



A Better Future Through Shared Innovation:

The Innovation Ecosystem of the National Innovation Center par Excellence (NICE)

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The Innovation Ecosystem of NICE



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NICE's Overseas Cooperation Models



长三角国家技术创新中心
NATIONAL INNOVATION CENTER for EXCELLENCE

1. The Innovation Ecosystem of NICE





WHERE ARE WE FROM?



We are from the Yangtze Delta region, one of the most globally connected, economically developed, and innovative regions in China.



Regional Composition

One metropolis of Shanghai and three provinces of Jiangsu, Anhui, and Zhejiang



Population

236 million, ~ 17% of the national total



GDP

~ 24% of the overall national GDP



R&D Spending

~ 30% of the national total



Foreign Investment

~ 40% of the national total, largest recipient of Foreign Direct Investment (FDI) inflow to China



Manufacturing Output

The Yangtze Delta region contributes to 8%+ of the global manufacturing output*

* According to the UN's Statistics Division (2022) and the National Bureau of Statistics of China (2022)

The Yangtze Delta Region of China (41cities)



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Shanghai



Nanjing, capital city of Jiangsu province



Hangzhou, capital city of Zhejiang province



Hefei, capital city of Anhui province



Suzhou, Cities in Jiangsu Province



Wuxi, Cities in Jiangsu Province



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NICE AT A GLANCE

R&D
Platforms



- **90+** institutes and innovation platforms in advanced materials, energy & environment, manufacturing, biology & medicine, and ICT

Industrial
Partnerships



- **360+** joint innovation centers that support industries to best-source R&D solutions globally

Innovation
Network



- **80+** strategic partners worldwide, including prominent universities, research institutes, international organizations and multinational corporations

Technical
Personnel

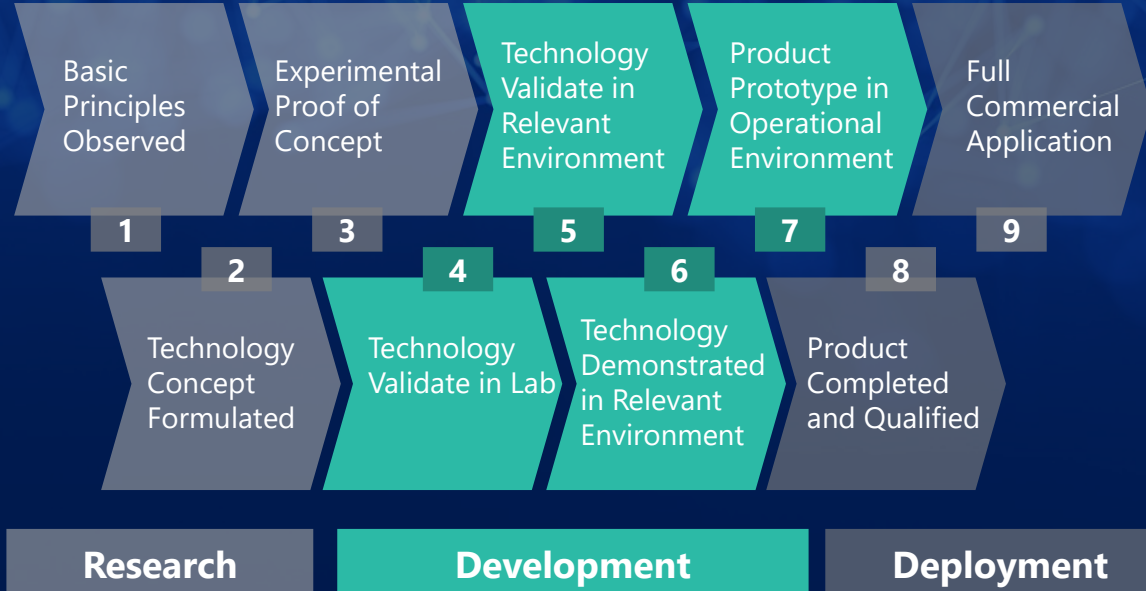


- **16,000+** researchers for applied R&D, with commitment to develop more talent jointly with our institutional partners

