its technology guarantee support on highly feasible enterprises in key support segments, such as innovative growth industries and young startups, KOTEC offered guarantees totaling KRW 22.002 trillion in 2019. The guarantee balance amount was reduced by KRW 330.4 billion compared to the previous year, settling in at KRW 22.1122 trillion to maintain financial stability.

KOTEC focused its guarantee capabilities on enterprises in innovative growth industries seen as the key drivers of economic growth in order to vitalize the national economy. Meanwhile, by issuing P-CBO guarantees worth KRW 155.8 billion for enterprises possessing excellent technologies, KOTEC facilitated SME loans concentrated in the indirect financial market for further expansion into the direct financial market.

→ Strengthening the Technology Guarantee Support System for Innovative Tech Enterprises

KOTEC concentrated its guarantee support on innovative Tech SMEs expected to serve as the engine for future growth of the national economy and demonstrating a great impact in job creation. In particular, it expanded support for innovative growth industries, export SMEs, and R&D guarantees.

Guarantee Support Performance by Year

(Unit: KRW 100 million, %)

Category	2017		2018		2019	
	Weight	Weight	Weight	Weight		
Guarantee provision	222,555	100.0	224,798	100.0	220,020	100.0
Technology appraisal guarantees	215,783	97.0	219,613	97.7	215,415	97.9
Innovative tech SMEs	213,411	95.9	217,157	96.6	213,037	96.8
Knowledge & culture industry	37,192	16.7	40,825	18.2	41,827	19.0
Innovative growth SMEs	26,634	12.0	49,000	21.8	54,852	24.9
Export SMEs	27,734	12.5	27,200	12.1	31,467	14.3
Young startups	15,250	6.9	16,261	7.2	16,683	7.6
R&D guarantees	48,348	21.7	53,138	23.6	55,456	25.2
P-CBO guarantee	2,609	1.2	1,562	0.7	1,558	0.7
New guarantees	52,859	-	52,465	-	48,480	-
Guarantee balance	218,506	-	224,426	-	221,122	-

* Duplication included

2. Technology Guarantee

✔ Guarantees for innovative tech enterprises

In 2019, KOTEC provided KRW 21.3037 billion (96.8% of the total guarantee provision) for innovative tech SMEs, supporting innovative growth and technology competitiveness reinforcement for SMEs and startups.

✔ Guarantees for Young Startups

In order to boost the national economy through youth job creation and expansion of the business establishment culture, KOTEC made concerted efforts, such as preferential treatment in the guarantee limit, guarantee ratio, and guarantee fee. As a result, the provided amounts increased to KRW 1.5250 trillion in 2017, KRW 1.6261 trillion in 2018, and KRW 1.6683 trillion in 2019 (7.6% of the total guarantee provision).

➔ Preparation of innovative growth standards and implementation of support system to create future growth engines

In an effort to preemptively respond to rapid changes in SME business structures, following the Fourth Industrial Revolution, etc., KOTEC played a leading role in building the government's innovative growth industry classification system and in implementing an innovative growth industry support system.

The innovative growth industry support system reset the key support targets and reestablished the support system based on 'Common Innovative Growth Standards,' composed of nine themes, 46 categories, and 300 items, with consideration for technology, marketability, feasibility, and publicness. KOTEC has been continuously restructuring this system in order to help SMEs improve their competitiveness and achieve stable growth amid rapid changes in the industrial structure.

Additionally, by preparing the 'Principles in Applying Common Innovative Growth Standards,' KOTEC can accurately and consistently judge whether an enterprise's representative product, service, or technology falls in line with innovative growth industries in order to issue provision of support.

Status of Guarantee Provision for Innovative Growth Industry

(Unit: KRW trillion, %)

Category	2017	2018	2019
Guarantee provision for innovative growth industry	2.7	4.9	5.5
Ratio to total guarantee amount offered	12.0	21.8	24.9

Creating Jobs and Encouraging Entrepreneurship via Technology Financing

➔ Operating a Job Creation Support Program Customized for an Enterprise's Employment Environment

While contributing to 'quantitative expansion' and, at the same time, 'qualitative improvement' of job creation, KOTEC eased the requirements for selection as a job-creating enterprise in order to expand the number of preferred recipients and has been operating the 'Good-Job Guarantee' program as a customized job-creating enterprise guarantee support program for employment environments.

The 'Good-Job Guarantee' program provides preferences for three types of enterprises: the 'SharingJob' type for enterprises that hire individuals with employment vulnerabilities (irregular workers, women dealing with career interruptions, disabled individuals, etc.); the 'Jumping-Job' type for enterprises that expand job creation; and the 'Best-Job' type for enterprises that maintain 30 or more regular employees, among job-creating enterprises. By easing the requirements to apply under the 'Sharing-Job' type for local SMEs, KOTEC expanded its support for regions facing employment crises, focusing on facilitating the creation of 'more and better jobs.'

Status of New Good-Job Guarantee Provision

(Unit: KRW 100 million, %)

Category	2017	2018	2019
Total new guarantee provided	52,859	52,465	48,480
New Good-Job Guarantees provided	2,383	8,935	10,218
Ratio of total new guarantee	4.5	17.0	21.1

➔ Restructuring of startup guarantee system and expansion of support

KOTEC categorizes tech-startups into four levels. For new startups with lower credit ratings, it provides more guarantee fee exemptions and preferred guarantee rates, improving the startup support system by stages.

Status of Preferential Treatment for Startups by Stages in Years of Operation

Category	Pre-startup	Early stage	Middle stage	Late stage	
Operation years	Before establishment	~1	~3	4~5	6~7
Guarantee ratio	100%	100%	95%	95%	90%
Reduction in guarantee fee rate	0.7%p ↓	0.4%p ↓	0.3%p ↓	0.3%p ↓	0.3%p ↓

In addition, depending on the startup type, KOTEC has adopted the 'Customized Startup Growth Guarantee' program, in which the four startup fostering areas of knowledge and culture startups, science and engineering challenger startups, expert startups in root industries, and advanced technology and growth-related startups are selected and provided with concentrated support. Through this program, new guarantees worth KRW 2.5021 trillion were provided for 10,008 startups.

Furthermore, through a variety of startup guarantee support programs, KOTEC provided new guarantees amounting to KRW 3.3418 trillion (68.9% of the total amount of KRW 4.8480 trillion for new guarantees) for 12,863 startups, expanding support for technology startups through technology appraisal based on future growth potential and, accordingly, contributing to vitalization of the business establishment culture.

2. Technology Guarantee

➔ Strengthening the Excellent Technology Commercialization Support (Tech Valley Guarantee Program) Program to Promote Business Start-up for Universities and Research Institutes

With an aim to create dynamic power for economic growth and revive 'Made in Korea' successes by promoting business Start-up for high-level technical professionals, KOTEC launched 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 a U-Tech Valley agreement with five universities (Seoul National University, Yonsei University, Korea University, KAIST, and Pohang University of Science and Technology) for the first time in the financial sector, KOTEC additionally entered into an agreement with 61 universities leading startup promotion. In addition, it signed an R-Tech Valley agreement with 17 government-funded research institutes. As of the end of 2019, KOTEC had provided Tech Valley guarantees amounting to KRW 460.2 billion for 257 enterprises.

In the future, in addition to a maximum KRW 3 billion worth of financial support for excellent technology startups through the Tech Valley program, KOTEC will continue to offer non-financial support including recommendations for guarantee-linked investment, consulting for marketing strategies, and supporting IPOs through special listing system for technology.

➔ Formation of Safety Net for Startup to Promote Challenging Business Establishment

To this point, in an effort to ease the burden of business failure and expand the challenging business establishment culture, KOTEC has abolished the 'Joint Guarantee System' and expanded the exemption of joint guarantor to the whole financial sector through an agreement with 17 commercial banks. Thanks to such measures, the average number of joint guarantor in new guarantees has continuously decreased (0.12 in 2018 → 0.01 in 2019).

Additionally, in 2019, a joint owner of an unincorporated enterprise was added to the exemption cases of a joint guarantor, while joint liability in existing guarantees will be exempted gradually by 2022. Furthermore, KOTEC improved cases of unreasonable discrimination against debtors whose legal liability for performance have terminated or were completed, along with debtors with invalidated liabilities for which collection is impossible, and KOTEC also provided support for enterprises that have completed reimbursement of indemnity debts, offering guarantees under the same conditions as for normal enterprises. By doing so, it alleviated the burden of business failure and contributed to fostering a challenging business establishment culture.

Average Number of Joint Guarantors in New Guarantees

(Unit: number of persons)

2015	2016	2017	2018	2019
0.64	0.53	0.48	0.12	0.01

Strengthening Preemptive Support for SMEs in Advanced Industries to Lead the 4th Industrial Revolution

➔ Expanding Specialized Programs for the 4th Industrial Revolution and Strengthening Support for Future Growth Engine Sectors

As the growth rate of the existing industries slows down due to the lingering economic slowdown, low fertility rate, and aging population, the 4th Industrial Revolution and its drastic changes to the industrial structure is on the horizon. With this backdrop, KOTEC has introduced the "Industry 4.0 FIRST (Fourth Industrial Revolution and Significant Transformation) Guarantee" and "4.0 Smart Factory Guarantee" programs, which support industrial segments for the 4th Industrial Revolution, to provide preemptive support for new growth sectors which will become the major industries in the future.

KOTEC's 4th Industrial Revolution support program identifies and fosters SMEs commercializing advanced technologies and offers support for the establishment of smart factories, aiming to help SMEs assume an advantageous position for the 4th Industrial Revolution-related technologies and grow as Small Giants.

Performance of the 4th Industrial Revolution Support Program

(Unit: number of enterprises, KRW 100 million)

Introduced system	Purpose	Category	
		Number of enterprises	Amount
Industry 4.0 FIRST Guarantee	Enhancing competitiveness of high-tech industries that will lead the 4th Industrial Revolution	2,746	9,575
4.0 Smart Factory Guarantee	Enhancing competitiveness of the Korean manufacturing industry by promoting smart factories	196	1,419

➔ Strengthening support capacity by expanding programs with external partners for enterprises in the Fourth Industrial Revolution sectors

With the goal of providing concentrated support for technology SMEs to lead the 4th Industrial Revolution, KOTEC promoted guarantees through special purpose contribution agreements with financial institutions and provided guarantees amounting to KRW 178.9 billion for 1,047 enterprises in 2019.

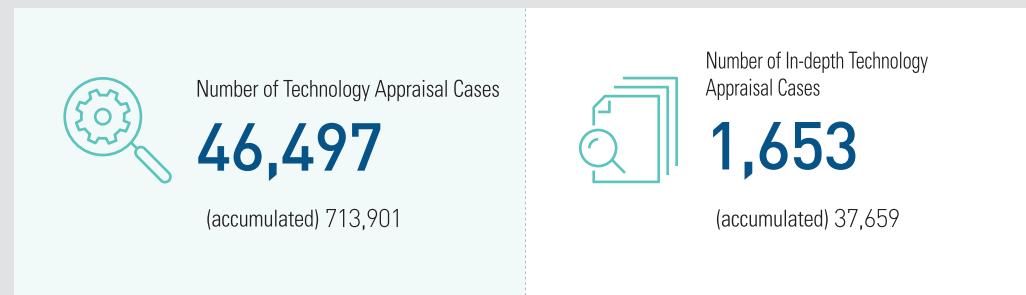
In addition, while activating the smart factory distribution project, KOTEC concluded an agreement with the Korea Land & Housing Corporation (special purpose contribution), Gyeongsangnam-do (secondary compensation for interest), Woori Bank, Industrial Bank of Korea, Nonghyup, and Kyongnam Bank (guarantee fee support), expanding its agreements with external institutions.

3. Technology Appraisal

Organization and Staff for Technology Appraisal



Technology Appraisal Performance



Provision of Guarantees for Intellectual Property (IP) and R&D



Appraisals for Special Listing of Technology Companies on KOSDAQ



Overview

→ Concept of Technology Appraisal

Technology appraisal refers to an in-depth assessment of the technology competency, marketability and business feasibility of intangible technologies or related projects, with the focus on their potential values. The evaluation results are expressed in monetary value, grade, score, and opinions, etc.

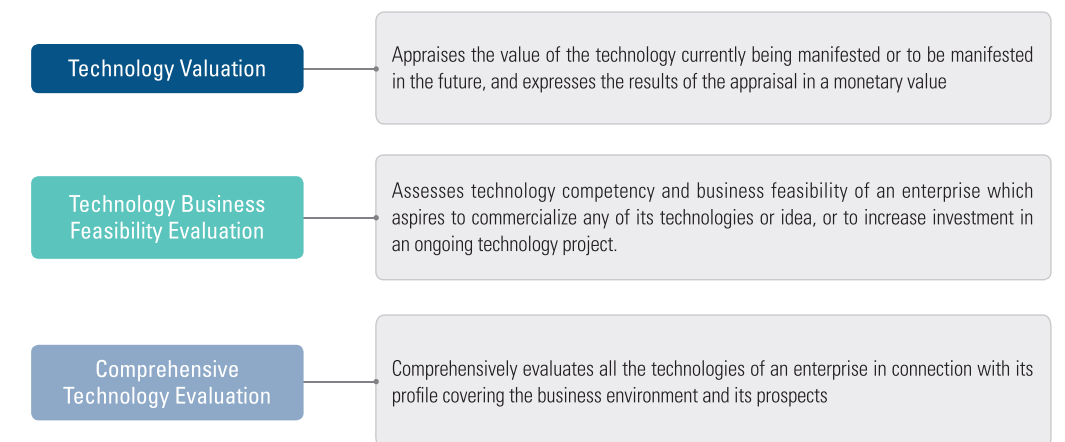
Scope of Technology Appraisal



→ Types of Technology Appraisal

Technology appraisals are categorized into technology valuation, technology business feasibility evaluation, and comprehensive technology evaluation, in accordance with the purpose of each appraisal case.

Types of Technology Appraisal



3. Technology Appraisal

Operation of the Technology Appraisal Business

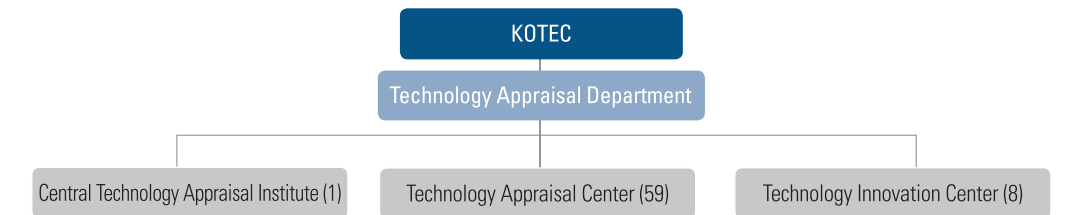
➔ Progress

Since first introducing its technology appraisal services in March 1997, for 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 the KIBO Technology Rating System (KTRS), and being designated as a venture certification and Inno-Biz evaluation institution and specialized SME technology promotion institution.

- 1997** Mar. Opened technology appraisal center
- May. Designated as an institution for the appraisal of the technology competency and business feasibility of patented technologies (Invention Promotion Act)
- Oct. Designated as an appraisal institution for the valuation of investment in kind through transfer of IPs by Venture Businesses (Act on the Special Measures for the Promotion of Venture Businesses)
- 1998** Aug. Designated as an institution for the certification of Venture Businesses (Act on the Special Measures for the Promotion of Venture Businesses)
- Nov. Designated as a technology appraisal institution for the valuation of the intellectual properties invested in-kind by foreigners (Foreign Investment Promotion Act)
- 1999** Feb. Implementation of technology appraisal guarantee system
- 2001** Apr. Designated as an institution dedicated for the technology appraisal and transfer of technologies for commercialization (Technology Transfer Promotion Act)
- Jul. Designated as a technology appraisal agency for the evaluation of Venture Businesses seeking to be listed on the KOSDAQ (Korea Securities and Dealers Association)
- Aug. Designated as a technology appraisal agency for the certification of INNO-BIZ enterprises (technology-innovative SME) (Small and Medium Business Association)
- 2004** Sep. Launched a technology appraisal certification system (for internal use)
- 2005** Jul. Implemented the new KIBO (KOTEC) Technology Rating System (KTRS)
- 2007** Apr. KTRS acquired domestic BM patent
- 2008** Apr. Applied a patent registration for the international patent (PCT) for the technology appraisal system (KTRS) in other countries (Japan, China and Singapore)
- 2009** Oct. Acquired a Korean patent for a technology appraisal model (KTRS-Startup) which is used for assessment of startups
- 2010** Apr. Designated as the appraisal agency for green certification by the government
- Oct. KTRS Feedback System acquired domestic patent (two cases)
- 2011** Jan. Implemented the advanced version of KTRS (KTRS-V2.0)
- 2012** Nov. Developed a Green Technology Rating Model (GTRS) for improved assessment of Green Technology and related industries
- 2013** Dec. Improved the KTRS models and redesigned system processes
- 2014** Jun. Designated as one of the Tech Credit Bureaus (TCB)
- Jul. Developed the Pre-Startup Appraisal Model
- 2015** Jul. Applied for BM patents (2 cases) on technology appraisal methods and know-how
- Dec. Developed the Technology Appraisal Model for Investment
- 2016** Jan. Implemented "Technology Credit Appraiser" certificate system for the public
- Aug. Joined the Climate Technology Center and Network (CTCN)
- 2017** Sep. Launched the online Patent Rating System (KPAS-I)
- Nov. Hosted an International Symposium on the 20th Anniversary of its technology appraisal business
- 2018** Dec. Built online Patent Appraisal System (KPAS- II)
- 2019** Feb. Launched IP Fast Guarantee program based on KPAS- II
- Sep. Designated as a specialized SME technology promotion institution (Act on the Promotion of Technology Innovation of Small and Medium Enterprises)

Technology appraisal organization and human resources

In response to the growing demand for technology appraisals and to improve work efficiency, as of the end of 2019, KOTEC had established one central technology appraisal institute, eight technology innovation centers, and 59 technology appraisal centers, securing specialized technology appraisal and finance networks.



Organization	Roles	Key Responsibilities
Central Technology Appraisal Institute	Key appraisal institution to perform highly sophisticated appraisals	<ul style="list-style-type: none"> Highly sophisticated in-depth technology appraisal Marketing for technology appraisals Quality management of technology appraisals
Technology Innovation Center	Specialized organization to support technology transfer and commercialization	<ul style="list-style-type: none"> Support for technology transactions and M&A businesses Technology appraisal-linked guarantees (IP and R&D guarantees, etc.) In-depth technology appraisal (R&BD planning and consulting, etc.)
Technology Appraisal Center	Conduct standardized technology appraisals	<ul style="list-style-type: none"> Technology appraisal guarantee (IP guarantee, R&D guarantee, etc.) Technology appraisal certification, feasibility assessments for technology business, such as open voucher program, etc. Evaluation for certifying venture businesses and Inno-Biz enterprises, etc.

Meanwhile, 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.

(Unit: number of persons)

	2014	2015	2016	2017	2018	2019
Total Employees	1,102	1,126	1,156	1,211	1,304	1,362
Dedicated Technology appraisal experts	552	592	581	605	662	688
Doctoral Degree holders (or equivalent)	154	168	190	215	239	257

※ Dedicated technology appraisal experts: Doctoral Degree holders or equivalent, professional-class employees, members of the Technology Appraisal Department / Central Technology Appraisal Institute / Technology Appraisal Team, or those certified for Technology Appraisal Level 3 or above

To overcome the limitations of in-house human resources and to enhance appraisal expertise, KOTEC established a pool of external advisors from the industry, academia, and research fields to perform swift and reliable technology appraisals.

