AI 5G+ VR·AR IoT Cloud Block Chain

A specialized agency pioneering South Korea's ICT innovations for the future

nipa National IT Industry Promotion Agency

NIPA is opening up the future of South Korea on the back of ICT and software industries.

The Fourth Industrial Revolution is creating massive changes in every industry and every aspect of life. Major countries around the world are focusing their capabilities on fostering 5G and software industries including artificial intelligence (AI) and virtual/augmented reality (VR/AR) -technologies key to the Fourth Industrial Revolution. South Korea is no exception. It urgently needs to find new growth engines in the convergence between traditional industries and software.

The National IT Industry Promotion Agency (NIPA) is engaging in a variety of initiatives to raise national competitiveness and secure growth engines for the future through convergence of software (including AI, VR/AR, 5G and cloud computing) into conventional industries. The agency is also taking the lead in efforts to help competitive SMEs and startups become unicorn companies by entering global markets, including the "New Southern" countries such as ASEAN and India.

Going forward, NIPA will continue to create new markets and support innovative growth of companies, drawing on its extensive experience and knowhow in the field. We will continue to represent and advocate for the ICT industry in South Korea and serve as a stepping-stone for future national economic growth.

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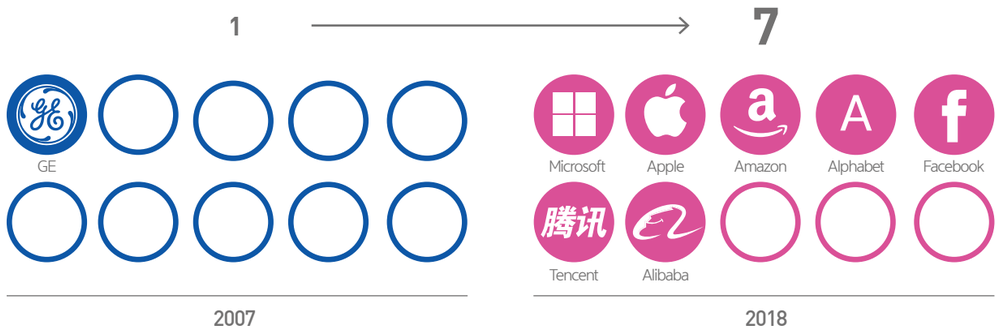
New Opportunities in the Software Industry

Convergence between ICT and software changing the world

Software companies leading global markets

No. of software firms in global top 10, by market cap



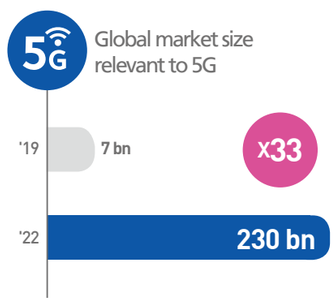
[Source: Financial Times]

Rapid growth of new software markets

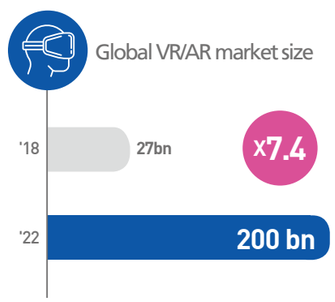
Unit : USD

[Source : IDC (2016)]

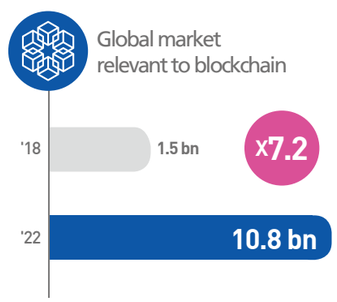
[Source : Gartner (2018)]



[Source : KISDI (2019) Reorganized]



[Source : Statista, Samjong KPMG (2019) Reorganized]



[Source: IDC (2018)]

Vision / Mission / Strategic Initiatives

NIPA - setting milestones in South Korea's ICT industry

MISSION Leading innovative growth for the nation and the economy through development of ICT and new software industries

VISION A specialized agency pioneering South Korea's ICT innovations for the future

Strategic Goals & Initiatives

New opportunities in the software industry
- Promoting convergence between new software and other industries
- Building innovative blockchain platforms
- Creating a foundation for the 3D printing industry
- Creating a foundation for ICT industries in regional areas

