

Hub for Global Technology Commercialization

Daedeok Innopolis!

## Contents

- **04**\_ Overview
- 06\_ DDI History

#### **World's No.1 Innovation Cluster DDI**

- 10\_Inno-R&BD
- 17\_ Inno-Business
- 20\_ Inno-Academia
- 23\_ Inno-Networking
- 26\_ Global R&BD Hub DDI
- 28\_ Epilogue

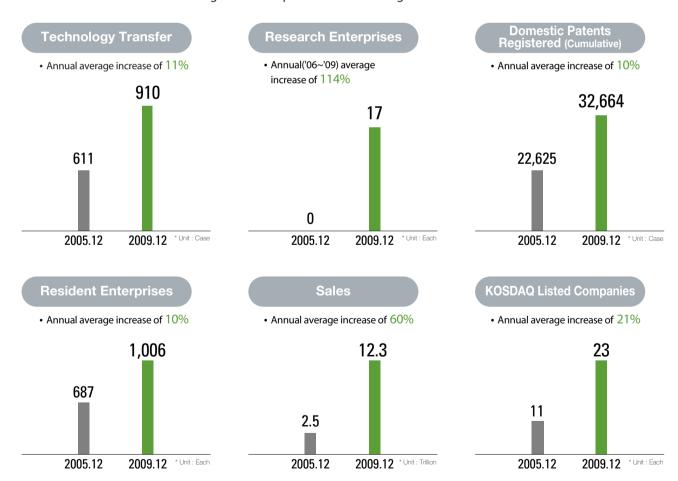
The cradle of science and technology in Korea and the heart of efforts to globally commercialize the nation's technology, Daedeok Innopolis is opening a new paradigm of R&BD as the future world number one innovation cluster.

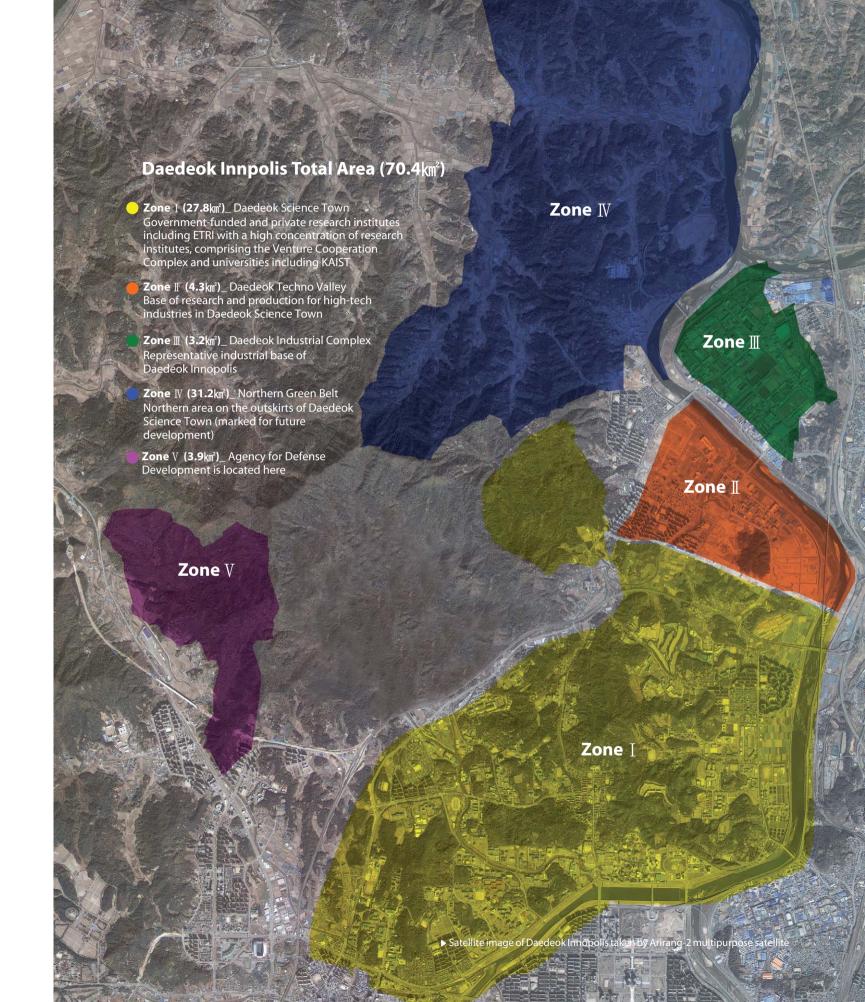
Hub for Global Technology Commercialization **Daedeok Innopolis!** 

# **Spearheading commercialization of global technology, Daedeok Innopolis!**

Daedeok Innopolis is a hub for global technology commercialization, combining R&D, business, and production. It was designated as an R&D special zone in pursuance of the Special Act on the Fostering of Daedeok Innopolis, Etc. enacted in July, 2005.

Daedeok Innopolis is home to more than 1,000 SMEs, including 29 government-funded institutions, 5 universities, and over 400 corporate R&D centers. Also resident in Daedeok Innopolis are 10 percent of all Ph.D.-level researchers in Korea who specialize in engineering and the natural sciences. Established as the shining emblem of Korea's science and technology, Daedeok Innopolis is now moving beyond science and R&D to take flight as a global innovation cluster, a stronghold for state-of-the-art technologies that compete on the world stage.





## **Over 40 trillion KRW invested over 35 years** A key milestone in Korea's scientific and technological advancement, Daedeok Innopolis!