(Unit: number of persons)

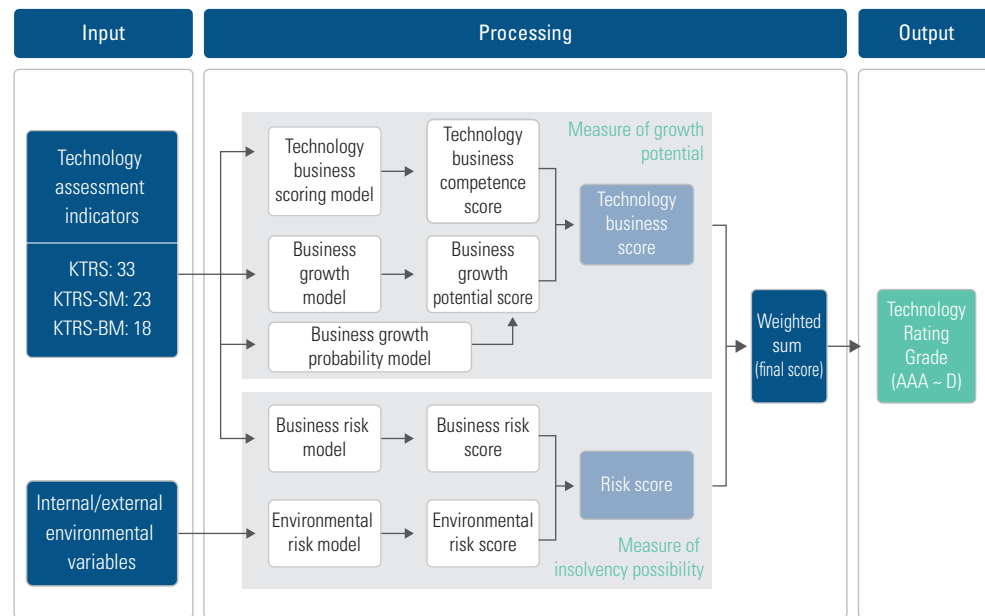
Mechanical Eng.	ICT	Electrical & Electronic Eng.	Material Eng.	Chemical Eng.	Textile Eng.	BIO	Environment	Accounting	Patent law	Cultural contents	Others	Total
159	118	119	79	72	13	94	33	151	52	30	60	980

3. Technology Appraisal

→ Technology appraisal system

KOTEC has developed and has been operating its proprietary technology appraisal system, the KIBO Technology Rating System (KTRS), to assess and evaluate technological competency, business feasibility, and marketability of intangible technologies or knowledge, which are difficult to evaluate with conventional credit rating systems whose focus is more on the financial records of firms.

KTRS is an appraisal system optimized for technology finance that simultaneously considers the future growth potential of a technology along with the risk of a technology business. Since its fullscale introduction in July 2005, through continuous verifications and enhancements, KTRS has shown stable prediction results in terms of growth potential and default rates.

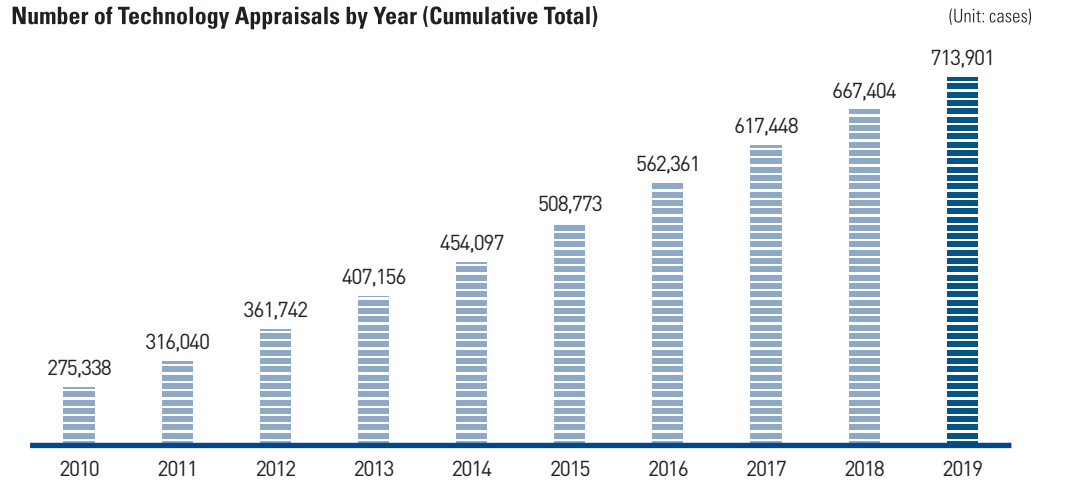


In addition, depending on the purpose and use of an appraisal, KOTEC classifies and operates different models in terms of KTRS series and policy-purpose models (13 categories and 65 models, in total), making it possible to respond to diverse technology finance needs.

→ Technology appraisal performance

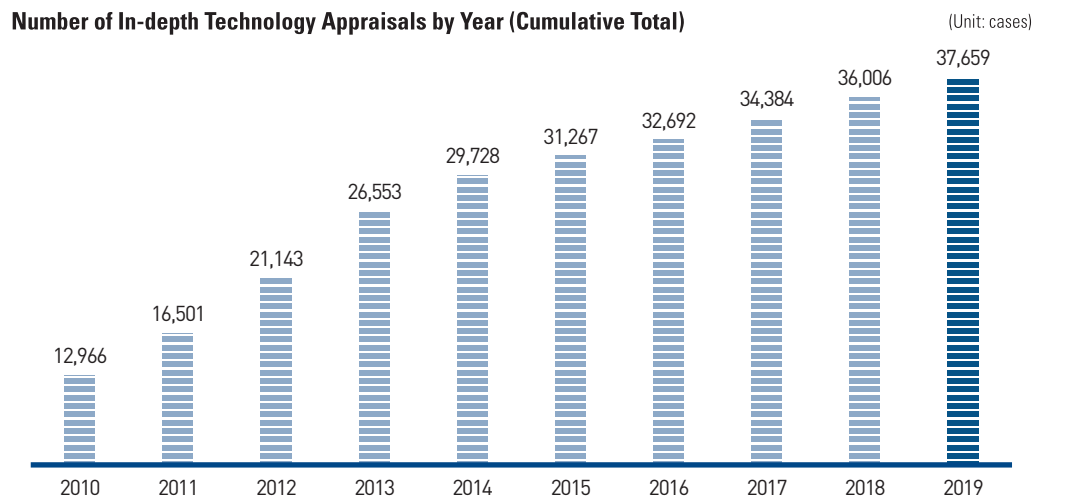
Since the launch of its technology appraisal system in March 1997, KOTEC has completed a total of 713,901 technology appraisal cases as of the end of 2019, securing its status as the leading technology appraisal institution in Korea.

Number of Technology Appraisals by Year (Cumulative Total)



In particular, among technology appraisals, in-depth technology appraisals which are highly difficult compared to general appraisals and require extensive expertise and objectivity, such as Technology Appraisal of the 'Government and Public Sector' and 'Technology Appraisal of Private Sector for Provision to Private Institutions', are contributing greatly to the expansion of the domestic technology appraisal market and the revitalization of technology financing.

Number of In-depth Technology Appraisals by Year (Cumulative Total)



3. Technology Appraisal

Major Progress and Achievements of Technology Appraisal in 2019

→ Performing as a frontier for the intellectual property (IP) financing in Korea

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 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.

As the IP-based Guarantee System involves technology valuation process on top of the general technology appraisal procedure, it requires much more sophisticated expertise as well as higher costs for conducting evaluation. To resolve such problems, KOTEC concluded joint-support agreements with related institutions, such as the Korean Intellectual Property Office (KIPO) and commercial banks, contributing to reductions in expenses for excellent technology enterprises' financial arrangements. Additionally, by setting an aggressive goal for IP-guarantee support, it significantly improved the performance of IP financial support.

Technology Valuation Process



* Differentiated features of the Technology Valuation for in-depth appraisal

Especially, KOTEC enhanced the previously difficult and complicated IP-appraisal procedures by introducing an AI-based patent-appraisal system (KPAS) and expanded IP finance drastically by launching new programs, such as 'IP Grade Guarantee' and 'IP Fast Guarantee.' KOTEC also divided the technology valuation reports into four types to provide more options for users. The company's market-oriented approach to IP evaluation has further contributed to advances in IP financing in Korea.

IP-Guarantee Provision Performance

(Unit: cases, KRW 100 million)

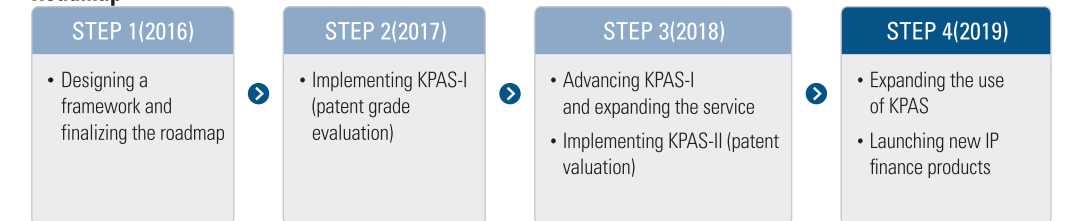
Category	2016		2017		2018		2019	
	Cases	Amount	Cases	Amount	Cases	Amount	Cases	Amount
Category	3,037	6,141	3,874	7,992	4,514	9,363	6,533	13,225
IP value	2,323	5,278	2,884	6,681	3,344	7,774	3,985	8,883
IP grade*	-	-	-	-	-	-	977	2,366
IP acquisition	714	863	990	1,311	1,170	1,589	1,571	1,975

* IP Grade Guarantee: Newly introduced in February 2019

→ IP Finance Innovation by Developing AI-based Patent Appraisal System (KPAS)

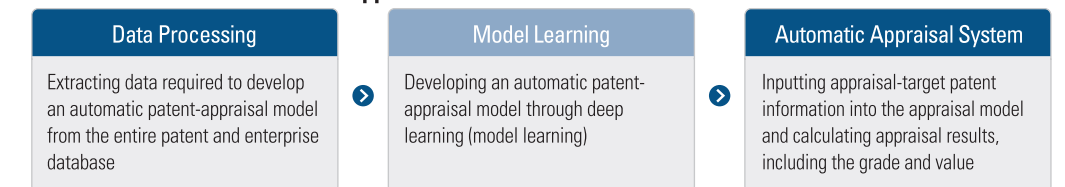
In 2016, KOTEC established a roadmap for developing an AI-based patent-appraisal system (KPAS) in order to improve IP-appraisal procedures requiring high-level expertise and high costs and, in September 2017, KOTEC implemented a patent-grading system (KPAS-I) to automatically evaluate patent grades with AI technology.

Roadmap



KOTEC provides KPAS-service to the public for free, allowing citizens to calculate the grades for their own patents by themselves. It launched the KPAS-I based 'IP Grade Guarantee' in February 2019 and has since provided new IP grade guarantees worth KRW 230.1 billion for enterprises holding excellent patents (as of the end of 2019).

Flow Chart for Automatic Patent Appraisal



Furthermore, for the first time, in December 2018, KOTEC built a patent-valuation system (KPAS- II) capable of automatically calculating the value of a patent through deep learning of the unique characteristics of patents and appraisal patterns used by experts. As a result, the IP appraisal time, which used to take up to three weeks or even longer, was significantly reduced. It launched 'IP Fast Guarantee' based on KPAS-II in February 2019 and has now provided KRW 46.3 billion in IP guarantees. By lowering IP appraisal fees, which were quite expensive in the past, to under KRW 1 million, the burden felt by clients has been greatly reduced.

KOTEC, by introducing and utilizing the patent-appraisal system (KPAS), improved the efficiency of the IP-financing support system, for which difficulty and complexity had been issues for some time. By doing so, KOTEC drastically expanded IP financing (KRW 290.9 billion in 2018 → KRW 541.3 billion in 2019, representing an 86% year-on-year increase). As a result, as of the end of 2019, KOTEC's accumulated IP-guarantee support amount, dating back to when it first developed and offered IP finance in the country, surpassed KRW 2 trillion. Additionally, in 2019, KOTEC provided 74.8% of domestic IP financing, proving its importance in leading the domestic IP-finance market.

3. Technology Appraisal

➔ 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 lifecycle of the projects in order to facilitate technology development and commercialization.

Guarantee Support System for Entire Lifecycle of R&D

Target fund	R&D fund Funds directly or indirectly required to achieve R&D project goals	Operation or facility fund necessary for the commercialization of R&D products
	Development completion fund Funds needed to improve the level of development completion for design and prototyping	
Appraisal method	Business feasibility and economic analysis	Technology business feasibility evaluation
Appraisal model	R&D Appraisal Model	KTRS or KTRS-SM (Others not applicable)

In 2019, KOTEC provided a record high of KRW 5.5 trillion under the Comprehensive R&D Support System, greatly contributing to the advancement in the technological competitiveness of SMEs.

Provided R&D Guarantees

(Unit: cases, KRW 100 million)

Category	2016		2017		2018		2019	
	Cases	Amount	Cases	Amount	Cases	Amount	Cases	Amount
Provision of R&D Guarantee	13,860	41,937	17,493	48,348	20,073	53,138	22,330	55,456
Development stage	6,835	10,651	9,171	13,794	9,955	14,364	10,558	14,543
Pre-commercialization stage	749	1,180	820	1,214	802	1,102	662	902
Commercialization stage	6,276	30,106	7,502	33,341	9,316	37,671	11,110	40,010

The scope of KOTEC's R&D finance support, whose eligibility had been limited to technologies developed in house, was expanded to cover the acquisition of externally-developed technologies (open R&D) in 2016. This measure helped KOTEC contribute to facilitating the commercialization of R&D achievements (e.g. Intellectual Properties) and earned KOTEC the "Intellectual Property Commissioner (Prime Minister) Award."

Open R&D Support System



➔ Leading efforts to expand the technology appraisal market

KOTEC leads various initiatives as the leader in the technology appraisal market in order to expand the scope of technology appraisal and to consistently create demand thereof.

KOTEC implemented the Preferential IPO Program for Tech SMEs based on the MOU with Korea Exchange in order to facilitate a technology-oriented venture capital market. The program enables tech SMEs to go public on KOSDAQ or KONEX based on their technology appraisal results even if they were not able to meet financial requirements.

Performance of Preferential IPO for Tech SMEs

(Unit: number of enterprises)

Category	Contents					
Requirements	Companies that receive technology rating grades of BBB or higher from 2 of dedicated appraisal institutions and at least one rating should be A or higher					
Performance	Category	2015	2016	2017	2018	2019
	Appraised SMEs	12	12	8	4	16
	Listed SMEs	6	6	6	0	5

KOTEC developed and distributed the "Technology Appraisal Model for Investment", which was designed from the perspective of growth potential and investment recoverability, as assessment indicators suitable for selecting investment targets, aiming at vitalizing investment into high-tech companies such as private TCB and VC. Based on this, it conducted the technology evaluation and certification for investment in 2016. In 2018, it developed the guidelines for identifying social venture companies and the social venture appraisal model and distributed it among relevant social venture support institutions. In addition, using its expertise in technology evaluation, KOTEC has been participating in specialized technology evaluations for IP and R&D commercialization projects in the public sector, such as the R&D Planning Support Project (Ministry of SMEs and Startups), Research Achievement Commercialization Support Project (Ministry of Science and ICT), Patent Technology Appraisal Support Project (Korean Intellectual Property Office), and Software Technology Valuation Support Project (Ministry of Science and ICT).

Furthermore, KOTEC operated online and offline education programs to cultivate technology finance specialists in an effort to support the government initiative, "TCB Loan Development Road map". The education programs focused on practical knowledge and training, particularly on the technology trends and market characteristics of each industry, to improve the expertise of the technology financing staff of commercial banks and venture capitals, and to provided them with networking opportunities to exchange relevant information.

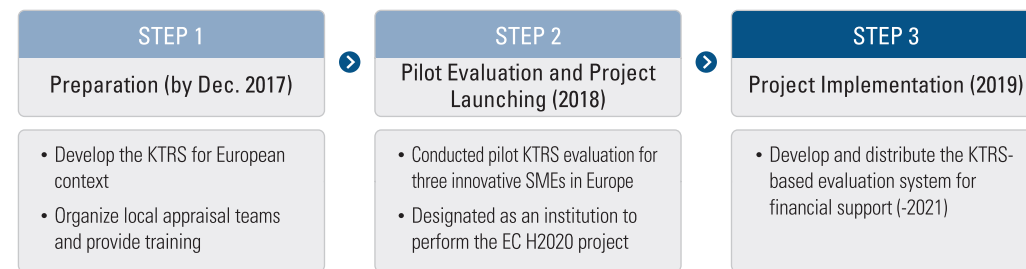
In 2016, KOTEC launched the "Technology Credit Appraiser" certification test to educate technology finance specialists. Through this program, 3,419 technology appraisers in the private sector (Level 1: 39, Level 2: 638 and Level 3: 2,742) were certified by the end of 2019. This effort was praised by the government, and KOTEC was awarded with the President's Award on the commemoration of Finance Day of 2016.

3. Technology Appraisal

→ Globalization of KTRS to enhance KOTEC's international recognition and support for SMEs' overseas expansion

KOTEC has raised the awareness and status of the technology evaluation system through international knowledge sharing and overseas transfer of the KIBO Technology Rating System (KTRS). In particular, in 2017, it concluded a business agreement with the European Investment Bank (EIB) for the exchange of technology evaluation and set up a plan for applying the KTRS for the first time in Europe. In 2018, KOTEC conducted a pilot evaluation of the EIB financial support project. In addition, it was designated as an institution to perform the EC H2020 project for the first time among Korean financial institutions and finalized a specific roadmap to apply the KTRS to Europe tech SME support policies, showing concrete achievements in globalization of the KTRS.

KTRS Deployment Road map in Europe



* KOTEC's technology rating system was introduced as a best practice in EU IPF Report (Nov. 2012) and in EIB Report (Mar. 2018)

Furthermore, in developing countries, KOTEC has endeavored to distribute its innovative technology financing platform. In particular, in Thailand, Vietnam, and Peru, KOTEC shared technology evaluation systems reflecting the KTRS and establish dedicated technology evaluation institutions.

Construction of Global Demand Base for KTRS

Category	Partner	Details
Capacity Building	State Agency for Technology Innovation (SATI) of Vietnam	User training for Establishment of Vietnam Technology Rating System (VTRS) (Nov. 2016)
Localization Support	Thai Credit Guarantee Corporation (TCG)	Completion of Thai Technology Rating System (TTRS) (May. 2017)
Financial System Export	Fondo de Garantia para Prestamos a la Pequena Industria (FOGAPI) of Peru	Completion of Peru Technology Rating System (PTRS) (Apr. 2018)

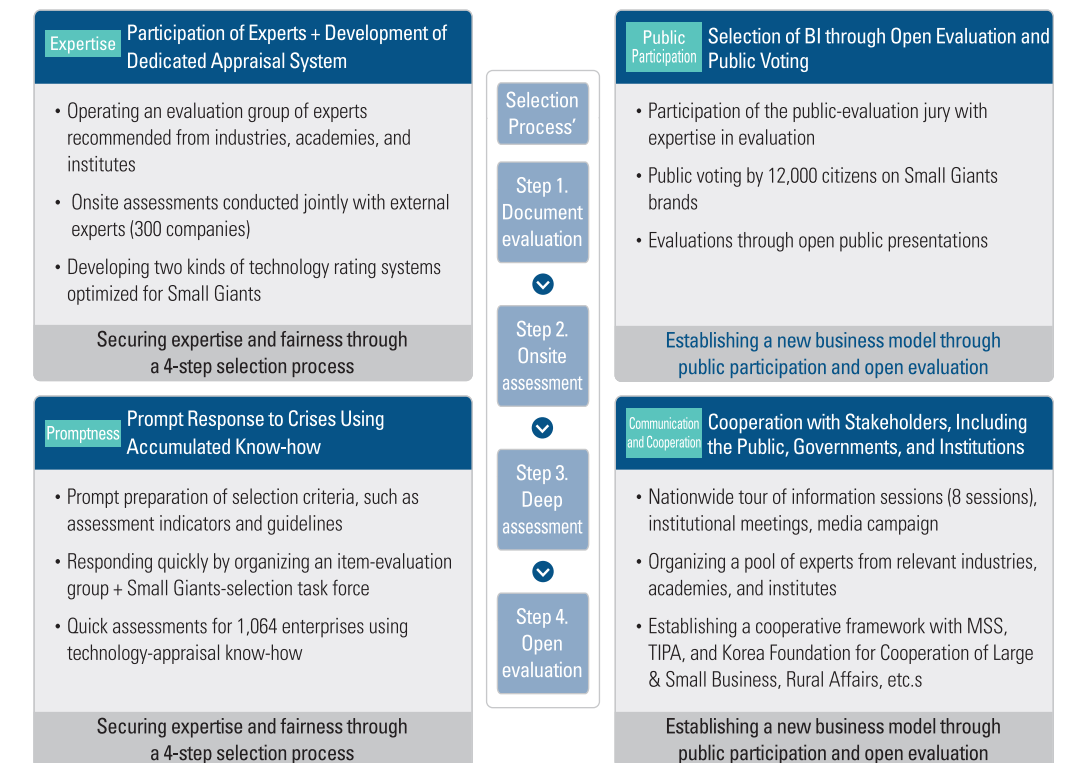
Meanwhile, KOTEC prepared international network with global partners through mutual agreements on guarantee support programs for supporting globalization of SMEs experiencing difficulties in overseas expansion due to lack of information and funding. With global collaboration network, sharing organization and personnel among the domestic bases (National IT Industry Promotion Agency, Foundation of Agri. Tech. Commercialization & Transfer) and overseas bases (USA, China, Europe), KOTEC has tried to identify SMEs ready for global expansion and provide customized services for various types of globalization, such as support for localization, marketing and global technology transfer.