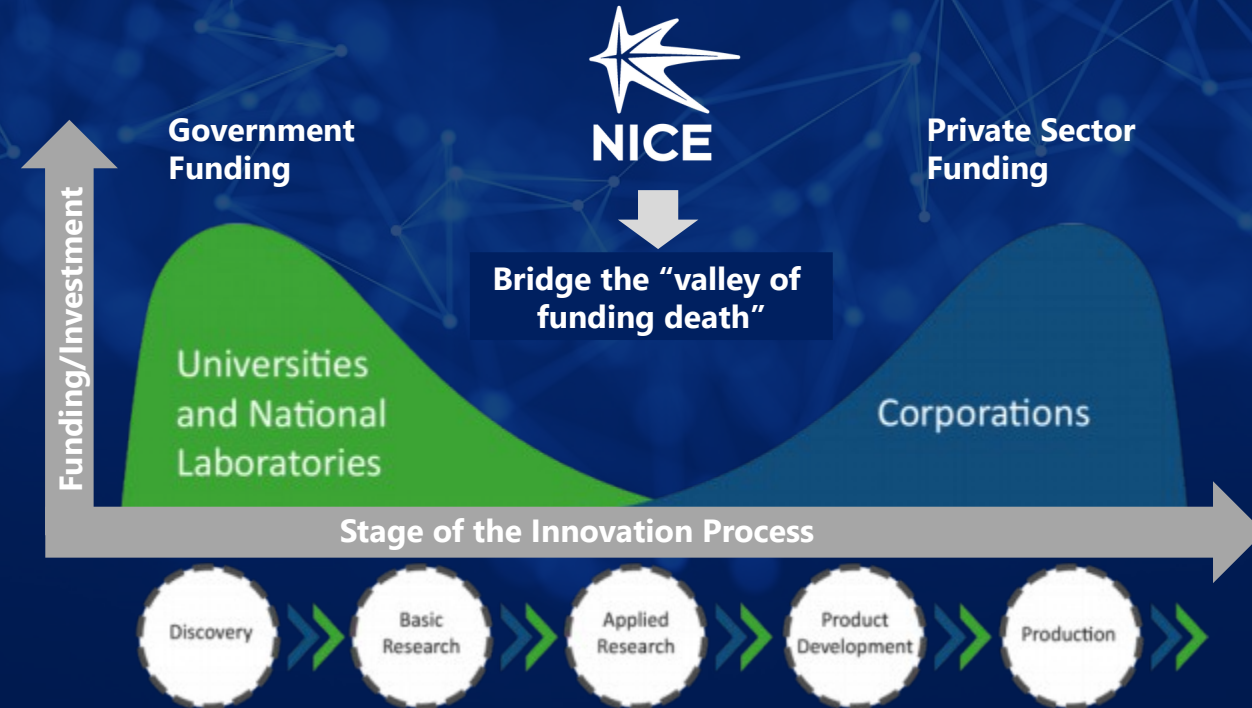


- As a top application-oriented research organization and a high-tech investor in China, NICE was founded to **promote industrial technology research and the commercialization of advanced scientific results**.
- NICE is driven to be responsive to technical demands from industry, thereby **bridging the infamous "valley of funding death" that lies between applied research and commercialization**.
- NICE is a not-for-profit organization that aims to accelerate the industrial upgrade in the Yangtze Delta region.

Technology Readiness Level (TRL)



NICE primarily supports projects between **TRL 4 and 7**.



Our Function as a Two-Way Bridge



长三角国家技术创新中心
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Global
Innovation
Community



The Yangtze
Delta



Academia



Industry



We strive to build a two-way bridge between the world and the Yangtze Delta,
and between science and industry.