Fostering the AI industry
- Building AI platforms supporting accelerated growth
- Pushing for a strategic AI project "AI + X"
- Consolidating an intelligent next-generation IoT ecosystem
- Building a foundation for intelligent cloud services

Developing a content industry enabled by new technologies
- Building digital life platforms
- Securing killer content for 5G services
- Supporting infrastructure innovations for producing content converging with new technologies
- Promoting convergence of ICT with culture and the arts

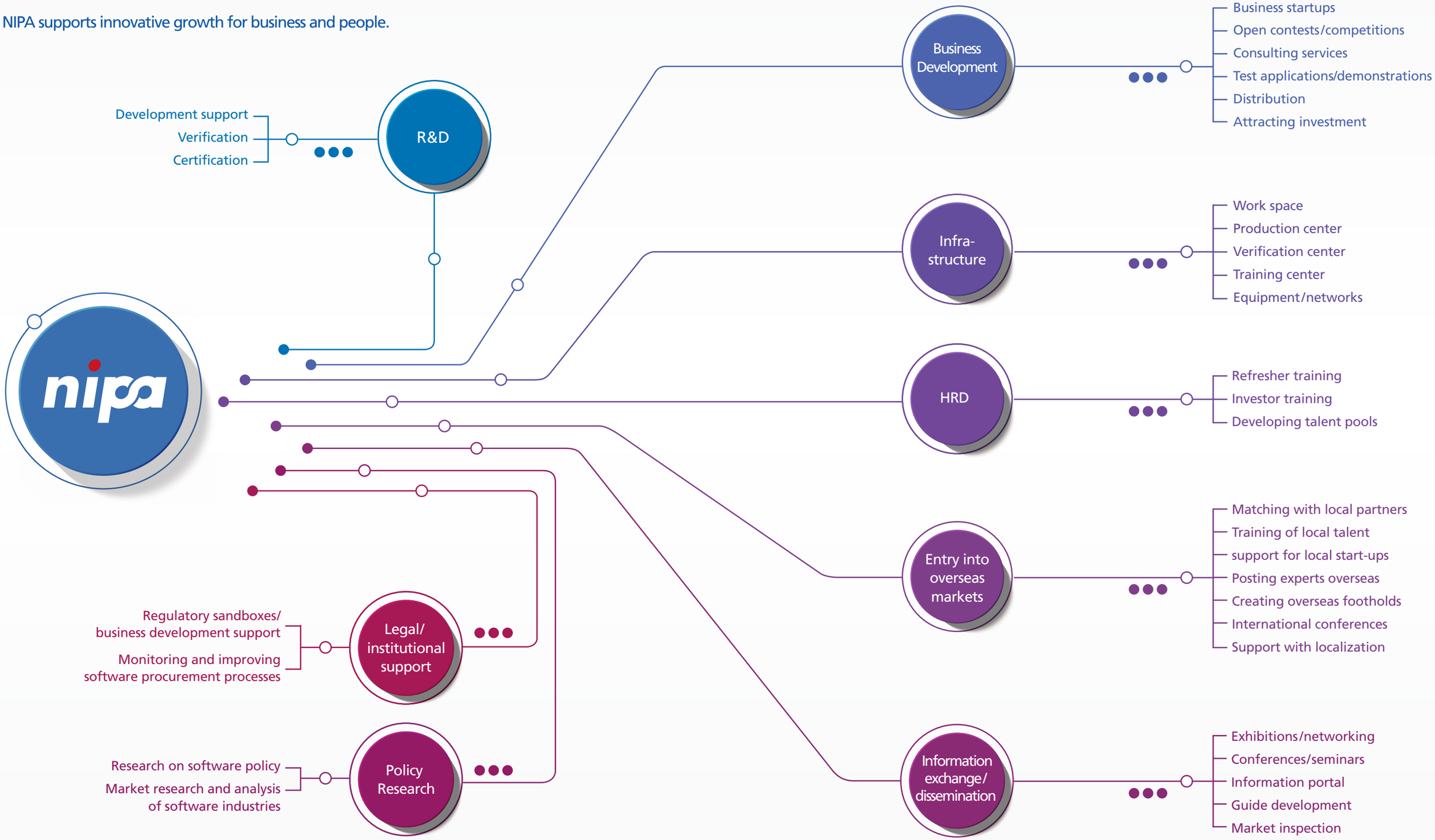
Developing an ICT ecosystem to support entry into global markets
- Accelerating ICT startups and entry into overseas markets
- Developing ICT talent and manpower souring for startups
- Creating a foundation for inter-Korean cooperation in the ICT industry
- Securing software quality competitiveness and designing safety systems
- Improving the regulatory environment for new markets and creating a level playing field for software businesses

CORE VALUES

Professionalism · Autonomy & Accountability · Communication & Collaboration

NIPA's Roles

NIPA supports innovative growth for business and people.