→ Designated as a Specialized Technology-Promotion Institution and Dedicated Management Institution for Small Giants in Materials, Components, and Equipment Industries

In September 2019, to expand the scope of SME support programs from the financial sector to non-financial sectors, KOTEC was designated as a 'Specialized Technology Promotion Institution for SMEs' that comprehensively supports R&D businesses, under the 'Act on the Promotion of Technology Innovation for Small and Medium Enterprises'.

Based on the legal basis, as a dedicated management institution for Small Giants to improve the competitiveness of the materials, components, and equipment industries, KOTEC led the 'Small Giants 100 Selection Project' in 2019. Despite the critical situation arising from export-restrictions by Japan, KOTEC exhibited its response capabilities based on its excellent appraisal infrastructure. As a result, it identified 55 representative Small Giants domestically and established a new business model with the participation of experts and citizens, as well as partner institutions.

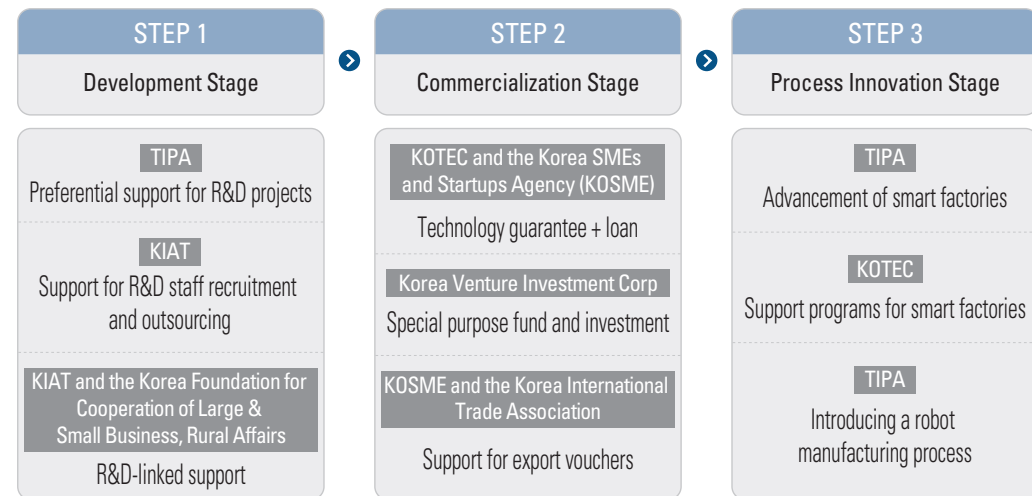
Process of Selecting 100 Small Giants in Materials, Components, and Equipment Industries



In addition, by preparing an integrated support system based on cooperation among institutions, in which dispersed support systems by institutions under the Ministry of SMEs and Startups are packaged into a single system, KOTEC has contributed greatly to enhancing the competitiveness of the materials, components, and equipment industries.

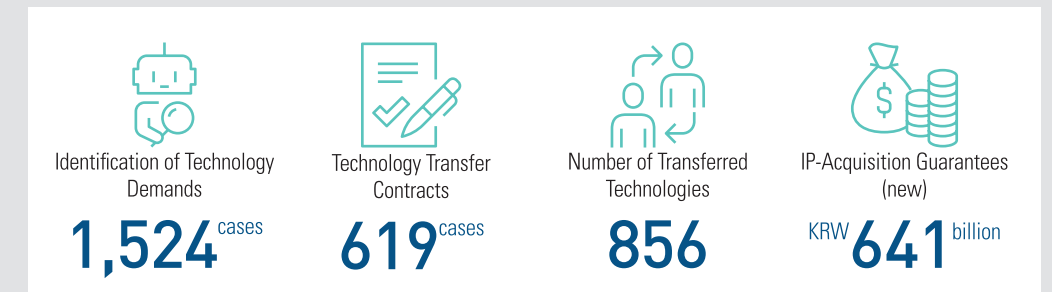
Support System for 100 Small Giants in Materials, Components, and Equipment Industries

KOTEC Preparing a comprehensive 1:1 support system for each stage of SME's growth with KOTEC's technology-innovation support group (dedicated PM) and packaging institutions' different support systems into a single system

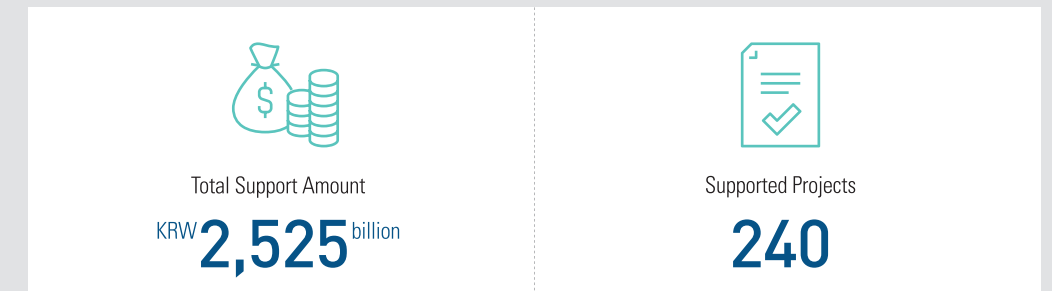


4. Technology Transfer and Protection

Performance of Technology Transfer and IP-Acquisition Guarantee



Tech-Bridge-based R&D Support for Commercialization



Performance of Technology Protection



Status of Patent Mutual Aid Program



4. Technology Transfer and Protection

Technology Transfer

Overview

To enable SMEs to successfully acquire and commercialize technologies needed, KOTEC supports open innovation in SMES using public technologies (technologies held by public research institutes and universities) through technology exploration*, technology transfer, and financing for commercialization.

* Utilizing the technology asset database of universities and research institutes showing excellent technology-development capabilities

Operation Status

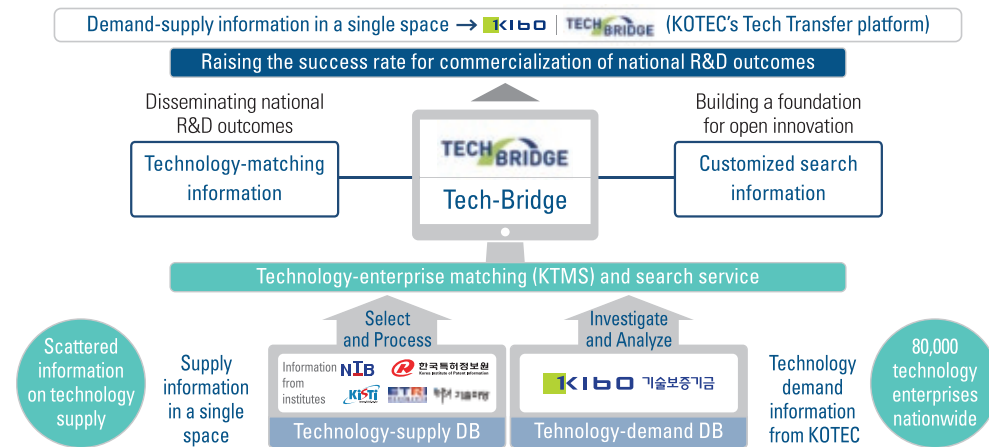
Business Progress

Date	Details
Apr. 2001.	Designated as a technology trading agency under the 'Technology Transfer and Commercialization Promotion Act'
Jan. 2014.	Established Technology Innovation Centers (Seoul and Daejeon) Started full-scale technology-transfer relay service
Sep. 2014.	Opened Tech-Bridge and implemented technology-matching system (KTMS)
Jul. 2015.	Established Daegu and Busan Technology Innovation Centers
Jul. 2016.	Established Gyeonggi and Gwangju Technology Innovation Centers
Jan. 2019.	Established Seoul-Seobu and Incheon Technology Innovation Centers

Infrastructure for Technology Transfer

KOTEC implemented Tech-Bridge, an online technology transfer platform, which gathers technology demand and supply information in a single space and provides customized technology-transfer information for enterprises. Since its implementation, KOTEC has been operating technology innovation centers in complete charge of this platform. Every year, the platform identifies 380,000 technologies supplied by public research institutes and more than 1,500 cases of technology demands, providing this information to various market players, such as enterprises, research institutes, and technology trading agencies. Additionally, through the KIBO Technology-Matching System (KTMS) that automatically matches technology demands from enterprises and supplied technologies to recommend relevant technologies, KOTEC has advanced its technology transfer service.

Infrastructure for Technology Transfer



Technology Transfer and IP-Acquisition Guarantee Performance

(Unit: cases, KRW 100 million)

Category	2014	2015	2016	2017	2018	2019	Sum
Identified technologies in-demand	1,299	1,411	1,415	1,490	1,559	1,524	8,698
Technology-transfer contracts	166	262	534	528	553	619	2,662
Transferred technologies	254	456	715	725	737	856	3,743
IP-acquisition guarantees (new)	222	247	414	608	593	641	2,725

Progress and Outcome of Major Technology Transfer Projects in 2019

Strengthening Support for Technology Transfer and Commercialization by Establishing a Support System Linked with Government-subsidized R&D

In response to export-restrictions by Japanese government, KOTEC promoted the establishment of government R&D programs exempted from preliminary feasibility assessment, and the plan was passed in the cabinet meeting, as its importance and urgency were recognized.

As a result, in order to contribute to fostering outstanding enterprises in materials, components, and equipment industries, and for early commercialization of key national technologies, KOTEC will provide KRW 252.5 billion in funding for technology commercialization R&D for 240 projects over the next seven years.

Technology Protection

Overview

Purpose

Eradicate technology theft and spread the culture of fair technology trading by systematically protecting technologies held by SMEs.

Details

KOTEC established a comprehensive technology-protection support system that effectively protects technologies held by SMEs by providing technology trust management, technology bailment, and technology data transaction record registration services.



4. Technology Transfer and Protection

Comprehensive SME Technology-Protection Support System

Technology trust management	Technology data transaction record registration	Technology bailment
Protection of patented technologies	Protection of unpatented trade secrets	
	Protection of technology data exposed during a trade process, such as bidding and contests	Protection of technology know-how and management information
Implemented in April 2019	Implemented in January 2019	Implemented in January 2019

Service	Description
Technology trust	System where KOTEC receives trust of technology, manages and protects the technology, and relays technology transfer to ensure SMEs' technologies are transferred at a fair price
Technology-data transaction-record registration (Evidence Guard TTRS*)	In this system, KOTEC, a reliable third party, stores a variety of unofficial technology theft evidence information produced during the process of technology trading, such as business proposals, bidding, and contests, in a systematic and safe way that allows for possible future use in legal disputes
Technology bailment	In this system, in preparation for an enterprise's key technology or management secrets being exposed, these secrets are stored by institutions with public confidence and, in the case of technology leakage, it can be verified that a certain enterprise is the holder of that technology

* TTRS(Technology data Transaction record Registration System)

→ Status of Technology-Protection Services

Business Progress

Date	Details
May. 2018.	Delivered guidelines for operating technology-trust management program
Oct. 2018.	Designation approved as a technology-trust management institution, under the 'Technology Transfer and Commercialization Promotion Act'
Jan. 2019.	Delivered guidelines for SME technology-protection program Notified of approval in designation as a technology-data bailment institution Opened Tech Safe system* and implemented full-scale technology-protection program
Apr. 2019.	Implemented full-scale technology-trust management program
Feb. 2020.	Added technology trust and technology protection to the 'Korea Technology Credit Guarantee Fund Act'

* Tech Safe is a compound term for 'technology' and 'safe,' meaning an online technology safe system, including a 'technology-data transaction-record registration system' and 'technologybailment system'

Performance of Technology-Protection Service

(Unit: cases)

Category	Annual goal for 2019	Performance
Technology trust	200	219
Technology bailment	1,000	1,037
TTRS	200	272

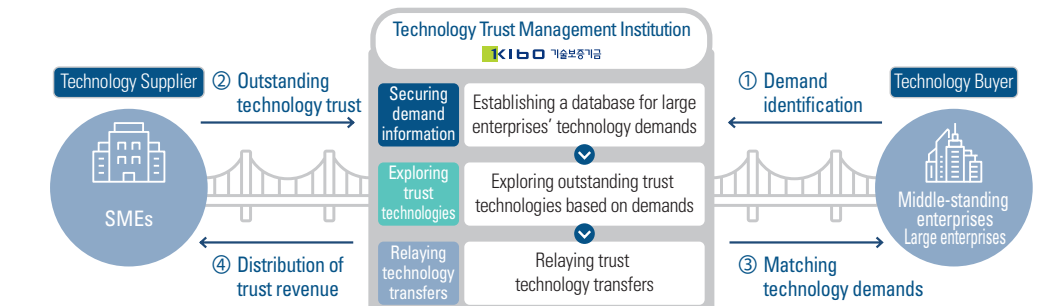
→ Progress and Outcomes of Major Technology Transfer Program for 2019

❖ Promoting Establishment of a Trust Technology Transaction System (2Win-Bridge*) for Mutually Beneficial Cooperation between Large Enterprises and SMEs

In an effort to foster a culture where technology is traded at a fair price, KOTEC established a technology-transaction system for mutually beneficial cooperation between large enterprises and SMEs, with KOTEC matching and relaying technologies needed by large enterprises and SMEs' trust technologies, promoting a culture of fair technology transfers and bringing accompanied growth for large enterprises and SMEs.

*2Win-Bridge, meaning a technology-transaction system creating a win-win situation among SME and large enterprises, is a trust technology-transaction system for mutually beneficial cooperation between large enterprises and SMEs.

Establishing a Trust Technology-Transaction System for Mutually Beneficial Cooperation between Large Enterprises and SMEs (tentative)



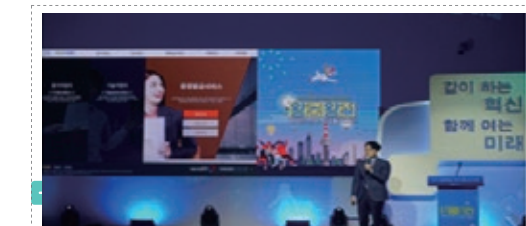
Technology-Transaction System for Mutually Beneficial Cooperation between Large Enterprises and SMEs through Technology Trust

Subject	Benefits
SMEs	<ul style="list-style-type: none"> (Reducing concerns about technology theft) Capable of executing technology transfers at a fair price through relays by KOTEC and without technology theft → Capable of promoting continuous technology innovation by strengthening inducement of technology development
Large enterprises	<ul style="list-style-type: none"> (Improving public image) Capable of escaping the image that 'large enterprises steal technology' to form an image of large enterprises leading win-win growth (Reducing costs) Capable of reducing time and expenses required to collect technology information from SMEs using the SME network and KOTEC's technology database

→ Selected for Best Practice in Government Innovation

Among 400 candidates in the 2019 Governmental Innovation Best-Practice Awards, Tech Safe was designated as a best practice in the final round of 16 competitors, and received the Minister's Award from the Ministry of the Interior and Safety (Bronze Award) (November 2019).

<Presentation of Governmental Innovation Best-Practice Award>



<Minister's Award for Governmental Innovation>



4. Technology Transfer and Protection

Patent Mutual Aid Program

✔ Purpose

Alleviate IP risks for SMEs and middle-standing enterprises, support entry to foreign markets, and provide a stable management foundation

✔ Background

Due to a lack of abilities on the part of SMEs to respond to technology infringement, damage resulting from technology theft is growing.* Because of increasing applications for domestic and international patents, expenses related to intellectual property activities are experiencing a growing trend.

* Over the past five years, among 8,219 SMEs, 644 SMEs (7.8%) experienced technology infringement or theft, and the amount of damages reached KRW 1.1 trillion (2017, Ministry of SMEs and Startups).

✔ Program Description

The patent mutual aid program provides mutual aid through installments that SMEs and middlestanding enterprises accumulate as financial resources in the case of IP disputes and overseas applications. Monthly installments paid out by a member enterprise are accumulated with a certain interest rate, and the accumulated principal and interest are refunded in a lump sum upon cancellation of the mutual aid contract.

A member enterprise can get an IP expense loan for up to five times the required expense in the case of overseas applications or domestic and international judgements or lawsuits. Upon the emergence of a suitable cause, such as monetary stringency, an enterprise can apply for a management fund loan within 90% of the sum of the paid installments, under the condition of repayment within a year.

In addition, KOTEC provides member enterprises in the patent mutual aid program with IP rightsrelated legal-consultation services and supports them in strengthening IP competitiveness by protecting IP rights.

➔ Operational Status

✔ Progress

Date	Details
Jan. 2019.	KOTEC selected as a trusted institution for patent mutual aid program
Mar. 2019.	Signed comprehensive business agreement with KIPO for joint support for IP enterprises
May 2019.	Revision of 'Enforcement Decree of the Invention Promotion Act' (with KOTEC specified as a trusted institution for patent mutual aid program)
Aug. 2019.	Official launch of patent mutual aid program
Nov. 2019.	1000th member enterprise enters the aid, meeting the annual goal for 2019 (1,040 cases) earlier than expected

✔ Patent Mutual Aid Registration Status

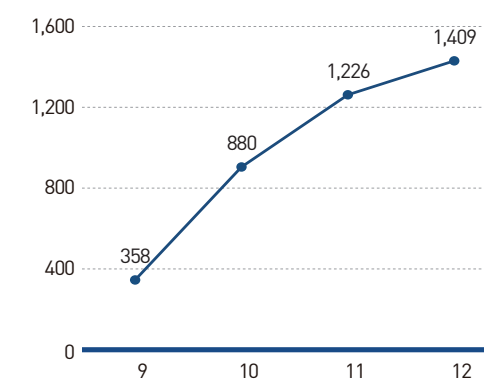
Since the commencement of the patent mutual aid program in August 2019, 1,415 enterprises have entered membership in the aid, exceeding the initial goal. As of the end of 2019, the paid installment balance was KRW 2.7 billion, and the total installment balance was KRW 47.9 billion.

(Unit: cases, KRW million, %)

Category	2019			Performance compared to goals	
	New (A)	Cancelled (B)	Balance (C=A-B)	Goal (D)	Achievement rate (C/D)
Member enterprises	1,415	6	1,409	1,040	135.5
Paid installments	2,677	5	2,672	-	-
Total installments	48,024	135	47,889	-	-

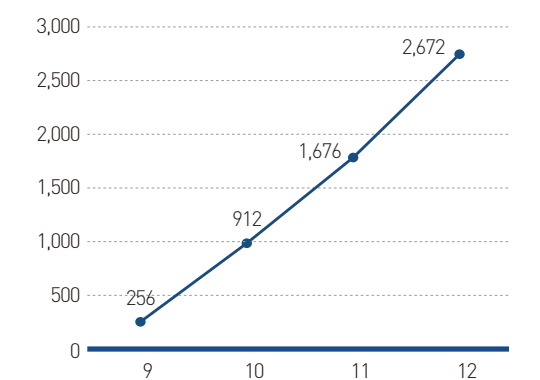
Member Enterprises

(Unit: number of enterprises)



Paid Installments

(Unit: KRW million)



By region, Gyeonggi, Chungcheong, and Busan are the three largest, in that order. Regional headquarters invited a total of 1,361 member enterprises, achieving 194% of the goal (700 cases).

Patent Mutual Aid Registration Status for Regional Headquarters

(Unit: cases, KRW million, %)

Category		Approval		Performance compared to goal	
		Member enterprises (A)	Paid installments	Goal (B)	Achievement rate (A/B)
Regional Headquarters	Seoul	207	458.4	149	138.9
	Busan	219	323.8	130	168.5
	Gyeonggi	265	513.0	136	194.9
	Incheon	175	258.9	74	236.5
	Chungcheong	251	355.3	79	317.7
	Honam	103	285.8	55	187.3
	Daegu	141	235.9	77	183.1
	Subtotal	1,361	2,431.1	700	194.4
Operation center		48	241.2	340	14.1
Total		1,409	2,672.3	1,040	135.5

According to industrial segments, the portion of registrations in the manufacturing industry was the highest (77%). The average

4. Technology Transfer and Protection

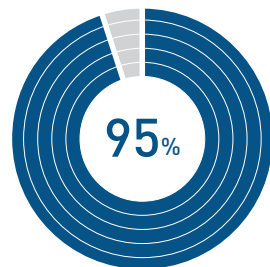
monthly installment amount was KRW 500,000 or higher for most industries, and the average monthly installment amount for the wholesale and retail trade industry and construction industry was KRW 750,000 or higher, denoting a satisfactory level.