Institutes & Innovation Platforms



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ADVANCED MATERIALS

Yangtze Delta Institute of Advanced Materials

Yangtze Delta Innovation Center of Carbon Fiber and Composite Materials

Innovation Center of Graphene Industry

Institute of Advanced Metal Materials and Applications

Institute of Nano Applications

Institute of Carbon Fiber Composites

Institute of Intelligent Liquid Crystal

Institute of Advanced Metallurgy

Institute of Molecular Engineering

Institute of Advanced Polymer Materials

Institute of Advanced Composite Materials Forming Technology and Equipment

Institute of Carbon Fiber and Composite Materials Application Technology

Institute of Organic Functional Materials and Applications

Institute of Photosensitive Materials

Institute of Advanced Fiber Applications

Institute of Advanced Optoelectronic Materials and Devices



MANUFACTURING & EQUIPMENT

Innovation Center of Ship and Ocean Engineering Equipment

Innovation Center of Intelligent Manufacturing

Innovation Center of Robotics

Institute of Intelligent Sensing Technology

Institute of Precision Manufacturing

Institute of Robotics and Intelligent Equipment

Institute of Fluid Engineering Equipment

Institute of Advanced Laser

Institute of Automotive Technology

Institute of Digital Manufacturing Technology

Institute of Intelligent Manufacturing

Institute of Road Engineering and Equipment

Institute of New Energy Vehicle

Institute of Micro-Nano Automation Systems and Equipment

Institute of Extreme Precision Measurement and System Control

Institute of Ultra-Precision Processing

Institute of Intelligent Optoelectronics

Institute of Operations and Control Systems

Institute of Applied Spectroscopy

Institute of Intelligent Transportation Systems and Equipment

Institute of New Energy Systems

Institute of Intelligent Sensing Technology



INFORMATION & COMMUNICATIONS TECHNOLOGY

Innovation Center of Integrated Circuit

Innovation Center of Technology Innovation Resource Data

Innovation Center of Integrated Circuit Industry

Innovation Center of Industrial Internet

Innovation Center of Neuromorphic Chips and On-Chip Intelligent Systems

Innovation Center of Industrial Control System Security

Innovation Center of Beidou Navigation

Innovation Center of Big Data Experimentation

Innovation Center of Supercomputing

Institute of Micro Technology Industrial Research

Institute of Third-Generation Semiconductor

Institute of Advanced Photonics

Institute of Integrated Circuit Technology

Institute of Wireless Communication and Information Transmission

Institute of Future Networking

Institute of Mobile Communication

Institute of Semiconductor Packaging

Institute of Optoelectronic Technology

Institute of Deep Perception

Institute of Intelligent Circuit Design

Institute of Brain-Computer Fusion Intelligence

Institute of Future City Applications

Institute of High-Performance Computing

Institute of Circuit Technology and Process



BIOTECHNOLOGY & MEDICINE

Innovation Center of Biomedicine Industry Technology

Institute of Biomedical Technology

Institute of Biomaterials and Medical Devices

Institute of Industrial Biotechnology

Institute of Food Biotechnology

Institute of Translational Medicine & Innovative Therapeutics

Institute of Biomedical Engineering

Institute of Brain Spatial Information

Institute of Novel Drug Formulations

Institute of Comparative Medicine

Institute of Medical Engineering Cross-Disciplinary Research

Institute of Cell Therapy

Institute of Aging Technology Innovation



ENERGY & ENVIRONMENT

Innovation Center of Solar Photovoltaic Technology

Innovation Center of Coastal Renewable Energy

Innovation Center of Low-Carbon Technology Innovation

Innovation Center of Intelligent New Energy Automobiles

Institute of Water Environmental Engineering (Yancheng)

Institute of Water Environmental Engineering (Yixing)

Institute of Membrane Science and Technology

Institute of Industrial Process Simulation and Optimization

Institute of Advanced Catalytic Technology

Institute of Advanced Energy Materials and Applications

Institute of Hydrogen Energy and Fuel Cell Research

Global Green Technology Center

Fueling Industrial Growth, Accelerating Technology Advancement

Through 360+ joint innovation centers with influential companies, JITRI facilitates collaborative R&D projects and helps identify technology gaps. This unique partnership creates new opportunities for growth and success, providing enterprises with the competitive edge it needs to thrive in today's global marketplace.