#### Establishment of a foundation for strengthening Korea's R&D capacity

- Plans finalized for Daedeok Science Park and University Town (1973)
- Construction begins on Daedeok Science Town infrastructure and research institutes



Groundbreaking ceremony for KAERI (1975)



1980s

#### **Expanding the R&D Foundation** ('78-'92)

#### **Relocation of government-funded** research institutes

- Ministry of Science & Technology's Daedeok Administration Office installed
- Daedeok Science Town annexed to Daejeon (1983)



Launching of ETRI (1985)



KAIST Campus Move-In (1989)

2000s 1990s

#### **Creating Innovation ('93-'98)**

#### **Relocation starts for corporate** research institutes, laying of groundwork for industry-academia-research collaboration

- Act on the Administration of Daedeok Science Town established (1993)
- Daejeon EXPO (1993)
- Daedeok Science Town Administration Center established (1994)
- Formation of technology commercialization district within Daedeok Science Town approved (1996)



Opening of '93 Expo (1993)



Groundbreaking ceremony for KNFC fuel processing facility (1994)

#### **Forming Innovation Clusters, Evolving to the Next Level ('99-'09)**

#### Creation of a scientific-technological activity network and R&D innovation cluster

- Act on the Administration of Daedeok Science Town amended (production functions) (1999)
- \$20,000 GDP per capita declaration ceremony, relocation begins for high-tech enterprises (2000)
- Special Act on the Fostering of Daedeok Innopolis, etc. enacted (2005)
- Daedeok Innopolis Support Headquarters established (2005)



Exhibit commemorating the 30th anniversary of Daedeok Science Town (2003)



Announcement of the vision for Daedeok Innopolis

#### Fostering Creative Innovation ('10~)

#### Establishment as the world's No. 1 innovation cluster at the vanguard of global technology commercialization

- Construction begins on technology commercialization infrastructure comprising the Tech Biz Center, Research-Production Integration Facilities, etc. (2010)
- Rapid rise of knowledge-intensive premium venture companies
- Globalization of a Korean model for science parks



Nuclear reactor (Jordan) and nuclear power plant (UAE) export (2010)



Daedeok Tech Biz Center (TBC) (2010)



Hosting the International Association of Science Parks World Conference (2010)

**6** DAEDEOK INNOPOLIS

www.ddi.or.kr 7

# World's No.1 Innovation Cluster DDI

- Inno-R&BD
- Inno-Business
- Inno-Academia
- Inno-Networking

# Taking flight as a world-renowned innovation cluster, Daedeok Innopolis

Over the years, Daedeok Innopolis has served a critical role in raising Korea's scientific competitiveness to global top 4 status (IMD, Switzerland, 2010).

On the solid foundation furnished by the cutting-edge convergence and integration R&D capacity of government-funded institutes, the cultivation of top minds in science and technology at top-tier universities, and the growth of technology-intensive venture companies through the commercialization of R&D results, Daedeok Innopolis is fast advancing toward its goal of becoming a world-class innovation cluster and hub for global technology commercialization.

Daedeok Innopolis has consistently produced R&D results that formed the foundation for Korea's economic growth. Such proud achievements include CDMA, which has become the global standard for mobile communication; WiBro; terrestrial DMB; the export of Korean nuclear reactors to the UAE; the Korean-made global new drug Factive; the Arirang satellites; and the nuclear fusion research device KSTAR.

Today, Daedeok Innopolis is creating a business-friendly environment complete with a global network and support for industry-academia-research collaboration, as well as strengthening the management capabilities of future entrepreneurs. Through such efforts, it is being reborn as a stronghold for state-of-the-art technology enterprises that compete on the world stage.



First-ever export of Korean-style nuclear power plant to the UAE!
World's first commercialization of CDMA mobile communication technology!
Pioneering global technology commercialization through world's first,
world's best technologies, Daedeok Innopolis!

The cornerstone of R&BD for Korea's science and technology!

Dynamic technology exchanges and convergent research!

Government-funded institutes, such as the Electronics and Telecommunications Research Institute (ETRI) and the Korea Atomic Energy Research Institute (KAERI), and corporate R&D centers, including the Samsung Heavy Industries Daedeok Research Institute, the LG Chem Research Park, and the SK Energy Institute of Technology, have long played a leading role in Korea's scientific and technological advancement.

Daedeok Innopolis is home to Korea's foremost research institutes, whose excellent facilities and R&D infrastructure allow them to pioneer futuristic, state-of-the-art technologies in a broad spectrum of fields, including Information Technology, biotechnology, nanotechnology, aerospace, and nuclear technology. The innovative results they achieve in Daedeok's fertile environment continue to strengthen and expand the R&BD foundation of Korea's science and technology.

Government-Funded Institutes in Daedeok Innopolis



National NanoFab Center



Korea Institute of R&DB Human Resources Development



Korea Basic Science Institute



Korea Institute of Energy Research



Electronics and Telecommunications Research Institute



A STATE OF THE STA

National Institute for Mathematical Sciences



Daedeok Innopolis



National IT Industry Promotion Agency



Korea Evaluation Institute of Industrial Technology



Korea Institute of Nuclear Safety



Korea Institute of Geoscience and Mineral Resources





National Fusion Research Institute



Occupational Safety and Health Research Institute



Korea Institute of Science and Technology Information



Korea Research Institute of Bioscience and Biotechnology



Korea Atomic Energy Research Institute



Korea Astronomy and Space Science Institute



Maritime and Ocean Engineering Research Institute



Agency for Defense Developmen



Korea Institute of Toxicology



Korea Institute of Machinery and Materials



National Research Foundation of



Korea Institute of Nuclear Nonproliferation and Control



Korea Research Institute of Standards and Science



Korea Research Institute of Chemical Technology

Inno-R&BD World's No.1 Innovation Cluster DDI

#### Information Technology (IT)

#### Creating the legend of "Korea, World IT Power"

As the epicenter of Korea's strength as a world IT power, Daedeok Innopolis is spearheading research on human-centered IT convergence technology.