Promoting convergence between ICT and software

Software -
a breakthrough for the South Korean economy

Global ICT markets are led by new software industries that include AI, blockchain, and AR/VR.

NIPA assists with convergence of AI, blockchain, IoT and other new technologies into the country's competitive and promising industries with the ultimate aim of creating new markets and accelerating their development into new engines for growth.

Precision Medicine

- Developing and promoting a cloud-based hospital information system (P-HIS)/ Developing customized precision medicine services based on AI (Doctor Answer)
- Developing and demonstrating AI-based emergency medical services

Shipbuilding & marine engineering

- Customized IoT/ big data platforms, application development, and infrastructure support for real-ship environment testing
- Demonstrating Korean-made smart shipbuilding drawing on R&D outcomes
- Supporting technological development of AI + marine/shipbuilding - ship equipment maintenance, outfitting procurement framework, indoor process simulator, and intelligent design verification

Developing the blockchain industry

- Support for identifying and verifying blockchain service models
- Consulting services for developing and promoting blockchain services
- Developing blockchain experts through customized training programs

Creating a foundation for the 3D printing industry

- Identifying industries with potential high demand such as medicine and telecommunications and providing assistance with product development
- Support development/application of small batch production of multiple products, and talent nurturing
- Running the K-ICT Device Lab in Pangyo, South Korea

Creating a foundation for ICT industries in regional areas

- Raising regional competitiveness by converging ICT and software into specialized regional industries such as agri-bio, logistics, biotechnology, machinery, and beauty
- Fostering ICT/SW industries in regional areas

AI -
the key driver of the Fourth Industrial Revolution

AI technology is moving beyond changing everyday life and into transforming the industrial landscape.

NIPA works to apply AI into the nation's competitive industries and development of support application services. It also focuses on promoting an intelligent IoT industry and cloud services to allow all industries to grow on the back of the AI industry.

Building AI platforms supporting accelerated growth

- Building an integrated platform that leverages learning data/algorithms and high-performance computing resources
- Developing AI talent that draws on industry-specific learning data
- Identifying AI service models

Pushing for strategic AI projects

- Promoting AI application projects such as digital health, smart factories, smart cities, and intelligent future cars
- Pushing for intelligent corporate solutions and other AI application projects to support SME management innovation

Consolidating an intelligent next-generation IoT ecosystem

- Developing and verifying IoT services for the top 10 public sectors
- Supporting demonstrations and roadshows in global markets for promotion and export of convergence products
- Running IoT technical support centers in Gasan and Songdo, South Korea

Building the foundation for intelligent cloud services

- Supporting cloud startups and SMEs in the use of cloud services
- Identifying and developing intelligent SaaS for promotion both locally and globally, including the "New Southern" countries

Facilitating a paradigm Shift in Industry and ways of life

New technology-enabled content, on the wings of 5G, will bring about great change to life and industry.

NIPA builds digital life platforms leveraging new technologies such as VR/AR and 5G. It also identifies and secures killer content for 5G services in its efforts to create innovation in life and industry.