Patent Mutual Aid Registration Status for Each Industrial Segment

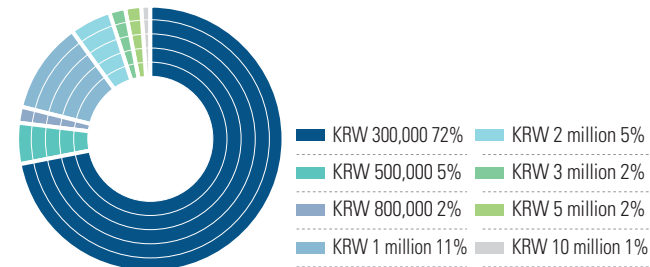
(Unit: cases, KRW million, %)

Category	Member enterprises	Proportion	Paid installments	Average monthly installments amount
Manufacturing industry	1,087	77.0	2,072.7	0.67
Information and communication industry	90	6.5	135.6	0.49
Specialized, science, technology service industry	82	5.8	155.6	0.64
Construction industry	64	4.6	110.4	0.75
Wholesale and retail trade industry	50	3.5	154.7	0.84
Others	36	2.6	43.3	0.46
Total	1,409	100	2,672.3	0.66

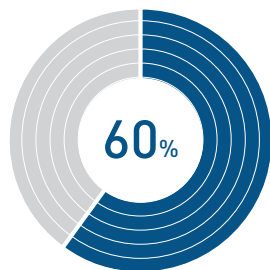
Proportion of Guaranteed Enterprises



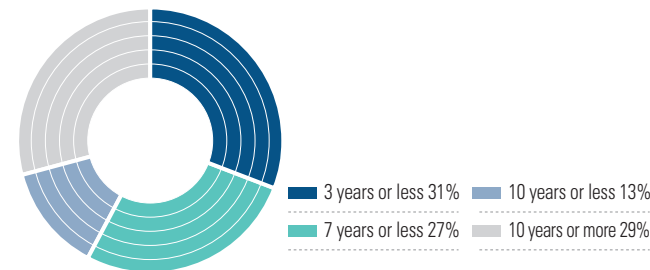
Proportion of Installment Amount



Proportion of Patent-Holding Enterprises



Proportion of Years in Business



5. Venture Innovation Support

Performance of Venture Investment



Financial Support Combining Guarantee and Investment



Startup Education and Incubation



5. Venture Innovation Support

Guarantee-linked Investment

→ Overview



- Direct investment program for innovative technology enterprises with technology competency and growth potential linked with guarantee
- Aimed at giving opportunities for direct financing to enterprises and supporting improvement of financial structures, etc.
- By focusing on technology venture businesses, which are more likely to be alienated in the venture capital (VC) market due to high investment risks, the program supports private investment sector



- In Article 28 of the 'Korea Technology Finance Corporation Act', 'guarantee-linked investment' is stated as a major task.
- 'Investment limit,' 'investment method,' etc. are specified in Provision 4 of Article 28 of the 'Korea Technology Finance Corporation Act'.

→ Investment Types

KOTEC's guarantee-linked investment accepts stocks, convertible bonds (CB), or bonds with a warrant (BW).

→ Eligible Investee Companies



→ Investment Limit per Enterprise

An investment in an individual firm shall be capped at KRW 3 billion, and the limit on gross amount of guarantee and investment at KRW 10 billion, provided that the investment amount shall not exceed twice the guarantee amount.

Category	T15	T14 or higher
Investment Limit per Enterprise*	KRW 1 billion	KRW 3 billion
Limit on gross amount of guarantee and investment for each enterprise	KRW 5 billion	KRW 10 billion

* Investment Limit : amount of KOTEC's investment only

→ Operation Performance

Since the implementation of the investment system in 2005, KOTEC has invested KRW 309.8 billion in 293 enterprises (as of 2019). As a result, 26 enterprises have gone public to be successfully listed on the KOSDAQ, and the accumulated return on investment reached 14.13%.

Investment Performance by Year

(Unit: KRW hundred-million)

Category	2017		2018		2019		Accumulated (after 2005)	
	No. of enterprises	Amount	No. of enterprises	Amount	No. of enterprises	Amount	No. of enterprises	Amount
investment execution	40	430	34	283	33	259	293	3,098
Investment profit	48		Δ25		259		438	

Financial Support Combining Guarantee and Investment

By preparing an investment-linked guarantee system integrated throughout all stages of investment, KOTEC responds proactively to investment-oriented financial policies that preemptively absorb market risks and promote the scale up of enterprises by providing follow-up support in growth funds for enterprises to attract private investment.

Category	Investment-linked guarantee	Angel investmentlinked guarantee	Guarantee with investment options			
Overview	Program to provide linked support in guaranteed loans for enterprises that have attracted investment from private VCs	Providing startups that have attracted angel investment with special guarantees of up to two times the amount of the attracted angel investment	Guarantee for outstanding technology startups with an option to convert guaranteed loans into investment after a certain period of time following the issuance of guarantee			
Implementation date	Jun. 2018.	Jul. 2019.	May. 2014.			
Eligibility for support	Leading innovative tech enterprises that have received investment from venture investment institutions or investment organizations (excluding private investors and private investment funds)	Startups that have attracted angel investment amounting to KRW 30 million or more from KOTEC's angel partners*	Leading innovative technology enterprises that are 5 years old or less with technology business rating grade of BB or higher			
Preferential treatment	Guarantee ratio	95% (startup), 90% (non-startup)	Full guarantee (100%)			
	Guarantee fee	0.3%p reduction	0.3%p reduction			
Guarantee limit	The assessment of working capital guarantee limit is exempted within 1/2 of the latest invested amount by venture investment institutions	Two times the angel investment amount (up to KRW 300 million)	KRW 1 billion			
Guarantee fee	0.3%p reduction	0.3%p reduction	Fixed rate of 0.5%			
Support performance (2019)	No. of enterprises	Amount (KRW 100 million)	No. of enterprises	Amount (KRW 100 million)	No. of cases	Amount (KRW 100 million)
	205	2,394	31	63	179	578

* KOTEC's angel partners are composed of 78 institutions (35 accelerators and 43 professional angel investors).

5. Venture Innovation Support

KOTEC Venture CAMP

KOTEC Venture CAMP is an accelerating program meant to lead successful startup 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.

KOTEC Venture CAMP*



* CAMP (Competitiveness Accelerating Management Program): Program to strengthen the competitiveness of new venture businesses

➔ Progress Status (4th and 5th KOTEC Venture CAMP)

A total of 801 enterprises applied nationwide. Through the 1st round of document evaluation and 2nd round of presentation evaluation, 105 enterprises were selected for participation.

➔ Synergy in Cooperation with Private Sector

KOTEC sought to create a collaborative and innovative ecosystem in cooperation with private institutions, including private accelerators, crowd funding brokers and financial institutions, in order to provide both financial and non-financial support for the selected participants.

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

➔ KOTEC Venture Startup Education Program

The KOTEC Venture Startup Education program is aimed at preliminary entrepreneurs preparing for technology startup, educating them on practical affairs related to technology startup, such as financing strategies, marketing, and IP rights, in a systematic manner, contributing to promoting startup and raising interest in startup by fostering a favorable atmosphere for such goals.

Startup Education Program

Operation Status

(Unit: no. of sessions, no. of persons)

Category	2001 ~2005	2006 ~2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
No. of sessions	17	12	2	2	3	2	2	2	2	2	2	42
Graduates	641	775	133	168	194	191	194	128	143	152	113	2,832

➔ Tech Startup Education Program for Young Entrepreneurs

For young entrepreneurs between the ages of 19 and 39 (3 or less years in business, or pre-startup), this program provides free lectures on business models, enhancement of entrepreneurship, introductions to KOTEC support programs, etc. By doing so, KOTEC promotes the fostering of startup ecosystem where creative technologies and youth-driven ideas can be led to successful commercialization.

Operation Status

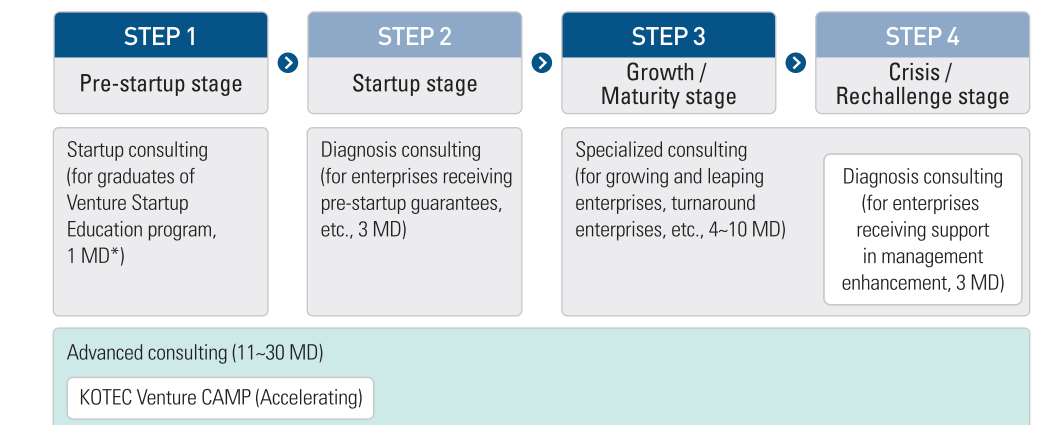
(Unit: no. of sessions, no. of persons)

Category	2017	2018	2019	Total
No. of sessions	6	4	3	13
Graduates	231	185	117	533

Consulting

By building a customized consulting-support system composed of startup consulting, diagnosis consulting, and specialized consulting, KOTEC provides systematic consulting throughout the entire cycle of an enterprise's development, going from pre-startup to business crisis / rechallenge.

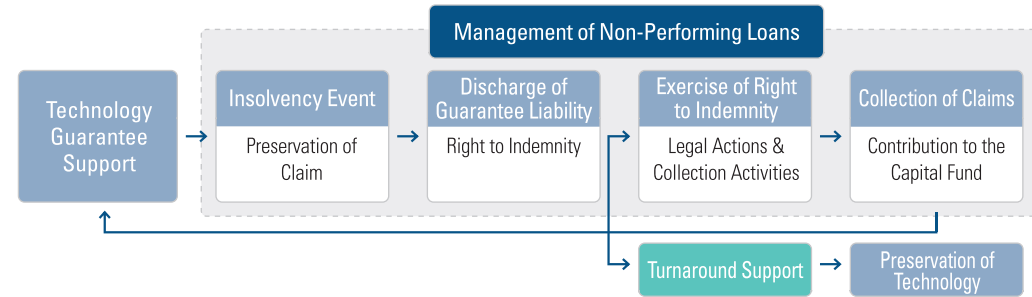
Building a Technology and Management Consulting-Support System throughout the Entire Cycle of Enterprise Development



* MD: Man-Day

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

KOTEC developed company-wide efforts to foster inclusive financial environments by expanding fundamental property through prevention of guaranteed enterprises' insolvency and collection of non-performing loans, and by providing support for the turnaround of diligent failures that nevertheless demonstrate technology competitiveness.



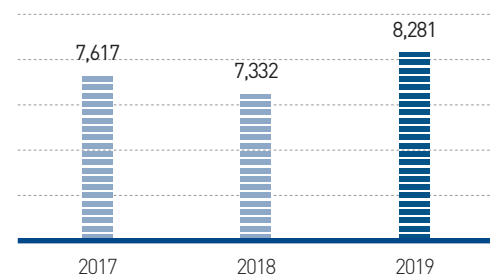
➔ Maintaining Stable Incident Rates and Reducing Insolvency Rates of Rechallenging Enterprises

In 2019, despite the difficult circumstances surrounding the slowdown of the global economy due to the trade dispute between the US and China, along with weak investment and exports following the diplomatic conflict between Korea and Japan, KOTEC managed a stable annual incident rate of 4.5%, falling within the target range of 4.8%. It additionally made efforts in strengthening the capabilities of rechallenging entrepreneurs by expanding non-financial support, such as through technology-management consulting, in line with KOSME for entrepreneurs who previously experienced failures in order to minimize the risk of a subsequent failures.

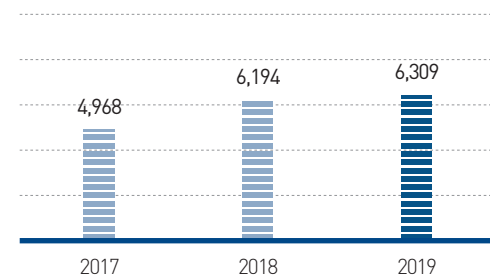
➔ Establishing a Non-performing Loan-Management System Optimally Operated with Limited Workforce

In an effort to prepare countermeasures to meet the deteriorated collection environment due to joint surety exemption and the increasing number of applications for business rehabilitation, KOTEC operates a recoverability-based step-by-step non-performing loan (NPL)-management system (NPL before charge-off → charged-off NPL → transferred NPL → cancelled NPL), improving the efficiency of collection activities by concentrating its efforts on selected items.

Amount of Charged-off NPL (Unit: KRW 100 million)



Amount of Transferred Charge-off (Unit: KRW 100 million)



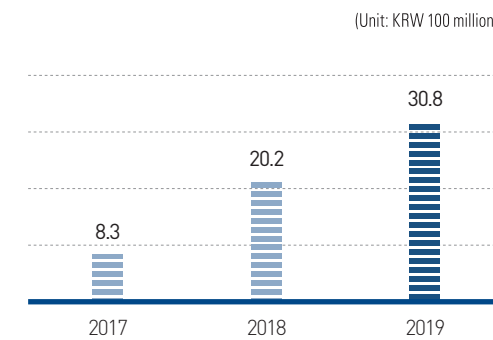
Expansion of Fundamental Property through Prevention of Insolvency and Collection of Non-Performing Loans

➔ Efforts to Improve Collecting Performance for Non-Performing Loans

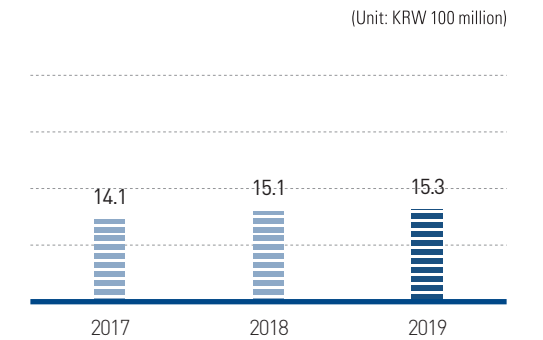
By expanding the collection of public information for discovery of new collection resources, KOTEC collected 13 kinds of public information from 6 institutions. As a result, using 118,328 cases of related information, it additionally recovered about KRW 3.1 billion of NPLs (representing KRW 1.1 billion more than the previous year).

Additionally, by operating internal and external training programs (internal training and external training by financial institutions), nurturing internal experts (NPL management specialists), and promoting information sharing (right of indemnity best-practice award), KOTEC reinforced practical capabilities for individuals, leading to the continuous increase in the collected amount per employee.

Amount of Collection from Hidden Assets (Unit: KRW 100 million)



Amount of Collection Per Employee (Unit: KRW 100 million)

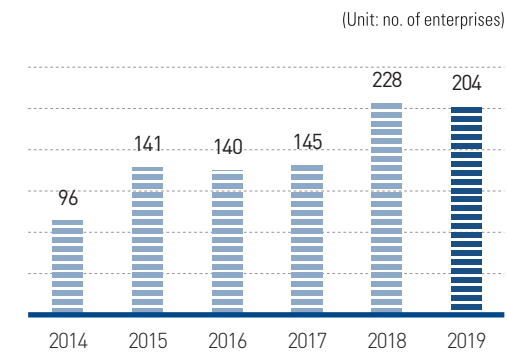


Fostering Inclusive Financial Environment by Supporting Debtor Rehabilitation

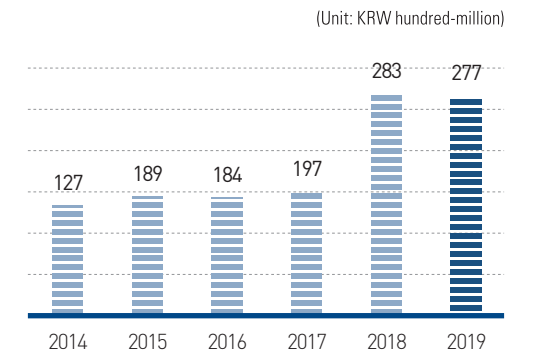
➔ Expanding Rehabilitation Guarantee Support through Customized Guarantee Support

Through customized guarantee support for each recipient (sole debtor – KOTEC's independent program, multiple debtor – joint program with Credit Counseling and Recovery Service), KOTEC provided rehabilitation guarantees amounting to KRW 27.7 billion for 204 enterprises in 2019. It also introduced an automated search system for re-challenging entrepreneurs in an effort to aggressively discover recipient enterprises using real-time information.

Enterprises Supported by Rehabilitation Guarantee (Unit: no. of enterprises)



Amount of Rehabilitation Guarantee Support (Unit: KRW hundred-million)



PASSION

03

KOTEC promises a brighter tomorrow

for our clients through untiring passion and efforts

KOTEC has strengthened its technology-appraisal organization to actively respond to the rapid and wide advancement and integration of technologies. Moving forward, it will continue to support sustainable management innovation for a brighter future through efforts such as reinforcing technology-appraisal capabilities, advancing risk management and policy research, and expanding social contributions.

MANAGEMENT SUPPORT FOR SUSTAINABLE INNOVATION

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1. Organization and Human Resources

The Patent Mutual Aid Department was newly added to headquarters to prepare a foundation for supporting the creation and commercialization of SMEs' intellectual properties. Additionally, to facilitate and expand integrated support-platform projects, such as Tech-Bridge, the previous Technology Transfer & Protection Office was promoted to the Technology Transfer & Protection Department. In terms of branch offices, new operations were assigned to regional Technology Innovation Centers, such as trust technology transfer, R&BD, and finance and technology appraisal, expanding the comprehensive support service for technology transfer and commercialization.

→ Organizational Status

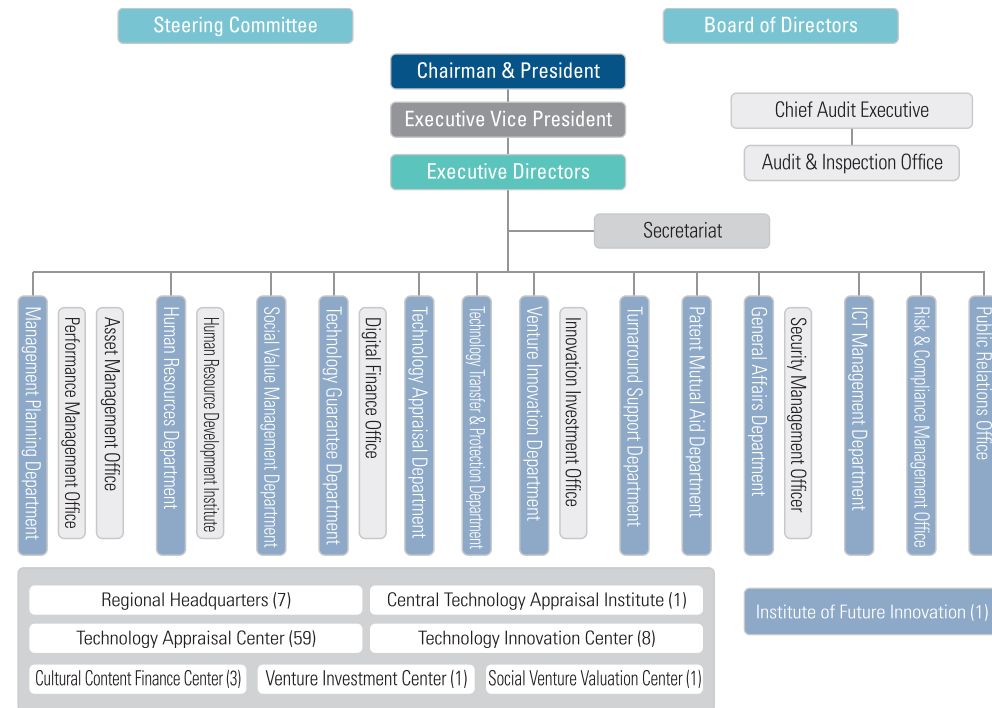
As of the end of 2019, KOTEC consists of the headquarters (11 departments, 3 offices, 6 affiliated offices, 1 institute) and branch offices (1 Central Technology Appraisal Institute, 8 Technology Innovation Centers, 3 Cultural Content Finance Centers, 7 Regional Headquarters, 1 Venture Investment Center, 1 Social Venture Valuation Center, and 59 Technology Appraisal Centers), and the workforce consists of 1,362 staff members including 7 executives and 164 special service employees.