ETRI's landmark achievements in the IT field-including the development of the TDX switching system, which opened a new chapter in Korea's communications history; the commercialization of CDMA, which laid the foundation for Korea's preeminence in mobile phone technology; the realization of terrestrial DMB, hailed as "television in the palm of your hand"; the development of WiBro, the world's first high-speed mobile internet; and the development of NoLA, a cutting-edge 4G wireless transmission system-have provided Korea with the finest IT infrastructure in the world.



TDX (Fully Electronic Switching System): Opening a new chapter in Korea's communications



CDMA (Code Division Multiple Access): The foundation Terrestrial DMB (Digital Multimedia Broadcasting): for Korea's preeminence in mobile phone technology



Television in the palm of your hand



NoLA (New Nomadic Local Area Wireless Access): 4G mobile communications wireless transmission system

#### Biotechnology (BT)

#### Advanced knowledge-based technology offering high added value

Biotechnology is an advanced knowledge-based field offering high added value and the potential to deliver solutions to a broad range of urgent issues for humanity, from food and medicine to energy and the environment. New drug development, genetic research on animals, plants, and microorganisms, development of natural anti-inflammatory ingredients, and extraction of anti-influenza candidate materials from indigenous plants are just a few of the ongoing achievements in R&D and technology transfer produced by Daedeok Innopolis in its quest to provide a healthier tomorrow for humankind.



Korean-made global new drug Factive



Candidate substance for an AIDS



Substance for preventing and treating flu viruses



Bionano Research Center



**12** DAEDEOK INNOPOLIS www.ddi.or.kr 13 World's No.1 Innovation Cluster DDI

#### Nanotechnology (NT)

## Staking out ground in future markets through convergence technology

Nanotechnology is a cutting-edge new field that develops new materials and functional substances by controlling on an atomic or molecular level materials whose size is only 1/100,000th the thickness of a single hair.

Daedeok Innopolis commands world-leading technologies in nanoimprinting processes and carbon nanotube development, as well as top-notch nano research facilities like the National NanoFab Center. By converging with such fertile fields as IT and BT, the nanotechnology produced in Daedeok Innopolis will continue to stake out ground in the future market.

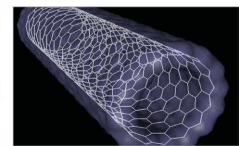




National NanoFab Center (NNFC)



Nanoimprint Lithography



Carbon Nanotube (CNT)

#### Space Technology (ST)

#### Making new history in the age of space development

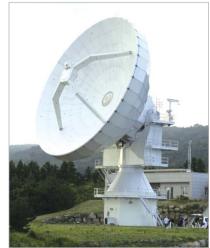
In the 21st century, national competitiveness hinges on taking the lead in space development. Forty years after first setting foot in space in 1969, humankind is now opening a new age of space development in Daedeok Innopolis. In recent years, Daedeok Innopolis has been taking a leading role in such milestone events as the realization of the first Korean astronaut, Dr. Lee So-yeon (2008); the construction of Naro Space Center, which made Korea the 13th country in the world to own a space center (2009); and the launching of Chollian, Korea's first geostationary orbit satellite (2010). As an advance base for Korea's voyage into the space age, Daedeok Innopolis is realizing Korea's dreams for space by developing new satellites, high-tech aircraft, and space launch vehicles.





Multipurpose satellite KOMPSAT-3

Giant Magellan Telescope (GMT)







Korean VLBI Network (KVN)

Chollian satellite

 $Aircraft\ development\_\ Smart\ UAV$ 

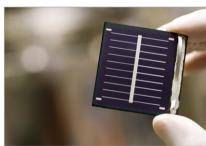
#### Energy and Environmental Technology (ET)

#### Preserving a future of sustainable growth for humanity

By developing cutting-edge nuclear fusion and new/renewable energy, Daedeok Innopolis is leading the effort to provide next-generation clean energy that will open a brighter future for humankind. Daedeok Innopolis is committed to building a future of sustainable growth. It is dramatically enhancing the safety and economic feasibility of nuclear power, a future clean energy with zero greenhouse gas emissions, and working to resolve the threat of resource depletion and environmental damage by creating advanced energy and environmental technologies.



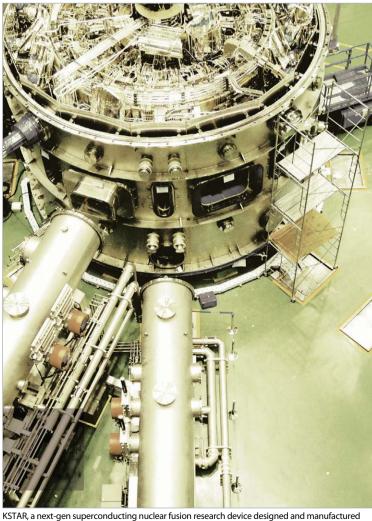
Diesel particulate filter using plasma



Photovoltaic technology



Hydrogen station



KSTAR, a next-gen superconducting nuclear fusion research device designed and manufactured using domestic technology



Home to future global enterprises and renowned business success, Daedeok Innopolis! Creating synergy through government support and industry-academia-research cooperation Fostering the meteoric rise of high-tech-based, knowledge-intensive premium venture companies

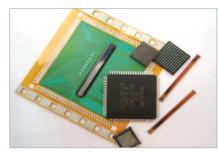
Inno-**Business**World's No.1 Innovation Cluster DDI

# Enterprises that aim for the global stage Venture companies offering premium technologies

Coexisting within Daedeok Innopolis are large corporations and venture firms specializing in advanced technology-based fields that span both science/technology and business. By combining world-class technology, diversified networks, efficient investment and information exchange, and win-win cooperation and competition, Daedeok Innopolis has created a healthy industrial ecosystem that helps premium venture companies achieve legendary success.