Building VR/AR digital life platforms

- Building digital life platforms that change our shopping, fashion, performance, and travel
- Supporting projects that converge VR/AR with other industries

Securing killer content for 5G services

- Identifying pioneering immersive content services supported by 5G and providing assistance with demonstrations (gaming and training)
- Supporting development of new, next-generation technological content, including AR graphics rendering, AR immersive representation, and holographic content
- Running a smart content center in Anyang, South Korea

Supporting infrastructure innovations for production of content converged with new technologies

- Advancing the infrastructure for production of VR/AR content, including construction of production systems and provision of space
- Providing one-stop support services to meet the demands of the new content service environment
- Running a VR production support center in Sangam, Seoul

Promoting convergence of ICT with culture and the arts

- Applying ICT in a variety of industries including culture and the arts, thereby identifying creative ideas and developing them into valued new products and services
- Identifying potential new industries created by converging ICT with other industries

* Motion capture + 3D scanning + camera tracking; software + drone + dancing; AR + motion capture + 3D scanning + fashion

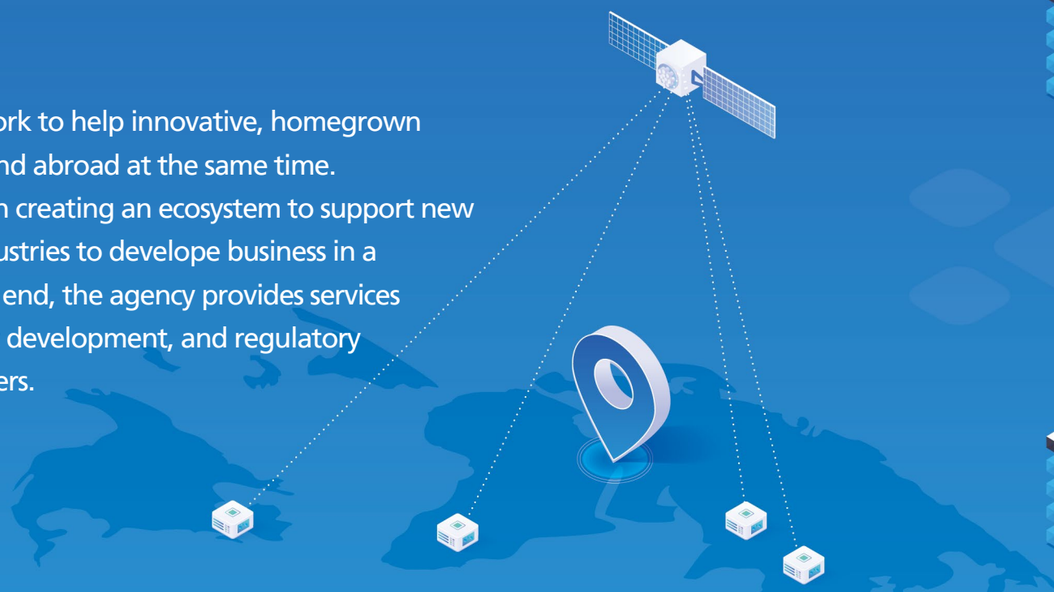
- Running an ICT-culture convergence center in Pangyo, South Korea

Developing an ICT ecosystem to support entry into global markets

04

Giving wings to companies entering global markets

NIPA builds a global network to help innovative, homegrown startups launch in Korea and abroad at the same time.
It also takes the initiative in creating an ecosystem to support new technologies and new industries to develope business in a fast-paced manner. To this end, the agency provides services for business startup, talent development, and regulatory improvement, among others.



Supporting accelerated startup of ICT business and entry into overseas markets

- Strengthening overseas footholds to aid penetration of global markets including the "New Southern" countries such as ASEAN and India
- Supporting startups and their growth into unicorn companies, providing opportunities for networking and investor search
- Providing local market information for small exporters on partnerships, networking, and regulations

Supporting development and talent sourcing of ICT talent for startups

- Developing professionals by industry including AI, blockchain, precision medicine, and manufacturing
- Assisting small venture firms with sourcing and development of local talent