→ Status of Human Resources

(Unit: number of persons)

Category	Executives	1st Class	2nd Class	3rd Class	4th Class	5th Class or below	Special services	Total
Number of employees	7	18	90	296	406	381	164	1,362

* As of December 31, 2019



2. Talent Acquisition

→ Job Creation Efforts

KOTEC established a medium-term human-resources plan to invigorate technology finance and innovative support for SMEs and startups. Moreover, it is making efforts, such as by recruiting new personnel for new projects and supplementing personnel for individuals currently on leave of absence, in order to remain in step with the government's job-creation policy.

In 2019, KOTEC recruited 86 new employees as a result of efforts of job creation to increase its personnel for promoting new policy projects, such as the complete abolition of joint sureties, patent mutual aid, and technology protection support for SMEs.

KOTEC's New-Employee Recruitment Status



→ Fair Recruitment based on Vocational Competency

Together with blind recruitment, where elements that may cause unreasonable discrimination or prejudice, such as academic background, age, and gender, are removed, KOTEC also adopts vocational competency-based recruitment utilizing the National Competency Standards (NCS). By operating a fair recruitment system, such as by engaging external experts for each stage of recruitment and operating a process to detect corruption in recruitment, and by providing equal opportunities wherever possible, KOTEC secures fairness and transparency in the overall process of recruitment. In addition, by establishing and advancing a vocational competency-oriented recruitment process, it is making efforts to recruit excellent personnel with vocational competency that fits KOTEC's image as an institute providing comprehensive support for SMEs and startups.

→ Expanding Socially Balanced Recruitment

In an effort to expand job opportunities for employment-support recipients, individuals with disabilities, female job-seekers, talented individuals stationed outside the capital area, and high school graduates, etc., and to realize social values by 'expanding, sharing, and joining jobs,' KOTEC has introduced a variety of preferential employment programs, including awarding additional points, setting up employment goals, and dividing recruitment into separate employment categories. In 2019, as a total of 106 new employees and unlimited-term contract workers were hired, including employment-support recipients, individuals with disabilities, female job-seekers, talented individuals stationed outside the capital area, and high school graduates. By providing these new jobs, KOTEC has contributed to resolving employment difficulties for members of socially disadvantaged sectors of society, actively fulfilling its social responsibility as a public institution.

KOTEC's Recruitment Status in 2019

(Unit: no. of persons)

Category	Number of employed staff members	Youth	Employment-support recipients	Individuals with disabilities	Female	Talented individuals stationed outside the capital area	high school graduates
New regular employees	86	80	10	2	32	35	1
Unlimited-term contract workers	12	9	1	-	9	4	12

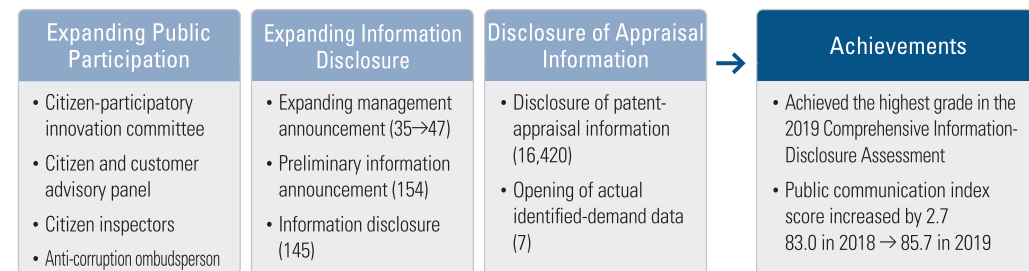
* Excluding the number of employed staff members, other figures represent the number of persons meeting the corresponding category's requirements among employed staff.

3. Ethics and Human Rights Management

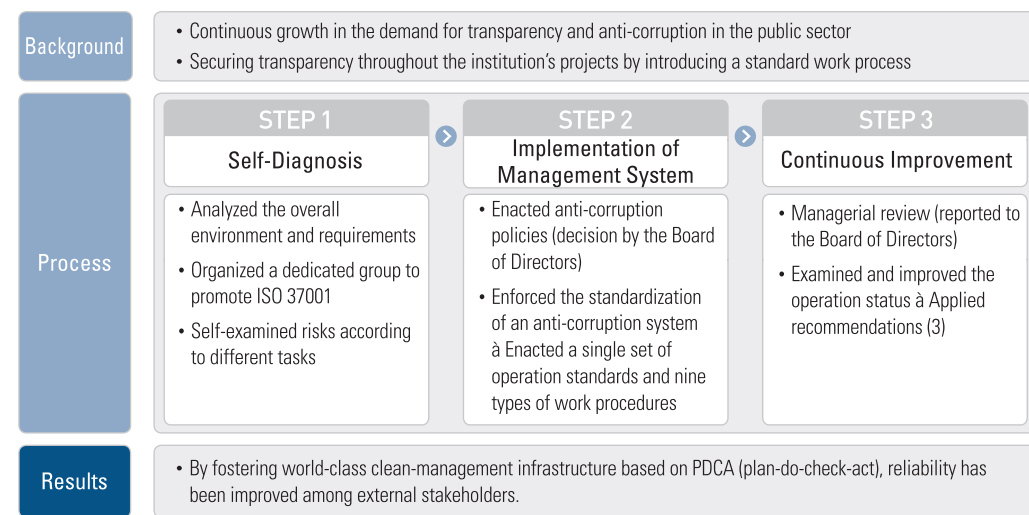
Ethics Management Status

➔ Efforts to Improve the System for Management Transparency in the Institution's Unique Projects

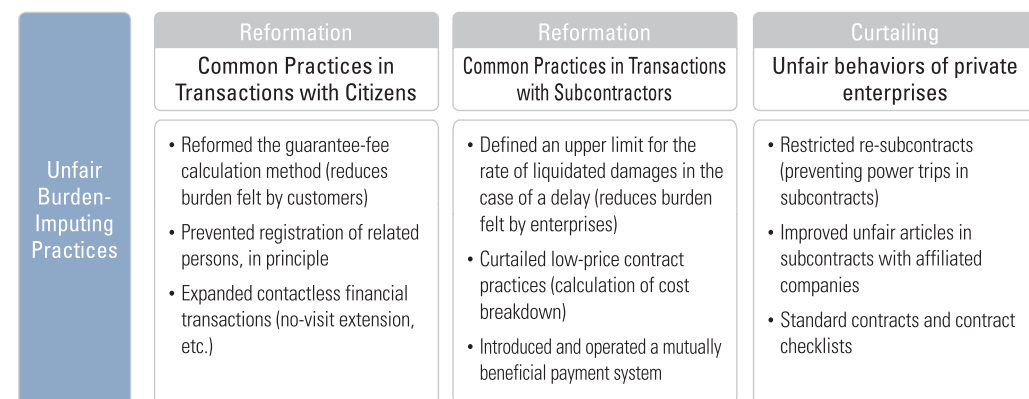
By strengthening overall transparency throughout the institution's management activities, KOTEC achieved the highest grade in the '2019 Comprehensive Information-Disclosure Assessment.'



Furthermore, in line with the growing demand from citizens for transparency and anti-corruption in the public sector, KOTEC acquired ISO 37001 (anti-bribery management systems) certification, building up a clean management system to meet international standards.

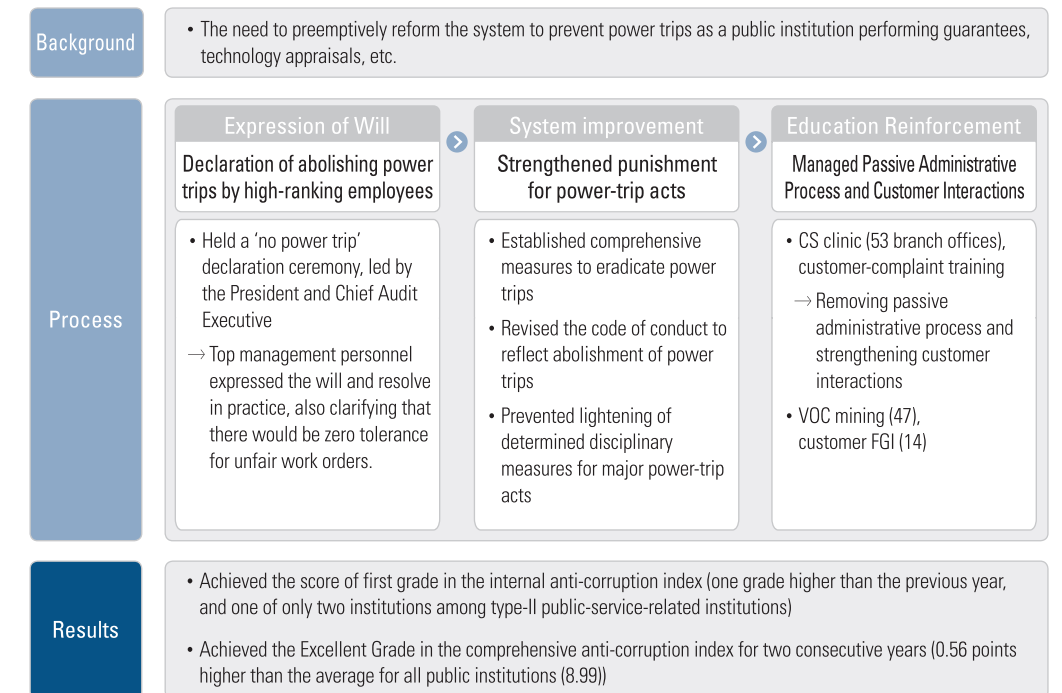


Additionally, KOTEC has reformed common practices relating to transactions with citizens and subcontractors and curtailed unfair behaviors of private enterprises, improving the rights and interests of private enterprises and citizens.

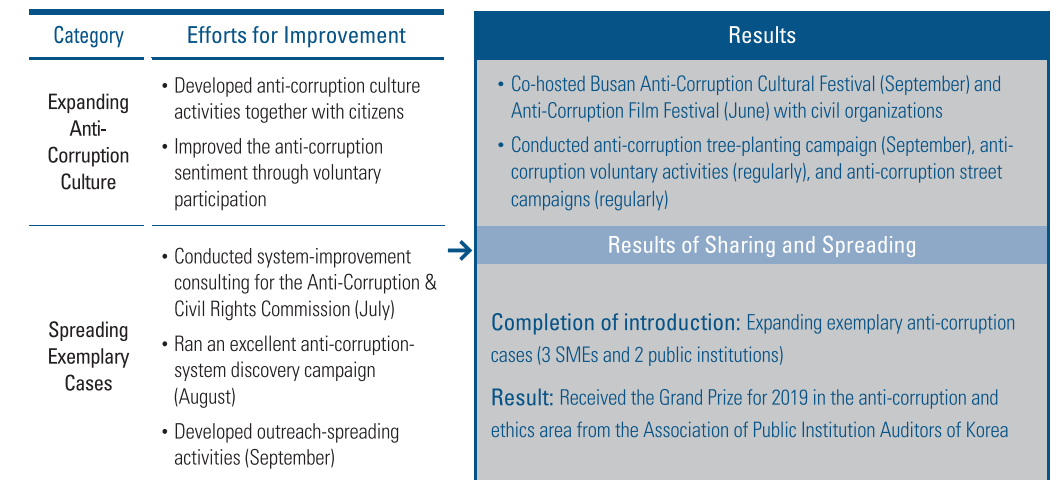


➔ Achieving an Excellent Grade in the Anti-Corruption Policy Assessment for Six Consecutive Years as a Result of Advancing the Ethics Management System

Through the declaration of abolishing power trips by high-ranking employees, reinforcement of punishment for power-trip behaviors, and management of a passive administrative process and customer interactions, KOTEC established an ethical entrepreneurial environment where even invisible corruption, such as power trips, unfairness, violations, and privileges, are eradicated.



By expanding its best practices in anti-corruption management and corruption-vulnerability improvement to the private sector, such as for SMEs, KOTEC received the Grand Prize for 2019 from the Association of Public-Institution Auditors of Korea in the area of anti-corruption and ethics.



3. Ethics and Human Rights Management

Results of Ethics Management

- Selected as an institution with an excellent comprehensive anti-corruption grade by the Anti- Corruption & Civil Rights Commission (Achieved the Excellent Grade for Two Consecutive Years)
- Achieved an excellent grade in the anti-corruption policy assessment by the Anti-Corruption & Civil Rights Commission for six consecutive years
- Zero corruption or violations of the 'Improper Solicitation and Graft Act'

Status of Human Rights Management

By setting up organizations like the human rights management committee and working-level human rights management council, KOTEC established a human rights management system to improve its ability to execute the management of human rights.

Category	Organization	Main activities
Deliberative organization	• Human rights management committee	• Making important decisions related to human rights management and deliberating plans to promote human rights policie
Consultative organization	• Working-level human rights management council	• Conducting working-level human rights activities for different departments and promoting policy reformation, such as human rights impact assessments
Working-level department	• Social value management department	• Establishing plans to promote human rights management and operating human rights education programs
Human rights support	• Human rightsinfringement deliberation committee	• Deliberating and dealing with human rights-infringement cases
	• Human rights-distress consultation center	• Conducting consultations on human rights-infringement distress and establishing and upholding measures to prevent recurrence of human rights infringement

By reforming the system to prevent human rights infringements, such as by producing a human rights management guidebook that considers work characteristics and actual work environments and by establishing an online human rights-distress consultation center, KOTEC protects the human rights of internal and external stakeholders. Additionally, by adding a message of guidance regarding the protection of workers engaged in customer interactions in the ringback-tone message, a measure was prepared for protecting employees from verbal abuse or sexual harassment by customers.

Category	Previously	Improvement	Result
Human rights manual	• Only the human rights management manual for public institutions distributed by the Anti- Corruption & Civil Rights Commission previously existed	• Produced a human rights management guidebook to consider work characteristics and actual work environments	• Operating standardized human rights management
Human rights-consultation center	• Only the offline distress consultation center previously existed	• Newly established an online human rights-distress consultation center offering convenient reporting and complete anonymity	• Improving accessibility for the consultation center • Preventing human rights infringement of victims
Affiliated companies	• Needed measures to protect human rights for affiliated companies	• Included article about compliance to human rights protection in contracts – mandatory for all subcontract cases of affiliated companies	• Spreading respect for workers' human rights
Ringback-tone message	• Health problems emerged as a result of verbal abuse and assaults	• Newly added a message of guidance regarding protection of workers engaged in customer interactions	• Protecting the human rights and emotional health of workers

By promoting various human rights management activities, KOTEC produced the result of there being no occurrences of human rights infringement, sexual harassment, or sexual abuse in 2019.

Status and Result of Human Rights Management Practices in 2019

4. Customer Satisfaction

Customer Satisfaction (CS) Practices

➔ Enhancing CS capability through customized service improvement practices

KOTEC established and spread its 「Customer-Satisfaction Improvement Plan」 in order to manage customer satisfaction. Moreover, it analyzed the results of the Public-service Customer Satisfaction Index (PCSI) survey for 2018 and drew up improvement plans to strengthen its CS capabilities.

PCSI result for 2018	Improvements in 2019	Result
90.3	<ul style="list-style-type: none"> • Reinforced service-quality management to improve customer service • Increased employees' CS capabilities for interactions with customers • Improved customer satisfaction by expanding communication with customers • Simplified procedures for customer services 	91.1 Excellent customer satisfaction index institution

In addition, by holding the 「Communication Up Festival」 to cultivate the mindset for communicating with customers and diversifying communication channels, KOTEC expanded the foundation for communicating with customers and internalized the CS mindset to promote CS-expansion activities and improve service quality in the realization of customer-satisfaction management.

Activities	Results
<ul style="list-style-type: none"> • Collected and spread know-how for communicating with customers and shared actual stories that impressed customers • Scored excellently on the customer-communication index in terms of whether detailed explanations provided were easily understood by customers • Strengthened activities to prevent complaints by reducing unsatisfied customers • Produced and distributed promotional materials and goods 	Expanded the foundation for communicating with customers and internalized the CS mindset

Furthermore, by conducting a variety of onsite CS-consulting programs and reinforcing education programs, KOTEC improved employees' CS capabilities.

Activities	Training target	Main content
• Conducted customized-outreach CS clinics (February and August)	• branch offices with below-average customer-satisfaction index scores • Sales branches that have not conducted clinics in the past two years	• Customized consulting on the vulnerabilities of each branch office
• Conducted self-access CS education for branch offices (February and August)	• branch offices that have never conducted a CS clinic	• Self-access education using plans to improve customersatisfaction index scores
• CS-monitoring days (monthly)	• All employees	• Self-diagnosis on service fulfillment • CS comments • Spreading best practices in CS
• CS-mindset refreshment training (March)	• CS leaders in branch offices	• Education program to improve customerinteraction capabilities and communication skills
• Conducted employee cross-meetings and CS education for each region	• Employees dealing with customer interactions in branch offices for each region • Employees in customer-call centers	• Discussions on care plans for different customer characteristics • Education on protecting employees dealing with customer interactions (emotional workers)
• Conducted CS education as part of newemployee orientation training	• New employees	• Fostering of a CS mindset through orientation training regarding customer service

4. Customer Satisfaction

→ Improving customer service quality through VOC activities and feedback

By expanding operation of the customer-advisory panel for the participation of and communication with customers and citizens, KOTEC reinforced onsite public-service innovation activities. It also collected customer opinions by listening to inconveniences and difficulties encountered by customers through A/S (after-service) calls with unsatisfied customers and VOC mining.

Customer opinions are collected and used to improve the system through the working-level customer-value council. By running an incentive system for employees who deal with customer interactions, voluntary participation in CS activities is encouraged.

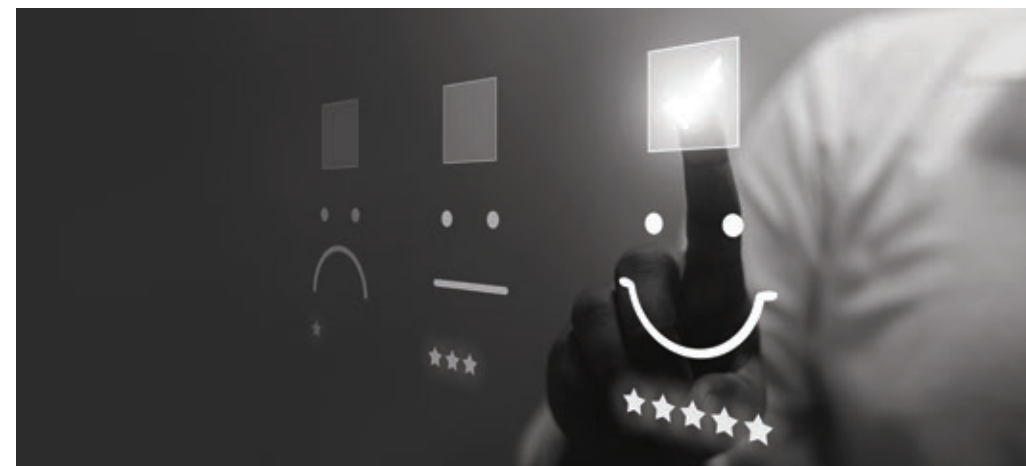
Activities	Result
<ul style="list-style-type: none"> Employee with the highest customer-satisfaction index score is selected as the 'CS master of the month' (every month) 	Encouraging voluntary CS practices
<ul style="list-style-type: none"> Designating the best CS-scored branch office as "Excellent CS Branch office" (Every other month) 	
<ul style="list-style-type: none"> Awarding best customer-call center staff (year-end) 	

→ Expanding Efforts to Improve Customer Satisfaction

KOTEC conducts customer-satisfaction index surveys (weekly) by phone and online customersatisfaction index surveys (biannually) among customers received KOTEC's new guarantee and certification services and, based on the survey results, improvement plans are arranged to raise customer-service satisfaction. Furthermore, CS training programs are held once a year in preparation for a PCSI survey.