GOLFZON\_Top runner in the Korean screen golf



Silicon Works\_ World's only DDI total solutions provider



IDIS\_ No. 1 in the global DVR industry



PANAGENE\_ Global standard in genetic diagnosis



BIONEER\_ Korea's first bio venture company



Lightron \_True leader of the optical communications industry



NewGrid\_ Core-network equipment provider for all-IP-based multimedia services



 $\label{lem:chernol} \mbox{CHERYONG INDUSTRIAL CO., LTD. } \mbox{Leading name in high-efficiency amorphous transformers}$ 



ChoongAng Vaccine Laboratory Co., Ltd. \_ Experts in preventive pharmaceuticals

Key players in the commercialization of advanced technology research companies!
Various tax incentives and financial subsidies



Sun BioTech\_ US export of HemoHIM and Atomy Cosmetics



Macrograph\_ Digital creature technology created using domestic technological capabilities

A "research company" is a private enterprise that invests 20% or more of its capital to establish itself in Daedeok Innopolis for the purpose of commercializing technologies owned by public research institutes. A representative model of cooperation for technology commercialization, research companies bring together superior R&D achievements with private capital and management know-how.

The Research Company System was instituted in pursuance of Article 2 (5) of the Special Act on the Fostering of Daedeok Innopolis, Etc. for the purpose of promoting the commercialization of R&D results in Daedeok Innopolis. Since its inception, 17 research companies including Seoul Propolis and DMBro have been established, and the number is steadily growing.

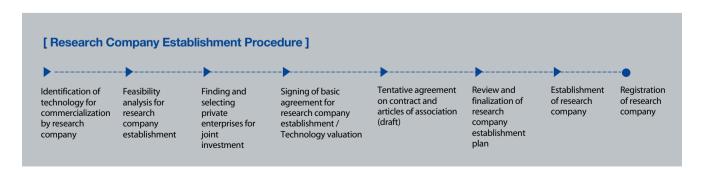
Sun Biotech, the first research company in Daedeok Innopolis, is a health supplement, cosmetics, and new materials R&D enterprise founded jointly by KAERI and Kolmar Korea, based on two patented technologies developed by KAERI in the fields of anti-cancer supplements and nanotechnology-based cosmetics. Sun Biotech recently finalized an export deal with a US distributor for its products HemoHIM and Atomy, and plans to use this as a springboard for advancing into China, Vietnam, and Japan.

Macrograph, a research company specializing in the digital actor technology developed by ETRI, received the "Best Mixed Media Technique" award at the 44th Daejong Awards, and is successfully expanding its business by inking a deal to export facial recognition software to the Abu Dhabi International Airport, winning the special effects and digital animation contract for the Hollywood film "Forbidden Kingdom," and more.

Through the construction of an innovation-oriented network backed by continued R&D and human resources support from public research institutes, research companies in Daedeok Innopolis will continue to grow and evolve as models of successful technology commercialization.

#### [ Research Company Eligibility Requirements ]

- ① The purpose of the company must be to commercialize technologies owned by public research institutes.
- ② The technology in question must be commercialized by the company itself.
- 4 The company must be established within Daedeok Innopolis.



18\_DAEDEOK INNOPOLIS www.ddi.or.kr\_19



Generating synergy through industry-academia-research collaboration!
Bringing together Korea's top minds, Daedeok Innopolis!
Brimming with the passion and enterprising spirit of world-class talent,
Daedeok Innopolis!

An incubator for the world's foremost minds
Cultivating creative convergence leaders

Home to such leading universities as KAIST, UST, Chungnam National University, Hannam University, Daeduk University, and more, Daedeok Innopolis strives to achieve mutual advancement by making these renowned institutions an advance base for building an industry- academia-research linkage system.

In addition to Hannam University, which operates a nanobio-specialized campus in Daedeok Innopolis, such regional institutions as Hanbat University (Technology Commercialization Center) and Pai Chai University (Center for Industry-Academia Cooperation) are busily building future competitiveness in Daedeok Innopolis' supportive environment.

Universities in Daedeok Innopolis aspire to become the world's best educational institutions in the field of science and technology. As the central axis in industry-academia-research collaboration, they are committed to fostering outstanding talents that will shine in the global arena.

KAIST\_ Cradle of state-of-the-art science and technology



KAIST is a polytechnic university founded for the purpose of cultivating high-quality science and technology human resources, carrying out mid/long-term R&D for national projects, and advancing Korea's scientific and technological level. As a global role model for universities, KAIST spearheads world-class projects aimed at resolving some of the most urgent challenges faced by humanity in the 21st century. It also operates 56 KAIST Research Centers, including the Satellite Technology Research Center (SaTReC), and 94 general research centers, and engages in diverse industry-academia collaboration with major enterprises.

- A new concept in maritime logistics systems, Mobile Harbor
- Charging on the run, On-Line Electric Vehicle
- Successful development and operation of Korea's first satellite, KITSAT-1, followed by KITSAT-2, KITSAT-3, and STSAT-1
- Korea's first running humanoid robot, HUBO 2

#### University of Science and Technology (UST)\_ Leader of creative convergence



A university run by the Ministry of Education, Science, and Technology, UST is dedicated to the cultivation of global leaders in the 5T convergence fields.

It is Korea's only educational institution centered on field R&D experience at government-funded research institutes. The UST "campus" is composed of 29 government research facilities, with the foremost researchers in each field comprising its faculty. Along with this unique advantage, UST offers cutting-edge facilities and equipment, and an educational program that utilizes national projects. The result is a superlative body of M.S.- and Ph.D.-level science and technology professionals with not only exceptional R&D field adaptability but also creativity, global competitiveness, and a capacity for cooperation across diverse fields.