Regulatory improvement for new markets

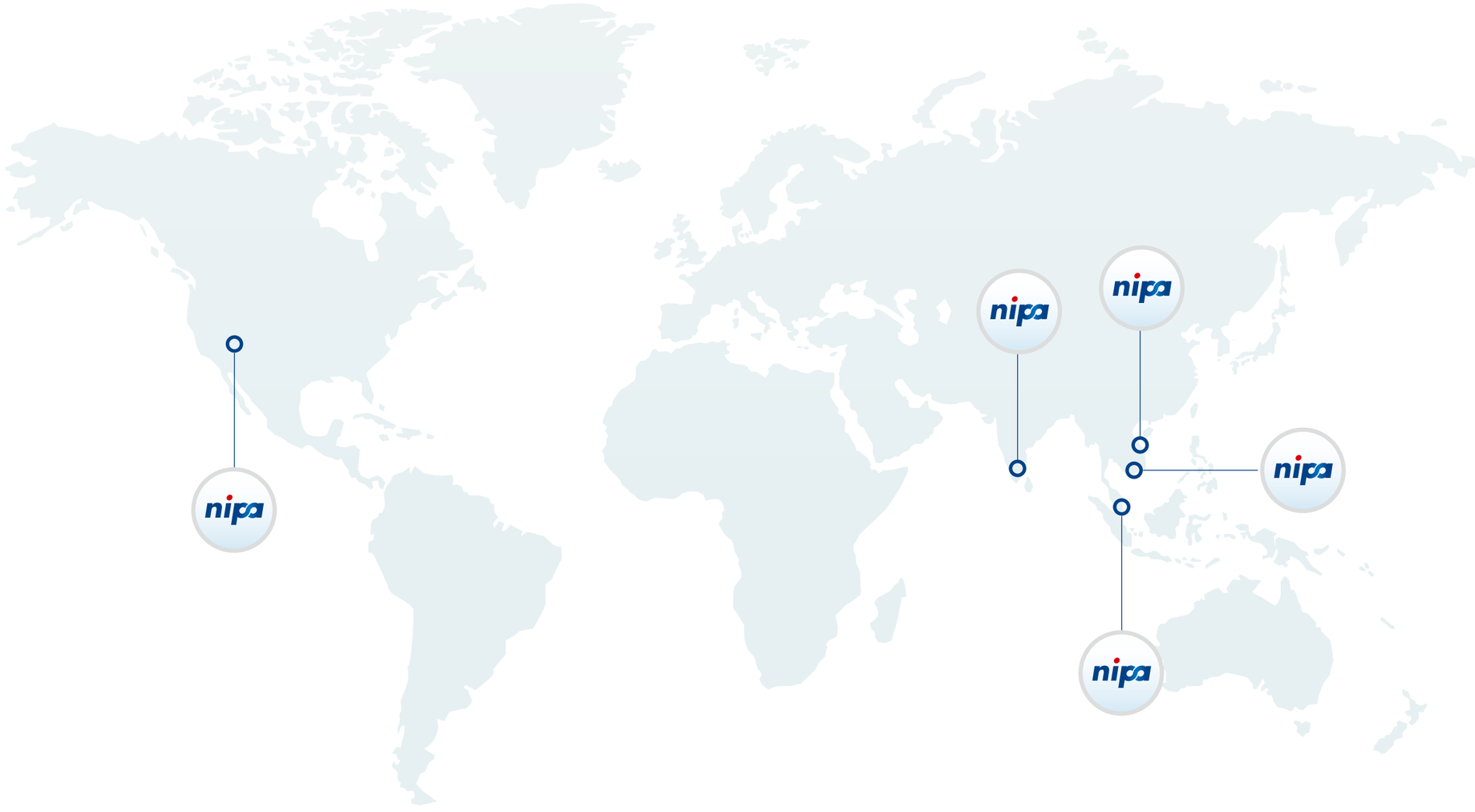
- ICT regulatory sandboxes
- Identifying areas needing a regulatory sandbox and supporting relevant deliberation
- Follow-up management of regulatory sandboxes
- Running ICT Regulatory Sandbox Advising Center [Website] www.sandbox.or.kr

Creating a level playing field for software businesses

- Providing assistance for relevant legal amendments including the Software Industry Promotion Act
- Tightened monitoring of implementation of and compliance with relevant laws on the ground

Outposts for Global Market Entry of ICT Companies

NIPA supports ICT and software SMEs seeking to enter global markets through one-stop services for finding and connecting local partners, marketing, and providing office space with each branch acting as a reliable resource in its respective market.