Achievements in CS Management

Measure	2017	2018	2019
PCSI	90.6	90.3	91.1
Online CS Survey	94.5	95.9	96.4
Call-based CS Survey	99.2	99.2	99.1



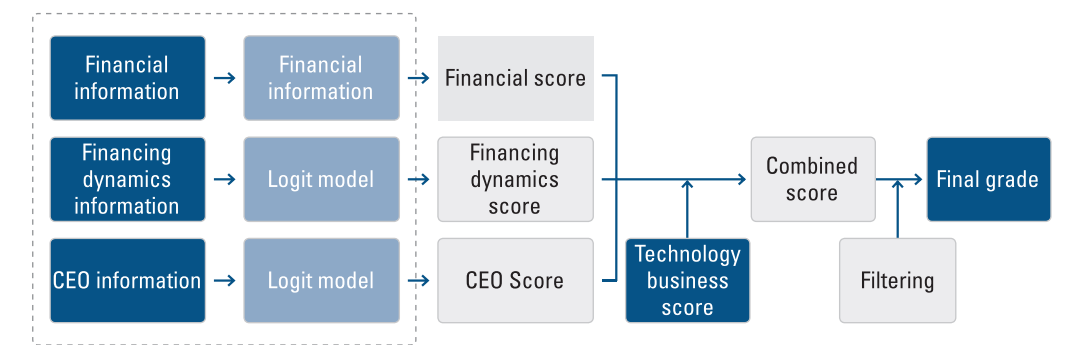
5. Risk Management

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.

Risk-Assessment System

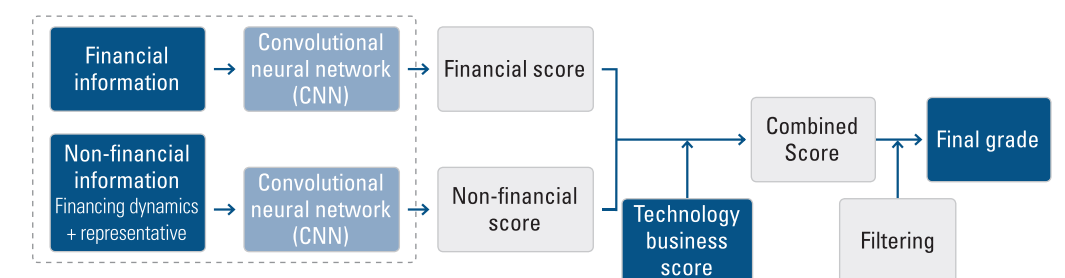
KOTEC is operating a risk-assessment model that calculates and manages the quantity of risk out of the total guarantee assets using the risk quantity for individual enterprises. The risk quantity for individual enterprises is calculated through a comprehensive analysis of the financial status, financing dynamics, CEO, and technology business of the enterprise.

Structure of Risk-Assessment System



Furthermore, KOTEC has developed an artificial intelligence-based (AI-based) risk-assessment model using deep learning (convolutional neural network (CNN)) and, by integrating this model with the existing risk-assessment model, has begun operating a mutually complementary dual-core model.

Structure of Risk-Assessment System Using AI-Based Model



Risk-Positioning System

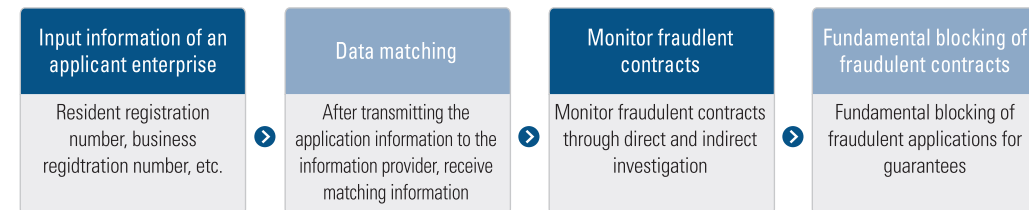
KOTEC has introduced a big-data-based risk-positioning system that uses basic data regarding a guarantee-applicant enterprise (years of operation, industry, size, and region) to provide the risk-assessment grade and early-warning grade for guarantee-applicant enterprises within a group of similar enterprises, taking preemptive measures against future risks and, by doing so, improving the quality of guarantee assets.

5. Risk Management

Fraudulent-Contract Warning System

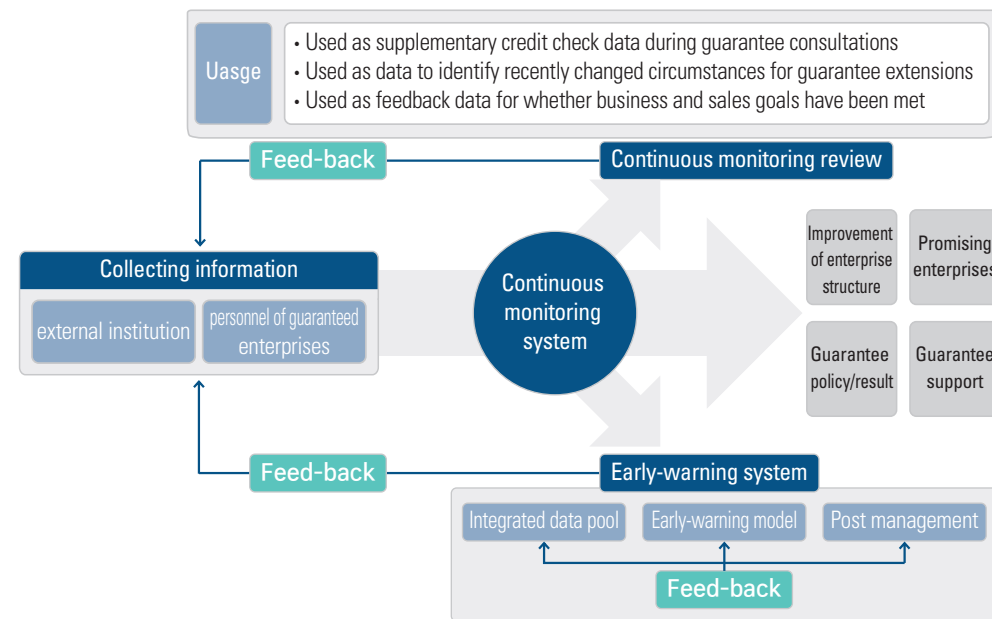
KOTEC is operating a fraudulent-contract warning system to manage risks due to fraud or falsehoods, such as false entry of personal information and intentional entry of inappropriate information.

Fraudulent-Contract Warning System



Continuous Monitoring System

KOTEC is operating a continuous monitoring system to conduct post management for guaranteee 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 submodels — 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.

6. Policy Research

Conducting Research Projects related to Technology Finance with Timeliness and Scalability

→ In house research on the Effectiveness of Technology Finance Support and SME

In order to increase the effectiveness of KOTEC's various support programs and establish a final strategy, multiple researches have been conducted, including advanced quantitative-data analysis studies. The study results are used as baseline data for projects in each business department.

KOTEC's Research Projects for 2019

Project title	Description	Usage
Study on data-based quantifying model to select guarantee-linked investment candidate enterprises	Drew up influencing factors in selecting guarantee-linked investment and suggested a model for discovering / recommending candidate enterprises	Effective discovery of candidate enterprises for guarantee-linked investment and support for projects by the Venture Innovation Department
Selection method for innovative technology startups to invigorate innovative growth in SMEs	Drew up appraisal indices influencing conversion to an innovative type and established a model for predicting conversion to an innovative type	Baseline data for early discovery of enterprises with high innovative-growth potential
Research on high-growth enterprises and analysis on the survival of newly established enterprises	The number of high-growth enterprises is 2,034 (ratio: 18.2%), and the ratio for the five-year survival rate is 74.7%	Provided baseline data for the 'rate of fostering high-growth enterprises,' one of the management goals
Analysis on technology guarantee support performance and result for enterprises with no sales records	Insolvency rates for enterprises with no sales records are higher, while their normal termination rates are lower, when compared to enterprises with sales; therefore, their guarantee risks are relatively high	Study results are used as data for responding to government policies and reflected in the medium and long-term management goals
Study on data-based high-growth enterprise prediction method	Drew up characteristics and influencing factors for enterprises showing high growth after two years following a new guarantee and developed a high-growth-potential enterprise prediction model at the time of the new guarantee	Presented importance of KOTEC's role in nurturing high-growth enterprises and innovative growth for SMEs
Quantitative analysis on years of operation and survival rates for new guarantee enterprises	Drew up the seven-year survival rate for 71,419 enterprises that received new guarantees from 2012 to 2015	Suggested qualitative advancement of support for startups

→ Discovering Timely Research Projects and Conducting Joint Studies or Outsourcing Research Services

In the case of research projects for which commercialization is imminent, in an effort to secure external public confidence, joint studies were conducted with external institutions to quickly draw up study results to earn public confidence.

Review of Patent Mutual Aid Projects

KOTEC	Strategic implications for medium- and long-term development of patent mutual aid
YOUME Patent & Law Firm	Plans to provide working-level law and patent-law services to conduct patent mutual aid projects
Details	<ul style="list-style-type: none"> Factors to consider during the introductory period of patent mutual aid projects include deciding how to differentiate, building a self-sufficient foundation, establishing governmental support, etc.; medium- and long-term development requires member welfare, asset operations, security management, introduction of consulting systems, etc. Consignment of patent mutual aid project, legal review of items required for promotional steps (preparation, conducting, and service)

6. Policy Research

Review of Blockchain-Based Accounts-Receiveable Insurance Project

ICONLOOP	Concept design for blockchain-based accounts-receivable insurance
BARUN Law Firm	Legal review of distribution process and business structure for accounts receivable
Details	<ul style="list-style-type: none"> Respond preemptively to accounts-receivable insurance project in progress Consignment of patent mutual aid project, legal review of items required for each promotional step (preparation, conducting, and service) * Revised bill for 'Accounts-receivable insurance business' promotion law was introduced to the Deliberation Subcommittee of the National Assembly, and the business model was put forth for a patent (2019-0101264).

→ Holding Joint Workshop for Research Exchanges

Co-hosted 'Workshop to Explore Plans for SME Innovation' (KOTEC, Korea Society for Innovation Management & Economics, Science and Technology Innovation Policy Forum)

Objective	Discuss a new business model for innovative growth for SMEs and form a consensus on new business with external expert groups
Date/place	Apr. 19, 2019 (Fri.) – Apr. 20, 2019 (Sat.), Human Resource Development Center, KOTEC
Participants	[External] Chairman of Korea Society for Innovation Management & Economics, and 20 others [Internal] Executive Vice President Cho Gyu-Dae, and five others
Details	<p>Presentation and discussion on technology finance for SMEs and venture innovation</p> <ul style="list-style-type: none"> Plans to form and operate innovative-growth funds for R&D support and investment-/loan-linked support for SMEs Plans to expand loans and investment for SMEs through R&D support
Media	SMEs with excellent capabilities will receive enterprise-led R&D investment (The Digital Times, Apr. 21, 2019)

Co-hosted 'Workshop to Explore Plans for SME Innovation' (KOTEC, Korea Society of Strategic Management)

Objective	Explore plans to foster an ecosystem for SME innovation, nurture high-growth technology-innovation enterprises, and form a consensus on KOTEC projects through networking with external expert groups
Date/place	Nov. 29, 2019 (Fri.) – Nov. 30, 2019 (Sat), Human Resource Development Center, KOTEC
Participants	[External] Chairman of Korea Society of Strategic Management, and 10 others, [Internal] Executive Vice President Cho Gyu-Dae, and seven others
Presentation	<p>Presentation and discussion on fostering rapid-growth technology-innovation enterprises</p> <ul style="list-style-type: none"> Study on data-based rapid-growth enterprise prediction method Plans to nurture super-rapid-growth technology-innovation enterprises R&D-policy directions for SMEs and 2020 R&D-project structure by the Ministry of SMEs and Startups

Workshop to Explore Plans for SME Innovation (Apr. 2019)



Workshop to Explore Plans for SME Innovation (Nov. 2019)



Establishment of Channels for Research Exchanges and Cooperation

7. Digital Transformation

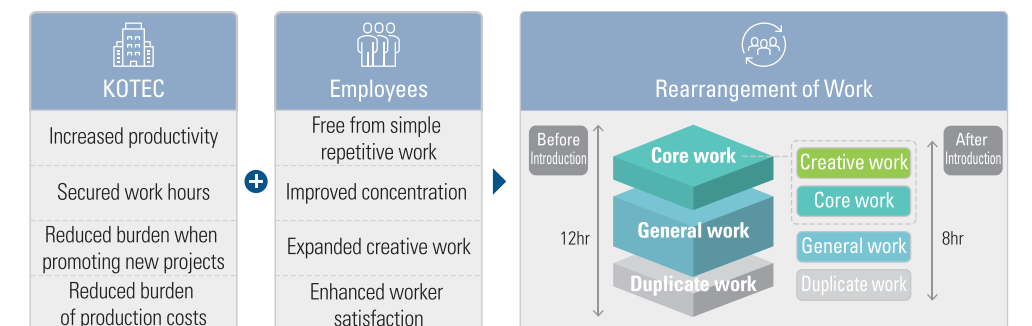
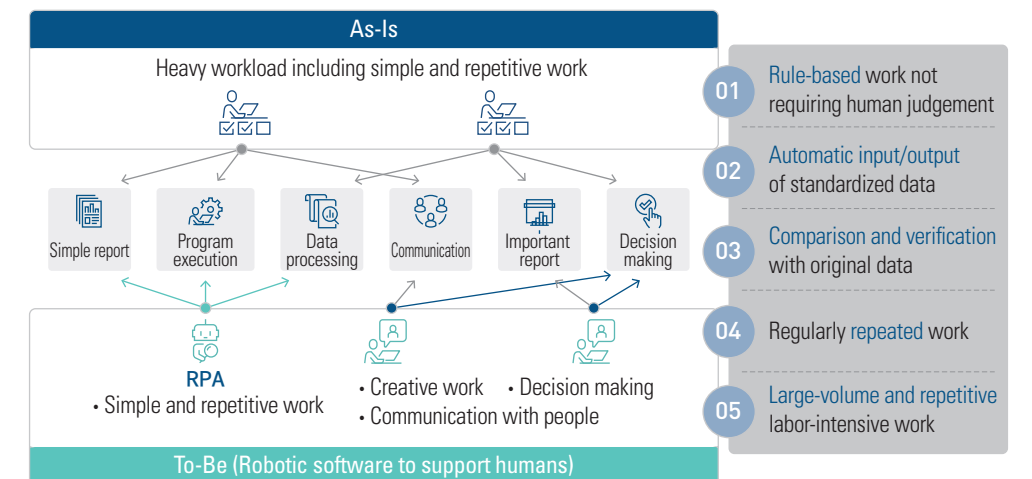
Digitalization Efforts to Improve Work Efficiency

→ Establishing Robotic-Process Automation (RPA)* (Dec. 2019)

With the goal of improving work efficiency, KOTEC has established a work-automation environment using digital labor, moving away from the existing human-oriented work process and leading digital transformation in the public sector.

* RPA (Robotic-Process Automation): A kind of robotic-software technology that reproduces human behaviors in an IT environment (PC, etc.) and automates repetitive tasks in various systems.

Flow Chart and Expectations for Introduction of RPA



RPA has been applied to 11 types of work, including 'automatic collection of intellectual-property information.' According to RPA-effectiveness verification results for selected work, the benefits from convenience were calculated at KRW 1.072 billion, and the return on investment (ROI) was KRW 724 million, showing excellent achievements. In 2020, the scope of RPA will be expanded to encompass 50 kinds of work.

(Unit: KRW million, %, months)

Application cases	Application period	Total benefit	Total cost	Net benefit	Return of Investment (ROI)	Payback period (PBP)
11	1	1,072	130	942	724	1.7

※ In 2020, the scope of RPA will be expanded to encompass 50 kinds of work (an idea contest will be run to select RPA target work).

7. Digital Transformation

➔ Setting up KIBO-ON, a Video-Based Sharing and Communication Channel (Oct. 2019)

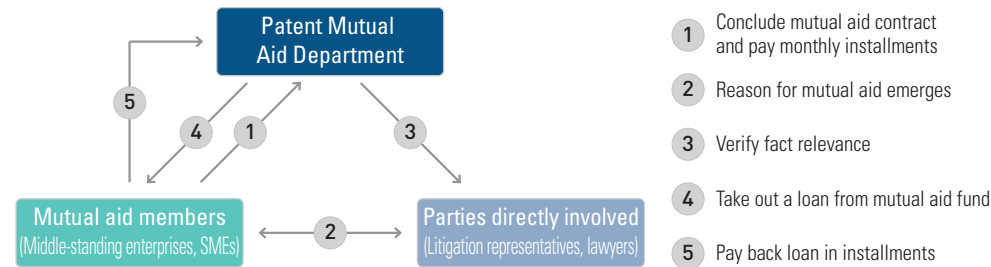
In order to diversify information-sharing and communication channels, the video-streaming service 「KIBO-ON」 was newly set up within the KOTEC groupware system. Video content is produced and shared through this communication channel, covering hot issues, information-sharing (guarantees, technology appraisals, technology innovation, and management), and hobbies, all with the goal of encouraging communication via subscriber evaluations and participation on social media.



Establishing and Operating an Information System for Business Support

➔ Establishing and Operating a Patent Mutual Aid System (Nov. 2019)

As a means to help distribute and ease the cost burden for SMEs and middle-standing enterprises and provide a foundation for stable management, KOTEC has established and started operating a patent mutual aid system (www.ipmas.or.kr) that supports costs related to intellectual properties, such as patents, under the 'loan first, payback in installments later' philosophy.



➔ Establishing and Operating an Open Social-Venture Valuation System (Social Square) (Dec. 2019)

As part of a social-venture invigoration program, included in the 「Plans to create jobs by invigorating social ventures」 (May 16, 2018.) announced by the Ministry of SMEs and Startups, KOTEC has established and started operating a social-venture valuation system (sv.kibo.or.kr).

Providing the services of member registration, self-diagnosis, application for screening, application for appraisal, social-venture support systems, and training-program materials

Introduction to Social Ventures	Screening of Social Ventures	Appraisal of Social Ventures	Notice	Status Information
Concept of Social Ventures Application Procedure	What is screening of social ventures? Self-diagnosis Application for screening	What is appraisal of social ventures? Application for appraisal of social ventures	Introduction of support systems Training programs	Status of support institutions Other materials

Efforts to Improve Countermeasure Capabilities against Cyber Threats

➔ Establishing an Advanced Integrated Log-Management System (Mar. 2019)

The previous log-management system had been upgraded to a big-data-based security-control system (SIEM*) to create an integrated form of security control and log management.

* SIEM: Security Information and Event Management

➔ Setting up a Cooperative System with the National Intelligence Service (NIS) (Oct. 2019)

In an effort to share cyber-threat information in real time, KOTEC has joined the NIS' 'National Cyber-Threat Information-Sharing System,' building up a cooperative system to respond to growing and advancing cyber threats.

Result of Digitalization

KOTEC has been recognized for its excellence from the information-security assessment by the Ministry of SMEs and Startups, the personal-information protection management-level assessment by the Ministry of Interior and Safety, and assessments conducted by other external institutions on systematic digitalization.

Category	Conducted by	Assessment results	Remarks
Diagnosis on personal-information protection and management level of public institutions	Ministry of Interior and Safety	90.3 (out of 100)	Excellent grade for five consecutive years
Measurement of informationasset-management level	Ministry of Interior and Safety	93.7 (out of 100)	Included in the highest group among public institutions (where the average score is 88)
Information-security assessment of affiliated · subsidiary institutions	Ministry of SMEs and Startups	96.6 (out of 100)	Highest grade (1st rank) Ranked 1st for two consecutive years
Training to respond to cyber attacks	NIS	Excellent	Achieved the Excellent grade

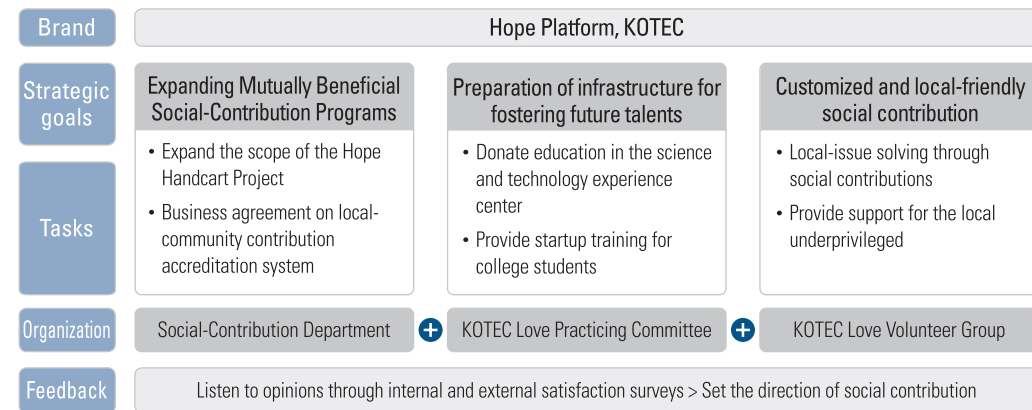
8. Social Contributions

→ Overview

By leading the realization of social values and providing support for stakeholders, such as SMEs, disadvantaged individuals, neglected neighbors, etc., KOTEC leads the establishment of welfare communities. Additionally, it promotes the realization of a public financial institution that contributes to developing communities as a goal in its social-contribution activities.