- Successful development of new nanobio materials and cell imaging technology
- Development of a new ultra-precision optical technology model for fabricating high-performance mirrors used in telescopes
- Mapping of human chromosome 11
- Full genome sequencing for marine microorganism

#### Inno-Academia

#### Chungnam National University\_ No. 1 university in central Korea



Based in the central region of Korea, Chungnam National University (CNU) has been turning out many of the finest minds in the nation for 58 years.

In addition to its Law School and School of Medicine, it includes the Graduate School of Green Energy Technology, established and operated jointly with government research institutes in Daedeok Innopolis, and the University-Industry Collaboration Foundation. Committed to education and research that actively promotes the fields of IT/BT/NT, CNU has produced approximately half of all nationwide secondary school teachers specializing in technical subjects, and is working to strengthen its research competitiveness by establishing a system of cooperation with government research institutes and venture firms.

- Largest number of "Excellent Paper on Science and Technology" recipients in the nation (8 recipients in 2010, top 2 nationwide)
- No. 2 nationwide in the number of SCI papers published per faculty member per 100 million won of support
- First-ever domestic development of an Al vaccine

#### Hannam University, Daedeok Campus\_ Mecca of bio-nano education



Hannam University (HNU) erected its Daedeok Campus in Daedeok Innopolis, and designated it as a profit creation-oriented industry-academia-research cooperation campus encompassing the functions of education, research, and production.

The College of Bio-Nano Science, in particular, is fast establishing itself as a mecca of bio-nano education. Another key part of HNU is the Institute for Industry-Academy Cooperation, which provides various R&D support and consulting in conjunction with research institutes and venture companies based in Daedeok Innopolis.

- Expansion of HNU Science Park selected to receive project support
- Designated as supervising institution for the Regional Innovation System (RIS)
- Selected as a participating institution for the Successful Start-Up Package and Management Enhancement education programs

#### **Daeduk University\_** Enterprise-customized education



An industry-academia collaboration university representing central Korea, Daeduk University (DDU) was recognized as the nation's top institution in education quality by being awarded the Presidential Prize at the Convention for Promoting Quality Innovation in Educational Services. DDU is committed to providing customized education that produces talented individuals who are uniquely qualified to satisfy the needs of venture companies.

- Named "industry-academia collaboration university representing central Korea"
- Selected as a participating institution for MEST's College Competency Upgrade Program
- Government-subsidized overseas internships



A business-friendly environment, the Biz Ecosystem

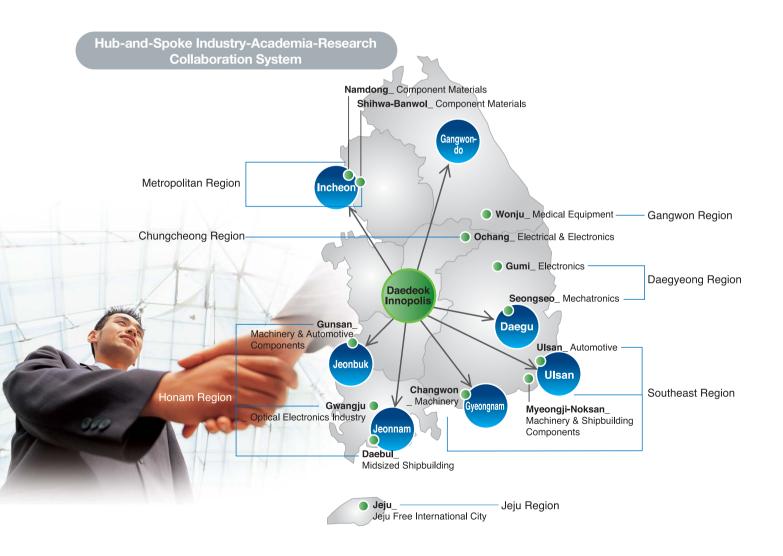
One-stop services for technology commercialization

A hub-and-spoke industry-academia-research collaboration system

Inno-Networking World's No.1 Innovation Cluster DDI

#### Backed by the finest global R&BD infrastructure At the center of a growing network for successful technology commercialization Korea's super-regional innovation cluster, Daedeok Innopolis!

Daedeok Innopolis is a mecca of technology commercialization that operates a wide variety of programs for successfully commercializing new technologies, and uses its rich store of accumulated know-how to synergize the nation's topmost R&D capacity with organic cooperation and exchange between industry, academia, and research. By completing a hub-and-spoke system linking its unique research capacity with advanced industries across the country, Daedeok Innopolis is firmly establishing itself as Korea's R&BD hub and super-regional innovation cluster.



#### **Building an R&BD** Infrastructure

By combining R&D results with successful business, Daedeok Innopolis serves as a new growth engine for Korea. Its unique ecosystem of institutions, facilities, and infrastructures provides fertile ground for commercializing new technologies.

Daedeok Innopolis boasts a high concentration of government and private agencies that support R&D and technology commercialization, including the Daedeok Innopolis Support Headquarters, the National Research Foundation of Korea, the Small and Medium Business Support Center, and Daejeon Technopark. It also offers an excellent array of infrastructures for technology commercialization support, including Daedeok Tech Biz Center (TBC) and Research-Production Integration Facilities.