KIC Silicon Valley

3003 N 1st St, San Jose, CA 95134, USA

- Helping small technology companies with globalization/localization, and assisting their entry into the US market.
- Providing global personnel development programs.
- kicsv@kicsv.org, +1-408-519-5085

Korea-India Software Cooperation Center

#2780 Orion Building, Bengaluru-560037, Karnataka, India

- Year-round startup support programs.
- Customized business matching services, such as start-up training and investor searches.
- india@nipa.kr, +82-070-4686-3161

Korea IT Cooperation Center, Singapore

4F, AXA Tower, 8 Shenton way, Singapore

- Providing office Space, legal and accounting consultation regarding localization, business infrastructure for (prospective) firms entering ASEAN markets
- Assistance with creating local business opportunities through specialized programs, such as K-solution fair, Sales lab etc.
- kicc.singapore@nipa.kr, +65-6221-7380

Korea IT Cooperation Center, Hanoi

Keangnam Hanoi Landmark Tower 25th Fl, Plot E6, Pham Hung Road, Cau Giay District, Hanoi, Vietnam

- Providing business infrastructure for (prospective) firms entering Vietnam, including office space and, consultations regarding localization
- Consulting/marketing assistance with Korea-Vietnam ICT exchange meetings
- kicchanoi@nipa.kr, +84-24-7300-0671

Korea IT Cooperation Center, Ho Chi Minh

No.135, Hai Ba Trung Street, Ben Nghe ward, District 1, Ho Chi Minh City

- Providing business infrastructure for (prospective) firms entering Vietnam, such as office space, legal and accounting consultation for localization.
- Assistance with creating local business opportunities through specialized programs on HRD, local marketing, etc.
- hcmc@nipa.kr, +84-028-3520-8135

History

Since its inception in 2009, NIPA has been dedicated to the identification of ICT businesses and policy-making and to the creation of future growth engines for the economy.

NIPA will continue its efforts for a new decade of South Korea's ICT industry.

2009

AUG. NIPA established
An integration of IITA, KIPA, and KIEC

AUG. Jeong Gyeong-won,
first NIPA president, appointed

SEP. "Five Future Strategies for IT KOREA"

NOV. Software Engineering Center opens

2010

FEB. "National Strategies for Software Powerhouse" announced

JUL. "Strategies to Promote IT Convergence" devised

2011

MAR. Establishing "+α Industry Nurturing Strategies" for new added value creation

OCT. "Software Ecosystem Development Strategies to Drive Co-Prosperity" devised

DEC. "IT Future Vision 2020" unveiled

2012

JAN. Selected for excellence in customer satisfaction and anti-corruption efforts

APR. "Vision 2020 for Creative IT Powerhouse" unveiled

SEP. Park Su-yong,
second NIPA president, appointed

SEP. "IT Convergence Promotion Strategies 2013 – 2017" devised

DEC. Smart Learning
Industry Support Center opens

2013

AUG. "Strategies for Software Innovation" established

OCT. "Mid-term Strategies for Nurturing Software Talents" designed

NOV. Groundbreaking ceremony
for relocation

2014

JAN. Korea-India Software Cooperation Center opens

MAR. Software Policy and Research Institute established

JUL. Korea IT Cooperation Center,
Singapore opens

AUG. Open Software Developer Center opens

NOV. KIC Silicon Valley opens

2015

JAN. Amendment and enforcement of notification on the software subject to modular contracting

MAR. Yun Jong-rok,
third NIPA president, appointed

JUN. NIPA (main office) relocated

2016

FEB. "Comprehensive Mid-to-Long-Term Plan for Intelligent Information Society" designed

OCT. "Mid-to-Long-Term Technology Roadmap for ICT R&D" devised

DEC. "Plan for Convergence of K-ICT and Shipbuilding & Marine Engineering" established

2017

MAY. Set up "Council on Convergence of Shipbuilding/Marine Engineering and ICT"

NOV. Korea IT Cooperation Center,
Hanoi opens

2018

JAN. Establishing "Strategies for I-Korea 4.0 ICT R&D Innovation"