→ Strategy

In 2019, KOTEC conducted social contribution activities that reflect its purpose of establishment and work characteristics and contributed to the reconstruction of local communities by identifying and expanding social contribution programs closely connected to the local governments, local public institutions, and local residents.



→ Achievements

✓ Expanding Mutually Beneficial Cooperative Programs through Hope Handcart Project and an Agreement on a Local Community Contribution-Accreditation System

Expanded the creation of social-value (CSV) type social-contribution programs by expanding the Busan Hope Handcart Project.

Activities	<ul style="list-style-type: none"> Donated lightweight handcarts attached with billboards to the disadvantaged and paid them advertising expenses Established a cooperative model between private enterprises (Actors Company), the local government (Busan, community centers), and public institutions
Result	<ul style="list-style-type: none"> Participated in 1:1 matching between local public institutions and community centers Increased the number of handcarts (from 10 to 25) and provided safety gear, such as luminous vests in connection with Busan
Outcome	<ul style="list-style-type: none"> Through CSV-type social-contribution activities, the institution was promoted and advertised while, at the same time, jobs were provided for local disadvantaged individuals The established cooperative model is spread among public institutions in the Busan area and outside Busan in all directions

Concluded a business agreement on a local-community contribution-accreditation system* and became certified as a local-community contributing enterprise.

Activities	<ul style="list-style-type: none"> By conducting a business agreement on a local-community contribution-accreditation system with the Ministry of Health and Welfare and the Korea National Council on Social Welfare, social contributions were encouraged, along with socially responsible management for SMEs 	
Outcome	<ul style="list-style-type: none"> By building a sustainable welfare community, certification was granted as a local-community contributing enterprise by the Ministry of Health and Welfare 	

* Local-community contribution-accreditation system: System to recognize social-contribution activities by enterprises and institutions that contribute to solving local communities' issues by forming a cooperative relationship with local non-profit organizations

✓ Expanding donation of education for supporting startups and fostering local talents through future talent fostering programs

Category	Details
Education donation to Busan Finance Museum Road	Seven institutions, including KOTEC, Busan, and Busan Metropolitan City Office of Education, co-ran an education-donation program for finance and science; Received an award from the Mayor of Busan
Business-establishment education for university students studying engineering	KOTEC and excellent technology enterprises cooperated in providing technology experiences and business-establishment education for university students studying engineering
Participation in Busan Science Festival	Provided students and teenagers in the Busan area with opportunities to experience science through events like robot demonstrations and science experiments
Holding of KOTEC Science Day	Held an event to give students and citizens in the Busan area opportunities to experience robot demonstrations and science experiments in cooperation with the Federation of Busan Science and Technology

✓ Performing recipient-oriented and local-friendly social contribution activities

Category	Details
Support for those suffering from the forest fires in the Gangwon area	Formed 'KOTEC's Forest of Hope Trees' jointly with labor and management near the original point of ignition of the Sokcho forest fire and purchased regional products to help SMEs suffering damages resulting from the fire
Book donations to the Good Bookshop, jointly donated by labor union and corporation	Through a used-book donation campaign, held jointly by labor union and corporation, 2,000 books were voluntarily donated by employees and delivered to Gayang Public Library in Gangseo-gu, Seoul
Support for low-income children, jointly provided by labor and management	Labor and management jointly delivered school uniforms and supplies to disadvantaged students through 1:1 matching
Conducting voluntary activities in farming areas	Performed voluntary activities in farming areas around Seoul, Gyeonggi, Busan, and Gyeongnam
Conducting voluntary activities at soup kitchens in community welfare centers	Conducted voluntary activities at the soup kitchen in Gamman Community Welfare Center, etc.
Conducting voluntary activities by delivering coal briquettes	Donated and delivered coal briquettes to disadvantaged individuals, such as senior citizens living alone
Holding Hope Platform Cultural Events	Held joint cultural events for disadvantaged children, with the participation of employees

Formed KOTEC's Forest of Hope Trees



Donated books to Good Bookshop



9. Global Business Network and Cooperation

Key Activities and Achievements in 2019

Korea-Sweden Social Venture Dialogue (Jun. 2019)



MoU with Business Sweden (Jun. 2019)



Global Business Operations at KOTEC in 2019

Collaborate with European and Asian Partners to Facilitate Innovative Entrepreneurship, and Promote Globalization of KOTEC's Innovation Support Platform through Global Network

- Jan. 01** EC InnoRate Kick-off meeting
- Feb. 21** Visit from French public-investment bank (BPI France)
- May 28** InnoRate Co-Creation Workshop
- May 28** InnoRate 2nd project meeting
- Jun. 07** Visit from UN Technology Bank
- Jun. 15** Korea-Sweden Social Venture Dialogue
- Jun. 15** Signed MoU with Business Sweden
- Jun. 20** Visit from the Central Bank of Armenia and other related institutions
- Jul. 29** InnoRate online workshop (discussed ITRS design issues)
- Dec. 02** InnoRate project's 3rd meeting (presented ITRS design)
- Dec. 04** Visited European Investment Bank (EIB)



InnoRate Co-Creation Workshop (May 2019)



Visit from the Central Bank of Armenia (Jun. 2019)



Concluded multilateral business agreement with OSMEP, TCG, and NSTDA (Nov. 2019)



Korea-Thailand Startup-Policy Dialogue (Nov. 2019)



- Apr. 23** Visited Thai Credit Guarantee Corporation (TCG) and National Science and Technology Development Agency (NSTDA)
- Apr. 25** Visited Small and Medium Enterprise Credit Guarantee Fund of Taiwan (SMEG) and Industrial Technology Research Institute (ITRI)
- Jun. 06** Signed MoU for innovative-SMEs support with TCG
- Jul. 02** Held International Technology-Valuation Workshop in Taiwan
- Jul. 03** Signed MoU for innovative-SMEs support with SMEG
- Jul. 26** Visit from the Office of Small and Medium Enterprise Promotion (OSMEP) and Thailand Development Research Institute Foundation (TDRI)
- Aug. 18** KOICA Capacity Building for Climate Technology Business Cultivation
- Sep. 06** Thailand Tech Show 2019 (presented technology appraisal and information-sharing project success stories)
- Sep. 11** Visited Indonesia Credit Guarantee Corporation (Perum Jamkrindo)
- Sep. 12** Visited Credit Guarantee Corporation Malaysia Berhad (CGCMB)
- Oct. 08** KOICA Capacity Building for SME Financing
- Oct. 28** Participated in 32nd ACSIC conference and finalized plans for KOTEC's holding of the 2021 ATP
- Nov. 01** UNESCAP 2nd ASEAN Inclusive Business Summit (presented social-venture support policy)
- Nov. 25** Signed Multilateral MoU with OSMEP, TCG, and NSTDA of Thailand
- Nov. 25** ASEAN–Republic of Korea Commemorative Summit (held Korea-Thailand Startup-Policy Dialogue)

Visited Perum Jamkrindo (Sep. 2019)



Signed MoU with Taiwan SMEG (Jul. 2019)



APPENDIX

04

APPENDIX

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1. Financial Statements

Summary of Statement of Financial Position 2019

As of December 31, 2019

(Unit: KRW million)

Assets		Liabilities and Net Assets	
Item	Amount	Item	Amount
I. Current Assets	2,065,693	I. Current Liabilities	167,297
Cash and Cash Equivalents	19,597	Deferred Revenue	149,010
Short-term Financial Instruments	1,142,613	Others	18,287
Short-term Investment Securities	787,087		
Other current assets	116,396	II. Long-term Liabilities	1,110,314
		Reserves for Claim Payment	1,046,742
II. Investment Assets	426,788	Reserves for Paying Claims on P-CBO Guarantee	23,499
Long-term Financial Instruments	61,000	Accrued Liability for Retirement Allowance	40,073
Long-term Investment Securities	217,204		
Other Investment assets	148,584	III. Other Non-Current Liabilities	802
		Total Liabilities	1,278,413
III. Tangible Properties	145,189		
Land	53,716	I. Basic Net Assets	10,360,891
Buildings	84,985	Basic Fund at the Time of Foundation	21,768
Machinery	2,467	Contributions	10,339,123
Furniture, fixtures, and transport equipment etc.	4,021		
		II. Accumulated Reserves and Surpluses	(8,710,866)
IV. Intangible Properties	3,063	Retained Earnings Carried Over from the Previous Year	(8,706,101)
Industrial Property Rights	3,063	Other Changes in Net Assets	103,000
		Financial Operation Results	(107,765)
V. Other Non-Current Asset	312,736	III. Net Asset Adjustment	25,031
Claim for Indemnity	256,358	Gain and Loss on Investment Valuation	25,031
Preserved Claim	84		
Deposits and others	56,294	Total Net Assets	1,675,056
Total Assets	2,953,469	Total Liabilities and Net Assets	2,953,469

Summary of 2019 Statement of Changes in Net Assets

From January 1 to December 31, 2019

(Unit: KRW million)

Item	Amount		
	Total Cost	Income	Net Cost
I. Program Net Cost	1,040,887	(339,688)	701,199
Industrial Financial Support	1,040,887	(339,688)	701,199
II. Management Cost			60,181
Labor Cost			30,550
Expenses, other			29,631
III. Non Allocated Expenses			695
Asset Impairment Loss and others			695
IV. Non Allocated Income			54,557
Interest income and others			54,557
V. Net Operation Cost (I + II + III - IV)			707,518
VI. Non Exchange Revenue			599,753
Contribution Revenue			488,800
Other Sourcing and Transfer			110,953
VII. Operation Result (V - VI)			107,765

Summary of 2019 Statement of Changes in Net Assets

From January 1 to December 31, 2019

(Unit: KRW million)

Item	Amount			
	Net Asset	Accumulated Reserve and Surplus	Net Asset Adjustment	Total
I. Basic Net Asset	10,360,891	(8,706,101)	21,284	1,676,074
Reported Amount	10,360,891	(8,706,101)	21,284	1,676,074
II. Statement of Operation	-	107,765	-	107,765
III. Adjustment Accounts	-	103,000	3,747	106,747
Gain and Loss on Investment Securities Valuation	-	-	2,766	2,766
Gain on Asset Revaluation	-	-	981	981
Other Gain and Loss on Net Asset	-	103,000	-	103,000
IV. Ending Balance of Net Asset (I - II + III)	10,360,891	(8,710,866)	25,031	1,675,056

2. Board of Directors / Chief Audit Executive

Cho Gyu-Dae

Executive Vice President

Jeong Yoon-Mo

Chairman & President

Park Se-Kyu

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 Chairman & President and the Executive Vice President, along with Non-Executive Directors.

In 2019, KOTEC's Board of Directors, aiming to revitalize itself and encourage the active participation of its members for smooth execution of policies, defined specific improvement tasks — securing diversity and expertise among the members of the board, improving the representation of women, expanding motivation for participating on the board, and reinforcing preliminary explanations and how issues are shared. As a result, six new executives with expertise (including two female executives) were newly assigned, the participation of Non-Executive Directors was encouraged with the holding of a video conference, and 100% of the items on the agenda for the board meeting were explained in advance.

In addition, by organizing subcommittees and dividing roles, the Board of Directors streamlined its decision-making process. Moreover, by restructuring the advisory committees into expert committees for different departments, it revitalized deliberations by experts and strengthened the functions of checks and balances within management.

The Chief Audit Executive may attend board meetings and state his or her opinion while performing an audit and inspection on the work and financial state of KOTEC.

Baek Kyoung-Ho

Executive Director

Kim Young-Choon

Executive Director

Yoon Bum-Soo

Executive Director

Lee Jong-Bae

Executive Director



<Members of the Board of Directors>

Position	Name	Position	Name
Chairman & President	Jeong Yoon-Mo	Non-Executive Director	Lee Dae-Shik (incumbent professor in the College of Economics and International Trade at Pusan National University)
Executive Vice President	Cho Gyu-Dae		Choi Jae-Ho (incumbent non-executive director of Daewoo Shipbuilding & Marine Engineering Co., Ltd.)
Chief Audit Executive	Park Se-Kyu		Lee Chul-Won (lawyer at Insan Law Firm)
Executive Director	Baek Kyoung-Ho		Kang Yoon-Kyeong (representative lawyer at Law Firm Jeongsan)
	Kim Young-Choon		Kim Jin-Kwan (former management consultant at Apro Financial Co., Ltd.)
	Yoon Bum-Soo	Kim Sun-Hwa (incumbent director of Management Consulting Center at the Korea Small Business Institute)	
	Lee Jong-Bae		

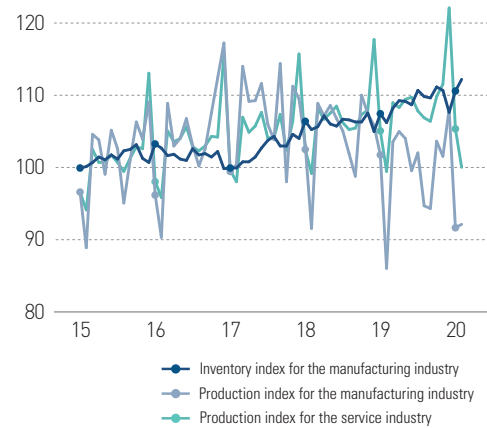
3. Economic Trends

Domestic SMEs

In 2019, amid aggravated exports and intensified weak domestic demand, a production slump in the manufacturing industry and growth recession in the service industry continued. Exports from SMEs also shrunk, especially in Chinese-speaking countries, due to the trade conflict between the US and China and a decline in export prices.

Despite deteriorated economic sentiment, at the end of 2019, thanks to expectations of improvement in the construction industry, following the government's SOC (Social Overhead Capital) expansion, SMEs' business statuses showed a trend of gentle recovery. However, the recent COVID-19 outbreak brought the rapid return of an economic downturn, also sharply affecting the business outlook for SMEs.

Production and Inventory of SMEs



Source: Statistics Korea

SMEs' Business Status BSI (outlook)



Source: Bank of Korea

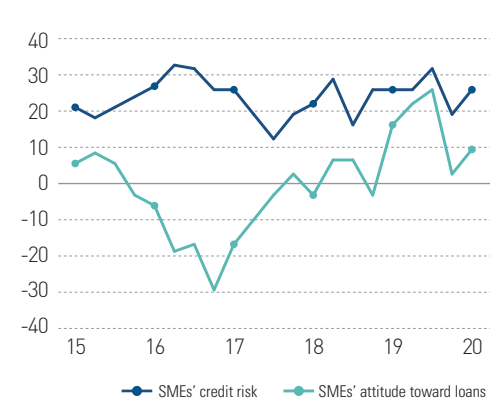
In 2019, the financial condition of SMEs was somewhat exacerbated due to increased personnel expenses and an economic slowdown, but thanks to the favorable financing environment fostered by the government, these difficulties were somewhat compensated for. In 2020, due to the COVID-19 pandemic, despite the aggressive expansion of policy funds and eased attitudes of banks toward SME loans (including loan-deposit ratios and productive finance), SMEs are expected to experience serious exacerbations in funding.

SMEs' Financial Condition and Loan Interest Rate



Source: Bank of Korea

SMEs' Credit Risk and Attitude toward Loans



Source: Bank of Korea

Venture Business

Overview

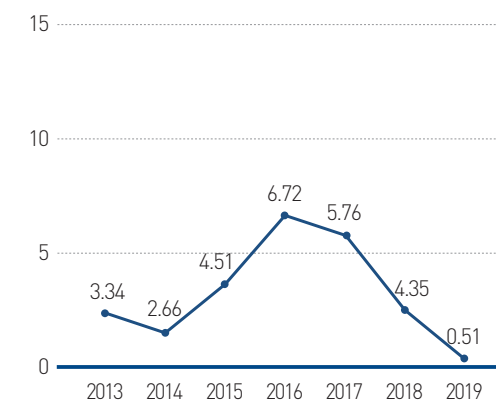
The government introduced a venture-verification system in 1998, based on the "Act on Special Measures for the Promotion of Venture Businesses", aimed at creating future-growth potential by verifying businesses with technology competitiveness and high-growth potential as venture businesses and providing various intangible benefits, such as funds, technology, personnel, and location.

History of Venture-Business Verification System

Since its introduction in 1998, the number of verified venture businesses reached 10,000 for the first time in July 2001. Thanks to the full-scale restructuring of the venture-business verification system in June 2006, which transferred the functions of venture-business verification from the government to the private sector, including KOTEC, KOSME, and the Korea Venture Capital Association, the number of venture businesses increased to 15,000 in 2008.

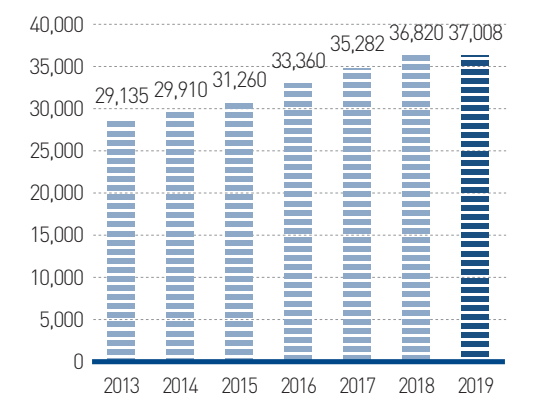
Number of Venture Companies by Year

Rate of Increase of Venture Businesses (Unit: %)



Source: VENTURE IN

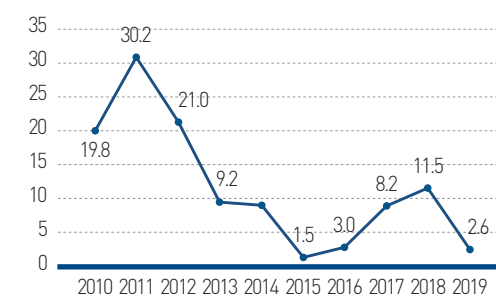
Number of Venture Businesses (Unit: no. of businesses)



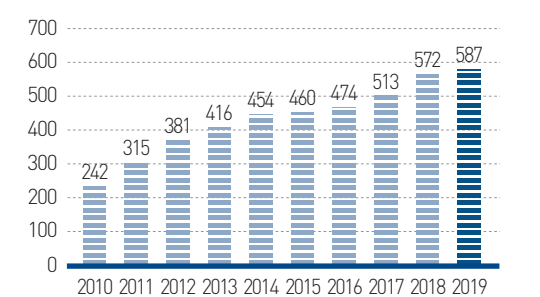
Hundred-Million-Earning Venture Businesses and Trend of Increase Rate

Venture businesses have grown remarkably in both number and quality. Amid difficult management conditions, such as the recent global economic downturn, the number of hundred-million-earning venture businesses, for which the turnover (in KRW) is a hundred million or more, reached 587 in 2019 (based on the closing of accounts for 2018), increasing by 2.6% (or 15 businesses) compared to 2018 (based on the closing of accounts for 2017).

Increase Rate of Hundred-Million-Earning Venture Businesses (Unit: %)



Number of Hundred-Million-Earning Venture Businesses (Unit: no. of businesses)



3. Economic Trends

→ Details of KOTEC's Guarantee Support for Hundred-Million-Earning Venture Businesses

Out of the 587 hundred-million-earning venture businesses selected by the Ministry of SMEs and Startups by 2019, KOTEC has provided guarantee support for 487 venture businesses and, according to the analysis results of these cases, the total amount of new guarantees reached KRW 2.933 trillion. Among these businesses, 397 (81.5%) graduated from their guarantees, while 90 businesses (18.5%) maintain guarantee balances amounting to KRW 185.2 billion.