Daedeok Tech Biz Center (TBC)

Research-Production Integration Facilities Daedeok Innopolis Help Center

Start-Up Support Center

#### Benefits for Resident Enterprises in Daedeok Innopolis

- Tax benefits for "research companies" and "companies with up-to-date technologies"
- State taxes: Income/corporation tax (100% exempt for 3 years, 50% reduced for subsequent 2 years)
- Local taxes : Acquisition/registration tax (exempt), property tax (100% exempt for 7 years, 50% reduced for subsequent 3 years)
- Daedeok Innopolis Investment Union
- An investment fund of 80 billion KRW invested in early ventures, etc.
- Utilities discounted for research institutes and businesses
- Electricity discounted approx. 38% for government research institutes, water discounted approx. 19% for agencies and businesses)
- An education/research/commercialization facilities district within Daedeok Innopolis(R&D Complex) Mitigation of transportationinduced financial burden for resident institutions
- Various forms of institutional support
- Special dispensations such as use of/profit from state-owned/public properties, exemption from various fees, etc.

- Less stringent application of construction regulations - Green zone BCR 20% →30%, FAR 80% → 150%
- General news and information about Daedeok Innopolis provided via the Daedeok Innopolis portal (www.ddi.or.kr/eng)
- Technology Market Information Portal (www.dit.or.kr)
- Provision of technology and market information for Daedeok Innopolis
- Electronic Civil Appeals Service (minwon.ddi.or.kr) and Daedeok Innopolis Help Center
- Fast, convenient complaint resolution support
- 20% discount for the Daedeok Innopolis Sports Center (for employees of resident enterprises and their spouses)
- Daedeok Innopolis Ombudsman System
- Provides support in resolving business management-related issues for foreign investors and living-related issues for foreigners

**24** DAEDEOK INNOPOLIS www.ddi.or.kr 25

#### Global R&BD Hub DDI

#### Soaring to new heights as the world's No. 1 innovation cluster A partner in the global community, **Daedeok Innopolis!**

As a hub science park for not only Northeast Asia but the entire world, Daedeok Innopolis is growing and evolving into the world's No. 1 innovation cluster. In addition to hosting the International Conference on Innovation Clusters (ICIC) each year, it continues to raise its international profile by holding a variety of international events, including the 2009 International Astronautical Congress (IAC) and the 2010 International Association of Science Parks (IASP) World Conference.



vestor relations session for Daedeok Innopolis

#### Overseas R&D Centers and Foreign Investment

- R&D centers from advanced nations actively accommodated in Daedeok Innopolis for continued growth as a global cluster
- \* ISIS (USA, pharmaceuticals), Norsat (Canada, satellite communications), NeuroSky (USA, brainwaves), VTT (Finland, ubiquitous), etc.
- Daedeok R&D center and production facilities built by LyoTip Korea, the Korean subsidiary of world-renowned US bioengineering firm IBS
- Factory No. 1 and 2 of Japanese multinational enterprise SMC, with subsidiaries in 38 countries worldwide, established in Daedeok Innopolis
- Leading Japanese enterprises Daiichi Institution Industry and Asia Information Tech moved into Daedeok Innopolis

#### **International Cooperation and Exchange**

- Establishment of cooperation and exchange agreements with 17 overseas innovation clusters, including France's Sophia Antipolis
- Transfer of know-how to developing nations for creating and operating a Korean-model Science & Technology Park (STP)
- Hosting of the annual ICIC Daedeok, a forum for international cooperation and exchange
- PR for Daedeok Innopolis by hosting information sessions and functions for the foreign diplomatic community and international media



Transfer of Korean-model STP operation know-how

#### **Organizing and Hosting of Major International Events**

- International Astronautical Congress (2009 IAC), the world's largest aerospace conference
- International Association of Science Parks World Conference (IASP 2010 Daedeok)
- Conference on Precision Electromagnetic Measurements (2010 CPEM)
- IAEA Fusion Energy Conference (2010 IAEA FEC), etc.

#### **Turning R&D results into commercial success** A hub of global technology commercialization, **Daedeok Innopolis!**

#### Establishing a virtuous cycle of R&D $\rightarrow$ Technology Commercialization $\rightarrow$ Reinvestment!

Daedeok Innopolis is evolving into a global innovation cluster by building on the firm foundation provided by industry-academia-research-private-public cooperation among resident institutes, enterprises, and universities.



Industry

In Daedeok Innopolis, with its high concentration of R&D functions, technology-intensive venture firms achieve rapid growth and new technologies find active world application through start-ups. In the years ahead, Daedeok Innopolis will serve as both cradle and stronghold for thousands of high-tech venture companies, a place where state-of-the-art technologies and the finest entrepreneurship in the world come together.

**Academia** Some 10% of all Ph.D.-level engineering and science researchers in Korea are concentrated in Daedeok Innopolis, giving it the greatest capacity for R&D in the nation. By nurturing world-class scientists and research professionals, Daedeok will play a central role in the cultivation of world leaders.



Research

In Daedeok Innopolis, state-funded research institutes and corporate research centers with proven records of technological innovation in such fields as IT and aerospace engineering are working ceaselessly to produce the world's best achievements in R&D. By carrying out advanced technology-based convergence research utilizing some of the finest research infrastructures available anywhere, they will serve as a bridgehead in Daedeok's journey to becoming a global innovation cluster.



People are the future of science and technology; they are also the driving force behind the technological creativity and cultural diversity characterizing Daedeok Innopolis. Building on its vision of "Human & Science," Daedeok Innopolis will continue to grow and develop through the harmony of passion and enterprising



**Public** 

Thanks to the generous investment and support of central and local governments, who continue to serve as Daedeok's facilitator, patron, and partner, Daedeok Innopolis is rapidly transforming into a shining hub of global technology commercialization.



DAEDEOK The logo representing Daedeok Innopolis' brand identity (BI) consists of five colors 0 P 0 L I S that respectively signify industry (red), academia (blue), research (green), private sector (purple), and public sector (orange). It expresses Daedeok's commitment to becoming the world's No. 1 innovation cluster through the combined effort of all five sectors.