OCT. ICT regulatory sandbox law amended and promulgated

OCT. Kim Chang-yeong,
fourth NIPA president, appointed

DEC. Korea Social Contribution Award received in the Job Creation category

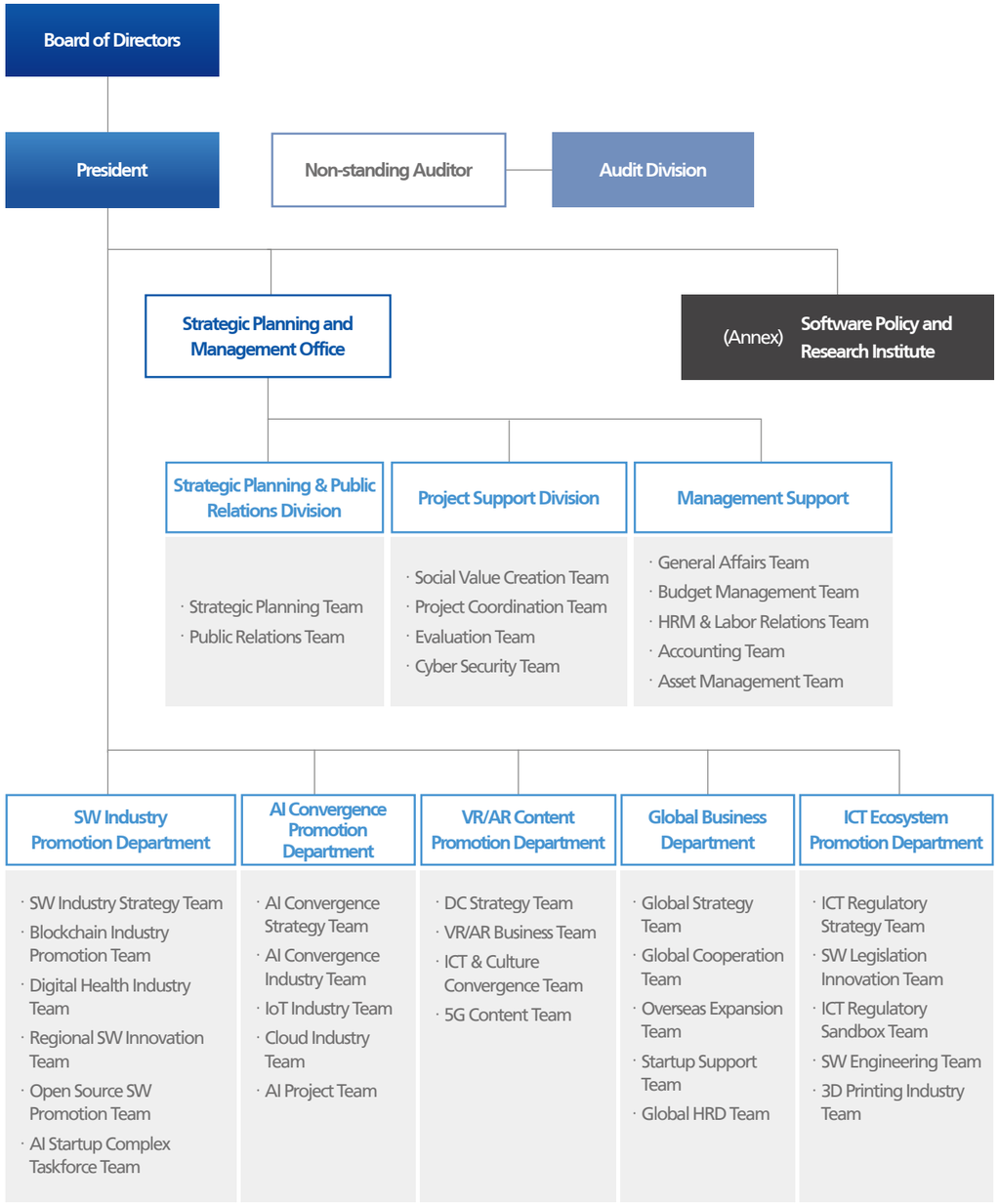
DEC. Became first public ICT institution to finish transition of entire workforce to permanent status

2019

JAN. Selected for excellence in adoption of private-sector cloud

MAY. Korea IT Cooperation Center,
Ho Chi Minh opens

Organization



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4F Research Building (A), Global R&D Center, 22 Daewang Pangyo-ro 712-gil,
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T. 031-739-7300

Nurikkum Square
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Mapo-gu, Seoul, South Korea
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Sujeong-gu, Seongnam-si, Gyeonggi-do Province, South Korea
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4F Startup Campus #1, 289 Pangyo-ro, Bundang-gu, Seongnam-si,
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T. 1670-5005

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#206 World Merdian Venture Center 1-cha, 254 Beotkkot-ro (Gasan-dong),
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T. 02-6458-4420

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