Status of Guarantee Support for Hundred-Million-Earning Venture Businesses (Unit: no. of businesses, %)

Category	Businesses that graduated from guarantees		Guarantee-holding businesses		Sum	
	No. of businesses	New	No. of businesses	New	No. of businesses	New
Guarantee status (ratio)	397(81.5)	22,522(77.4)	90(18.5)	6,808(22.6)	487(100)	29,330(100)

Among businesses holding KOTEC guarantees, the number of businesses that went public through initial public offerings (IPO) is 260. Of these, 39 successfully conducted IPOs at the time of the initial guarantee dealing, 151 conducted their IPO during the period of a guarantee contract, and 70 did so after graduating from their guarantee. Based on these figures, it can be assumed that businesses receiving guarantees went through periods of growth and maturation while preparing a foundation for IPO during the guarantee period.

(Unit: no. of businesses)

Category	KOSDAQ	KOSPI	KONEX	Sum
At the time of initial guarantee dealing	29	10	0	39
During the period of guarantee contract	130	19	2	151
After graduating from guarantee	56	13	1	70
Total	215	42	3	260

KOTEC will play the leading role as a specialized technology-appraisal institution to actively discover venture businesses that will become the nation's future growth engines, devoting its efforts to providing technology finance for venture businesses' sustainable growth.

Inno-Biz

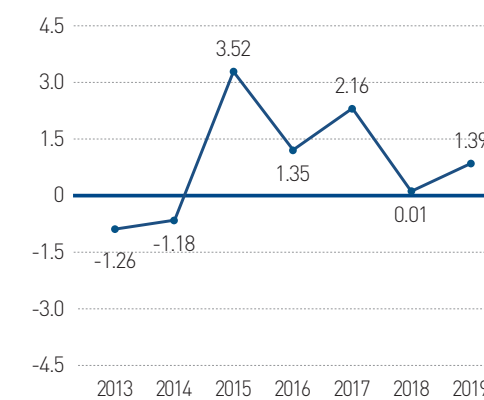
→ Overview

One of the most imminent challenges at hand is the task of fostering tech-oriented and innovative SMEs which are able to lead the national economy and help it to proactively cope with rapidly changing technological trends in the era of globalization. In 2001, the government established its "Plan for Identifying and Cultivating Innovative SMEs" under the SME Technology Innovation Promotion Act and implemented supplementary policies to designate SMEs with strong technological capabilities and growth potential as Inno-Biz enterprises. This was done to provide these SMEs with comprehensive support through technological funding and marketing, with the hopes of transforming the SMEs into competitive global players.

→ Trends in Selection of Inno-Biz Enterprises

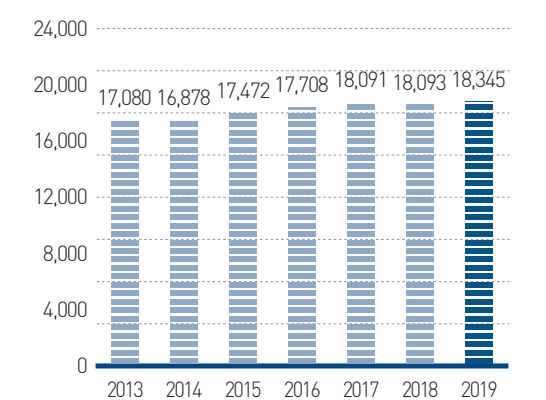
Thanks to continuous attention and support from the government and SME-related institutions, the number of enterprises applying for Inno-Biz certification continues to increase. As of the end of 2019, 18,345 enterprises had passed technology appraisals by KOTEC and were certified as Inno-Biz enterprises.

Increase Rate for Inno-Biz Enterprises (Unit: %)



Source: Ministry of SMEs and Startups

Number of Inno-Biz Enterprises (Unit: no. of enterprises)



4. Steering Committee

Steering Committee

Members of KOTEC

(Dec. 2019)

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

Type	Steering Committee Member			Note
Chair	KOTEC Chairman & President			
Appointed Members (5)	Appointed by the MSS Minister (1)	MSS	Director General for Venture Innovation Policy officer	Oh, Gi-ung
	Appointed by the MOEF Minister (1)	MOSF	Economic Budget Review Officer	Yang, Chung-mo
	Appointed by the head of FSC (1)	FSC	Head of the Financial Policy Bureau	Lee, Se-hun
	Appointed by the president of IBK (1)	IBK	Executive Vice President	Choi, Hyeon-suk
	Appointed by the president of KB (1)	KB Kookmin Bank	Senior Vice President	Shin, Deok-sun
Commissioned members (7)	Commissioned by the MSS Minister in consultation with FSC executives or the executive management of financial institutions (3)	Shinhan Bank	Executive Vice President	Choi, Dong-uk
		Woori Bank	Executive Vice President	Shin, Myeong-hyeok
		Hana Bank	Senior Vice President	Park, Ji-hwan
	Commissioned by the KORACHAM chairman (1)	KORACHAM	Executive Vice Chairman	Kim, Joon-dong
	Commissioned by the KBIZ Chairman (1)	KBIZ	Executive Vice Chairman	Seo, Seung-won
	Commissioned by the MSS minister in consultation with MSIT minister technology experts (2)	KOITA	Vice President	Ma, Chang-hwan
		Commercialization Promotion Agency for R&D Outcomes	Director	Bae, Jeong-hoe

5. Branch Network

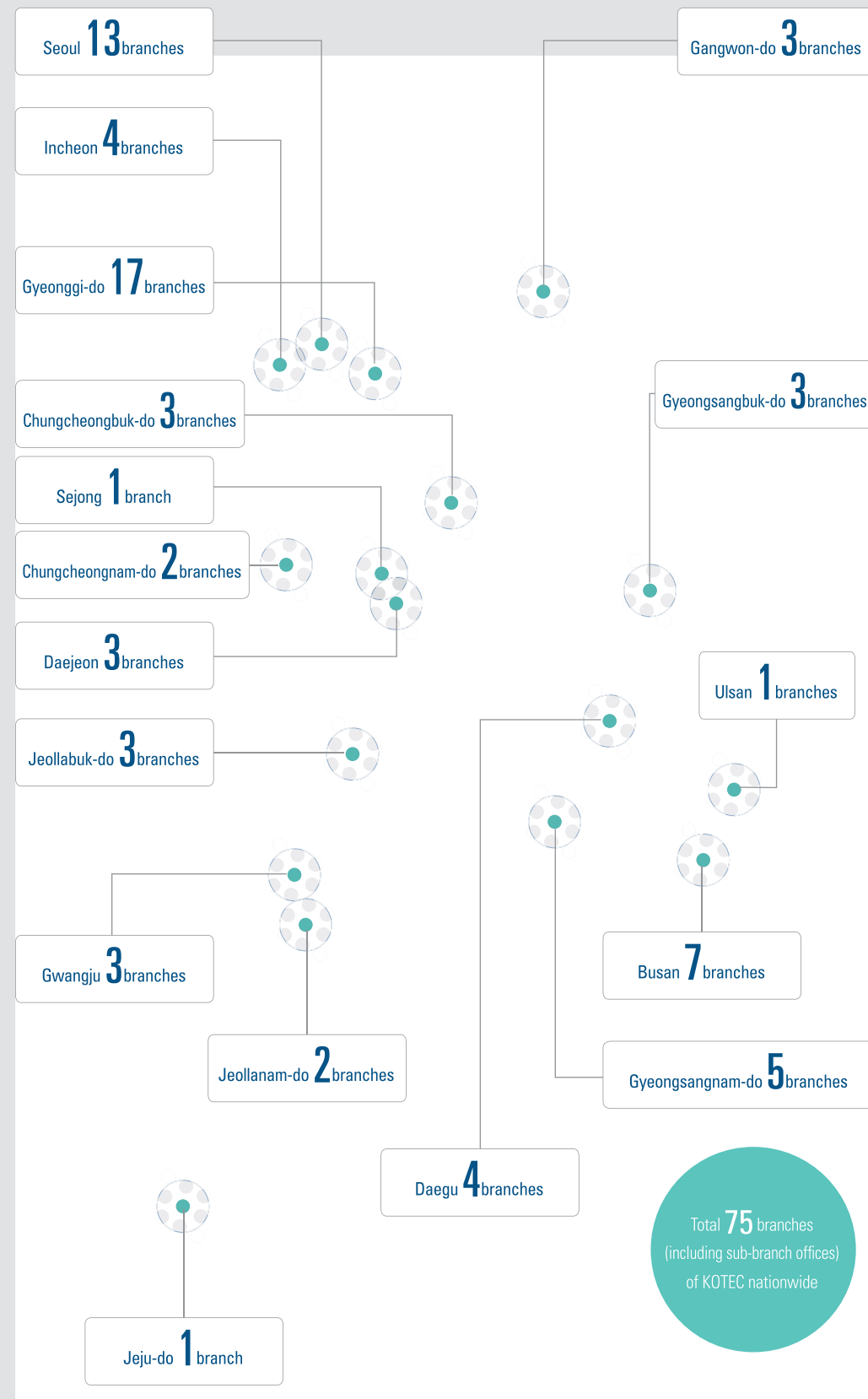
	Center	Address	Tel
Regional Headquarters	Gyeonggi	6th Fl., Suwon Regional Office of National Pension Service, B/D, 19, Hyowon-ro 307beon-gil, Paldal-gu, Suwon-si, Gyeonggi-do	031)8006-1590
	Daegu	10th Fl., S-Cube B/D, 2598 Dalgubeol-daero, Suseong-gu, Daegu	053)251-5672
	Busan	2nd Fl., annexe of KOTEC B/D, 33, Munhyeon Geumyung-ro, Nam-gu, Busan	051)606-6591
	Seoul	41st Fl., 50, 63-ro, Yeongdeungpo-gu, Seoul	02)3215-5915
	Incheon	10th Fl., Songdo centroad B B/D, 323, Incheon tower-daero, Yeonsu-gu, Incheon	032)830-5600
	Chungcheong	2nd Fl., KOTEC B/D, 141, Dunsanse-ro, Seo-gu, Daejeon	042)610-2232
	Honam	6th Fl., Mudeungsan Tower, 80, Jukbong-daero, Seo-gu, Gwangju	062)360-4662
Central Technology Appraisal Institute		11th Fl., Living Tower of Highbrand B/D, 16, Maeheon-ro, Seocho-gu, Seoul	02)2155-3754
Technology Appraisal Center	Gasam	Rm. 1906, STX-V Tower, 128, Gasan Digital-1-ro, Geumcheon-gu, Seoul	02)818-4300
	Gangnam	5th Fl., Dongwoo B/D, 328, Teheran-ro, Gangnam-gu, Seoul	02)2016-1300
	Gangneung	8th Fl., Donga B/D, 2110, Gyeonggang-ro, Gangneung-si, Gangwon-do	033)640-8700
	Gyeonggi Gwangju	2nd Fl., 1052, Gyeongchung-daero, Chowol-eup, Gwangju-si, Gyeonggi-do	031)724-5200
	Gyeongsan	1st Fl., Gyeongbuk Techno Park HQ building, 27 Sampoongro, Gyeongsan-si, Gyeongsangbuk-do	053)859-9000
	Gwangju	6th Fl., Mudeungsantower, 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., Industrial Bank of Korea B/D, 240, Mujin-daero, Gangsan-gu, Gwangju	062)970-9200
	Guro	Rm. 1801-1807, JNK Digital tower, Digital-ro 26gil 105, Guro-gu, Seoul	02)6124-6400
	Gumi	3rd Fl., Industrial Bank of Korea, 124, Suchul-daero, Gumi-si, Gyeongsangbuk-do	054)440-0730
	Gimpo	Rm. 805 Shinhan Plaza, 113, Gimpoheungang-4-ro, Gimpo-si, Gyeonggi-do	031)980-8600
	Gimhae	4th Fl., Industrial Bank of Korea B/D, 55, Naeoejungang-ro, Gimhae-si, Gyeongsangnam-do	055)330-2100
	Noksan	3rd Fl., Exchange Bank of Korea B/D, 20, Noksansandan-335-ro, Gangseo-gu, Busan	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 130, Wondae-ro, Buk-gu	053)350-9500
Daegu-Seo	12th Fl., Grand M Tower, 141 Yongsan-ro, Dalseo-gu, Daegu	053)550-1400	
Daejeon	1st Fl., KOTEC B/D, 141, Dunsanse-ro, Seo-gu, Daejeon	042)610-2200	
Daejeon-Dong	2nd Fl., Yuanta Securities, 540, Daejong-ro, Jung-gu, Daejeon	042)250-0700	
Dongnae	10th Fl., Geumjeong Tower, 1925, Jungang-daero, Geumjeong-gu, Busan	051)510-6900	

5. Branch Network

Center	Address	Tel
Masan	2nd Fl., Industrial Bank of Korea B/D, 323 Haeandae-ro, Masanhappo-gu, Changwon-si, Gyeongsangnam-do	055)249-9799
Mokpo	2nd Fl., Industrial Bank of Korea B/D, 25, Ogam-ro, Mokpo-si, Jeollanam-do	061)288-1500
Busan	3rd Fl., KOTEC B/D, 33, Munhyeon Geumyung-ro, Nam-gu, Busan	051)606-6500
Bucheon	4th Fl., NH Bank B/D, 217, Sohyang-ro, Bucheon-si, Gyeonggi-do	032)620-8800
Bupyeong	2nd Fl., Industrial Bank of Korea B/D, 353, Buheung-ro, Bupyeong-gu, Incheon	032)509-1700
Sasang	2nd Fl., Hana Bank B/D, 271, Hakgam-daero., Sasang-gu, Busan	051)320-3400
Saha	3rd Fl., Saus B/D, 336, Hasinjungang-ro, Saha-gu, Busan	051)250-7808
Seoul	41st Fl., 50, 63-ro, Yeongdeungpo-gu, Seoul	02)3215-5900
Seocho	4th Fl., Danwoo B/D, 181, Banggae-ro, Seocho-gu, Seoul	02)2224-3100
Seongnam	6th Fl., Gaon Media B/D, 884-3, Seongnam-daero, Bundang-gu, Seongnam-si, Gyeonggi-do	031)750-4800
Sejong	4th Fl., Sejong Central Tower 1219, Sejong-ro, Sejong-si	044)850-1800
Songpa	Rm. 601, IT Venter Tower East B/D, 135, Jung-daero, Songpagu, Seoul	02)3400-7900
Suwon	6th Fl., Suwon Regional Office of National Pension Service, B/D, 19, Hyowon-ro 307beon-gil, Paldal-gu, Suwon-si, Gyeonggi-do	031)8006-1500
Suncheon	6th Fl., Industrial Bank of Korea B/D, 152, Chunghyo-ro, Suncheon-si, Jeollanam-do	061)729-9333
Sihwa	3rd Fl., KT&G Ansan Branch, 361, Okgugongwon-ro, Siheung-si, Gyeonggi-do	031)496-5911
Asan	3rd Fl., Jangho B/D, 25, Baebang-ro, Baebang-eup, Asan-si, Chungcheongnam-do	041)538-5900
Ansan	9th Fl., Kyobo B/D, 366, Hwarang-ro, Danwon-gu, Ansan-si, Gyeonggi-do	031)8084-5300
Anyang	2nd Fl., National Health Insurance B/D, 182, Gwanpyeong-ro, Dongan-gu, Anyang-si, Gyeonggi-do	031)450-1600
Yangsan	3rd Fl., Industrial Bank of Korea B/D, 216, Jungang-ro, Yangsan-si, Gyeongsangnam-do	055)370-4700
Osan	4th Fl., 19, Naesammi-ro 79beon-gil, Osan-si, Gyeonggi-do	031)369-5500
Yongin	2nd Fl., 1349, Jungbu-daero, Cheoin-gu, Yongin-si, Gyeonggi-do	031)8020-4000
Ulsan	2nd Fl., Ulsan Economic Promotion Agency B/D, 915, Saneop-ro, Buk-gu, Ulsan	052)220-7900
Wonju	3rd Fl., NH Bank B/D, 115, Wonil-ro, Wonju-si, Gangwon-do	033)730-8300
Uijeongbu	4th Fl., Seokcheon B/D, 44, Uieong-ro, Uijeongbu-si, Gyeonggi-do	031)820-0300
Iksan	7th Fl., SK B/D, 39, Iksan-daero 16gil, Iksan-si, Jeollabuk-do	063)840-3100
Gunsan Office of Iksan	2nd Fl., Kyobo B/D, 35, Daehak-ro, Gunsan-si, Jeollabuk-do	063)460-2800
Incheon	10th Fl., Songdocentroad B B/D, 323, Incheontower-daero, Yeonsu-gu, Incheon	032)830-5600
Incheon-Jungang	1st Fl., KOTEC B/D., 30, Yesul-ro 152gil, Namdong-gu, Incheon	032)420-3500

Center	Address	Tel
Ilsan	15th Fl., Section-dong M-City Tower, 195 Baengma-ro, Ilsandong-gu, Goyang-si, Gyeonggi-do	031)931-7200
Jeonju	11th Fl., Jeonbuk B/D, 566, Baekje Blvd., Deokjin-gu, Jeonju-si, Jeollabuk-do	063)270-9800
Jongno	2nd Fl., Daewoo B/D, 30, Saemunan-ro 3-gil, Jongno-gu, Seoul	02)2280-4800
Jinju	4th Fl., Industrial Bank of Korea B/D, 310, Daesin-ro, Jinju-si, Gyeongsangnam-do	055)750-1111
Jincheon	3rd Fl., Daemyoung B/D, 356, Munhwa-ro, Jincheon-eup, Jincheon-gun, Chungcheongbuk-do	043)251-1500
Changwon	3rd Fl., Industrial Bank of Korea B/D, 38, Yongji-ro, Seongsangu, Changwon-si, Gyeongsangnam-do	055)210-4099
Cheonan	Rm. 802, 215, Gwangjang-ro, Seobuk-gu, Cheonan-si, Chungcheongnam-do	041)629-5913
Cheongju	6th Fl., Sannamdong Intem Plaza, 76, Sannam-ro, Seowongu, Cheongju-si, Chungcheongbuk-do	043)290-9513
Chuncheon	5th Fl., Industrial Bank of Korea B/D, 45, Geumgang-ro, Chuncheon-si, Gangwon-do	033)240-2800
Chungju	3rd Fl., Hyundai Motors B/D, 10, Aehyang-ro, Chungju-si, Chungcheongbuk-do	043)849-8600
Pangyo	5th Fl., 182, Pangyoyeok-ro, Bundang-gu, Seongnam-si, Gyeonggi-do	031)725-7800
Pyeongtaek	3rd Fl., Vision Plaza, 48, Pyeongtake-1-ro, Pyeongtaek-si, Gyeonggi-do	031)659-8700
Pohang	3rd Fl., Industrial Bank of Korea B/D, 369, POSCO-daero, Nam-gu, Pohang-si, Gyeongsangbuk-do	054)271-4900
Hwaseong	#C-207, Urieul Distribution Town, 934-4, Sicheong-ro, Paltan-myeon, Hwaseong-si, Gyeonggi-do	031)299-8200
Gyeonggi	6th Fl., 19, Hyowon-ro 307beon-gil, Paldal-gu, Suwon-si, Gyeonggi-do	031)8006-1570
Gwangju	6th Fl., Mudeungsantower, 80, Jukbong-daero, Seo-gu, Gwangju	062)360-4654
Daegu	12th Fl., Grand M Tower, 141 Yongsan-ro, Dalseo-gu, Daegu	053)550-1450
Daejeon	3rd Fl., 141, Dunsanse-ro, Seo-gu, Daejeon	042)610-2279
Busan	3rd Fl., 33, Munhyeon Geumyung-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, Digital-ro 26-gil, Guro-gu, Seoul	02)6124-6930
Incheon	4th Fl., 30, Yesul-ro 152beon-gil, Namdong-gu, Incheon	032)420-3560
Gyeonggi	5th Fl., Korean Semiconductor Industry Association Building, 182 Pangyoyeok-ro, Bundang-gu, Seongnam-si, Gyeonggi-do	031)725-7857
Busan	Busan Visual Industry Center, 39 Centums-ro, Haeundae-gu, Busan	051)726-1300
Seoul	41st Fl., 63 Building, 50 63-ro, Yeoungdeungpo-gu, Seoul	02)3215-5971
Venture Investment Center	2nd Fl., 30, Saemunan-ro 3-gil, Jongno-gu, Seoul	02)2280-4800
Social Venture Valuation Center	5th Fl., MG B/D, 89, Seongsui-ro, Seongdong-gu, Seoul	02)3407-2900

5. Branch Network



꿈이 깃든
기술력에
희망을

DREAM

KIBO 기술보증기금

당신의 소중한 기술력은
대한민국의 미래이기에
기술보증기금은
당신의 꿈이 깃든 기술력에 희망을 드립니다