**26** DAEDEOK INNOPOLIS www.ddi.or.kr 27



A cultural space defined by spirit, passion, and creativity
A city brimming with vitality
Higher quality of life made possible by the harmony of science and culture

The best of both worlds, Daedeok Innopolis

Culture comes to define the life and identity of a place through long history and tradition.

The culture of Daedeok Innopolis is a culture of research, a culture of spirit and passion defined by the drive to create legendary success. Restful green spaces fill the landscape, and science mingles with culture to create the finest quality of life for its inhabitants.

Daedeok Innopolis is a focal point at the center of Korea's growth.

Conveniently located just 30 minutes from the Cheongju International
Airport and 50 minutes from Seoul Daedeok Innopolis is a hub of
transportation transversed by the Gyeongbu and Honam railway lines, KTX,
and the Daejeon-Tongyeong, Daejeon-Dangjin expressways.

A short 2-3 hours is all it takes to get to Daedeok Innopolis from any location
within Korea.

#### **Convention & Conference**

A city that brings together top scholars from within and outside Korea, Daedeok Innopolis has hosted a broad range of international conferences including the 2009 IAC and the 2010 IASP. Assembled in Daedeok's state-of-the-art convention complex district are: the Daejeon Convention Center (DCC), with a 2000-seat grand ballroom and 2600-seat exhibition hall; the Korea Trade Exhibition Center. Daejeon (KOTRA), a specialized exhibition venue capable of admitting 5000 visitors simultaneously; the Daejeon Culture and Arts Center; the Daejeon Museum of Art; the CMB Expo Art Hall, and more.

#### **Arts & Amenities**

A diverse array of cultural groups and events—including the Daedeok Innopolis Singers, composed of resident science and technology professionals and their spouses; the Korean traditional orchestra Ayul, renowned for their heavenly harmony; and the International Festival—make Daedeok Innopolis a city that blends science with culture, where an artistic atmosphere fills the air. Daedeok Innopolis also offers a wealth of community amenities and facilities, such as the Daedeok Innopolis Sports Center, childcare facilities, and various sports and leisure parks, that contribute to the improvement of residents' health, welfare, and morale.

#### **Passion & Creation**

Brimming with passion, labor, and perseverance in pursuit of R&BD, Daedeok Innopolis is a city that never sleeps. It is the beating heart of global technology commercialization, where science and the human creative spirit meet to produce an optimal environment for business enterprises.



Daejeon Convention Center



KOTRA



CMB Expo Art Hall



**Innopolis Singers** 



International Festival



Daedeok Innopolis Sports Stadium



Science Nursery



Daedeok Innopolis Sports Center



Daedeok Innopolis Guesthouse

#### Contacts for Major Agencies and Institutions

#### **Government Research Institutes**

| National Institute for Mathematical Sciences (NIMS)              | www.nims.re.kr        | +82-42-864-5700 |
|--|-----------------------|-----------------|
| National Fusion Research Institute (NFRI)                        | www.nfri.re.kr        | +82-42-879-6000 |
| Agency for Defense Development (ADD)                             | www.add.re.kr         | +82-42-822-4271 |
| National NanoFab Center (NNFC)                                   | www.nnfc.re.kr        | +82-42-879-9500 |
| Occupational Safety and Health Research Institute (OSHRI)        | oshri.kosha.or.kr     | +82-42-869-0300 |
| Korea Institute of Toxicology (KIT)                              | www.kitox.re.kr       | +82-42-610-8250 |
| Korea Institute of R&DB Human Resources Development (KIRD)       | www.kird.re.kr        | +82-42-820-5600 |
| National IT Industry Promotion Agency (NIPA)                     | www.nipa.kr           | +82-42-710-1114 |
| Korea Institute of Science and Technology Information (KISTI)    | www.kisti.re.kr       | +82-42-869-1004 |
| Korea Institute of Machinery and Materials (KIMM)                | www.kimm.re.kr        | +82-42-861-7401 |
| Korea Basic Science Institute (KBSI)                             | www.kbsi.re.kr        | +82-42-865-3500 |
| Korea Evaluation Institute of Industrial Technology (KEIT)       | www.keit.re.kr        | +82-42-715-2114 |
| KOREA OCCUPATIONAL SAFTY & HEALTH AGENCY Daejeon Regional Office | www.kosha.or.kr       | +82-42-620-5600 |
| Korea Research Institute of Bioscience and Biotechnology (KRIBB) | www.kribb.re.kr       | +82-42-860-4114 |
| Korea Institute of Energy Research (KIER)                        | www.kier.re.kr        | +82-42-860-3114 |
| National Research Foundation of Korea (NRF)                      | www.nrf.go.kr         | +82-42-869-6114 |
| Korea Institute of Nuclear Safety (KINS)                         | www.kins.re.kr        | +82-42-868-0000 |
| Korea Atomic Energy Research Institute (KAERI)                   | www.kaeri.re.kr       | +82-42-868-2000 |
| Korea Institute of Nuclear Nonproliferation and Control (KINAC)  | www.kinac.re.kr       | +82-42-860-9700 |
| Electronics and Telecommunications Research Institute (ETRI)     | www.etri.re.kr        | +82-42-860-6114 |
| Korea Institute of Geoscience and Mineral Resources (KIGAM)      | www.kigam.re.kr       | +82-42-868-3114 |
| Korea Astronomy and Space Science Institute (KASI)               | www.kasi.re.kr        | +82-42-865-3332 |
| Korea Research Institute of Standards and Science (KRISS)        | www.kriss.re.kr       | +82-42-868-5114 |
| Korea Institute of Oriental Medicine (KIOM)                      | www.kiom.re.kr        | +82-42-861-1994 |
| Korea Aerospace Research Institute (KARI)                        | www.kari.re.kr        | +82-42-860-2114 |
| Maritime and Ocean Engineering Research Institute (MOERI)        | www.moeri.re.kr       | +82-42-866-3114 |
| Korea Research Institute of Chemical Technology (KRICT)          | www.krict.re.kr       | +82-42-860-7114 |
|  |                       |                 |
| Daedeok Innopolis Support Headquarters                           | www.ddi.or.kr         | +82-42-865-8800 |
| Daejeon Small and Medium Business Support Center                 | www.tssc.or.kr        | +82-42-864-4502 |
| Daejeon Technopark   | www.djtp.or.kr        | +82-42-930-2880 |
| Daedeok Innopolis Association                                    | www.sciencetown.or.kr | +82-42-861-8445 |
| Scientists's Association of National Research Institutes         | www.sanri.org         | +82-42-863-5851 |
| The Association of Korean Women Scientists and Engineers         | www.kwse.or.kr        | +82-42-863-8311 |
| Daedeok Innopolis Venture Association                            | www.diva.or.kr        | +82-42-867-9700 |
| Daedeok Industrial Complex Corp.                                 | www.dicox.or.kr       | +82-42-931-6363 |

www.ust.ac.kr

www.ddu.ac.kr

www.cnu.ac.kr

www.kaist.ac.kr

www.hnu.ac.kr

+82-42-864-5551

+82-42-866-0200

+82-42-821-5114

+82-42-350-2114

+82-42-629-7114

University of Science and Technology (UST)

Hannam University (HNU), Daedeok Campus

Korea Advanced Institute of Science and Technology (KAIST)

Chungnam National University (CNU)

Daeduk University (DDU)

**Support Agencies** 

**Educational Institutions** 

#### Tour of Daedeok Innopolis





#### Korea Atomic Energy Research Institute (KAERI)

Tour of exhibit hall and promotional video viewing
Tour of research facilities — HANARO facility,

KINAC

NIPA

radioactive isotope facility, KAERI Underground Research Tunnel, etc.

KASI

Tel +82-42-868-2798

KÁERI



#### Korea Institute of Machinery and Materials (KIMM)

- Promotional video viewing
- Introduction to large-area nanoimprinting technology, tailor blank laser welding system, DPF recycling plasma burner technology, and deep freezer; trial ride on the Urban Maglev
- · Tel +82-42-868-7861



- Viewing of facilities and video feeds for the primate testing facility

**Korea Research Institute of** 

(KRIBB)

**Bioscience and Biotechnology** 

· Promotional video viewing, early diagnosis

cancer-related diseases, understanding the

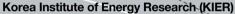
Human Genome Project, biochips/sensors, diagnosis kits, test animal type cultures, tour

and treatment development for

of research facilities, etc.

• Tel +82-42-860-4733

• Tel +82-42-610-8167



- · Introductory video, building-integrated awning-style
- Green building, hydrogen station, super energy-saving building, tour of Zero Energy Town
- •Tel +82-42-860-3262



#### **Korea Basic Science Institute (KBSI)**

- Guide to research functions and roles, promotional video viewing
- Introduction of KBSI's four representative apparatuses and accompanying lecture
- •Tel +82-42-865-3930~4



#### **National Fusion Research** Institute (NFRI)

- Introductory video
- KSTAR research device assembly procedure
- PowerPoint presentation on nuclear fusion
- energy
   Tour of exhibit hall (model and mock-up) and KSTAR device
- •Tel +82-42-879-6233

### Korea Institute of Toxicology (KIT)

- Promotional video for KIT, Korea stargest preclinical trial facility; tour of laboratories where preclinical trials are in progress



KRICT

• KIT

KIER

KRIBB

Daejeon • Observatory

KARI,

NFRI-KBSI



• NETEC







KINS



Museum

**National NanoFab Center** 

• Tour of equipment (NEMS/MEMS, etc.)

Semiconductors (CMOS)

•Tel +82-42-879-9642

and clean room

NNFC •

KISTI

(NNFC)







Daedeok Tech Biz Center (TBC)

• Exhibits of products from resident enterprises

• Promotional exhibit hall representing

and screening of promotional video

Biz Gallery

Daedeok Innopolis

•Tel +82-42-865-7081

KIOM









#### Korea Astronomy and Space Science Institute (KASI)

- Program for understanding the current state of Korean astronomical research and viewing ancient and present-day observation equipment
- Introduction to KASI; tour of Astronomy Experience Exhibit, ancient astronomical equipment, international GPS control points, Taeduk Radio Astronomy Observatory, KASI Sunspot Telescope, etc.
- Tel +82-42-865-2004

#### Korea Research Institute of Standards and Science (KRISS)

- KRISS promotional video viewing
- Special lecture: Introduction to measurement
- Tour of promotional exhibit (Sejong Hall)
- Measurement experience and tour of Newton's Apple
- ·Tel +82-42-868-5596



#### **Advanced Science and Technology**



- 4G wireless communication technology, human body communication, ubiquitous world, etc.

#### Center (ASTC) • Tour of national R&D results from 17 resident government research institutes • Tel +82-42-864-0055



- On-site programs on robots, digital actor technology, Promotional video viewing
- Tour of ETRI IT Exhibition Hall
- ·Tel +82-42-860-3901





Daedeok Innopolis 81 Expo-ro, Yuseong-gu, Daejeon, Korea TEL. +82-42-865-8800 www.ddi.or.kr



81 Expo-ro (Suite 310), Yuseong-gu, Daejeon, Korea TEL. +82-42-861-8445 www.sciencetown.or.kr