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JOINT INNOVATION CENTERS WITH LEADING ENTERPRISES



Empowering Local Business with Global Innovation through JITRI

Domestic Partners (Selected List)



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NATIONAL INNOVATION CENTER for EXCELLENCE



- NICE/JITRI has **70+** domestic academic partners, including the most prominent universities and research institutes in China, such as the Chinese Academy of Sciences, Peking University, Tsinghua University, Nanjing University, Tongji University, etc.



- NICE/JITRI establishes research institutes jointly with domestic universities and institutes.



- **1000~2000** graduate students are jointly trained by JITRI institutes and partner universities annually.



- NICE/JITRI regularly hosts Entrepreneurship Training Camps to train graduate students.



Partnering with the Best in Innovation



Europe



North America



Asia Pacific and Africa



International Organizations



Overseas Incubators & Offices



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Silicon Valley Office,
USA



Office in Toronto,
Canada



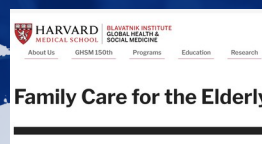
Copenhagen Innovation
Center, Denmark



Oxford-JITRI Impact
Office, the UK



CUBIO Incubator in
Houston, USA



Harvard Social
Technology for Global
Aging Research
Initiative, Boston, USA



OurCrowd Investment
Platform



The overseas offices and incubators provide a bridge between JITRI and the global innovation community, promoting partnership and technological advancement on a global scale.

Connecting Innovators with JITRI's Thriving Ecosystem

Innovation Complex



长三角国家技术创新中心
NATIONAL INNOVATION CENTER par EXCELLENCE

JITRI HQ in Nanjing
100,000 m² + 200,000 m²



Xiangcheng District, Suzhou
390,000 m²



Shanghai Yangtze Delta Innovation Institute
(SYDII) in Shanghai 25,000 m²





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2. NICE's Overseas Cooperation Models

Overseas Cooperation Mechanisms



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Universities & Research Institutes

- Support partner universities and institutes to carry out R&D, training, and technology transfer projects



Multinational Companies

- Provide R&D services, initiate joint training programs, and establish joint R&D centers
- Create an open innovation system



Start-up Teams & High-tech Companies

- Incubate and invest in overseas teams to set up companies and institutes, and provide guidance on IP protection, business model formulation & market introduction
- Help overseas high-tech companies land in China, reducing risks by validating technology, teams, and markets

○ Joint venture model:



HALDOR TOPSØE 

Catalyzing Global Innovation through Collaborative R&D, Incubation, and Expert Support



Funding Pool Program

Project Manager Program

Foreign Companies

Establishing joint ventures with top international R&D companies

- **NICE (minority shareholder)** provides operating fund, project initiation and start-up support to the JV.
- **Core project management & technical team (majority shareholder)** holds more than 60% of the initial registered capital (majority shares).
 - Responsible for daily operations of the JV.
- **Local industrial park (minority shareholder)** provides operating fund, office space, facilities, equipment, policy support, etc.

Initial Registered Capital Contribution

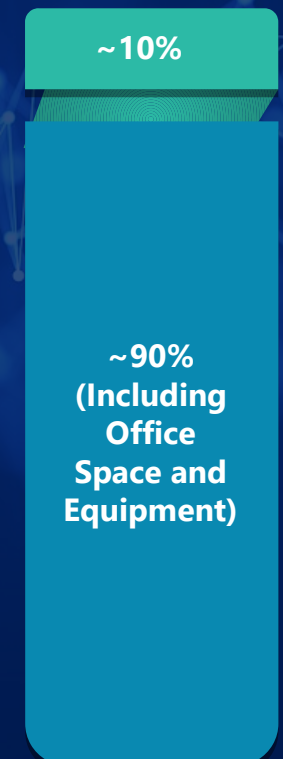


NICE

International R&D Company or Technical Team

Local Industrial Park

Operating Fund of the JV for 3-5 Years



Partnership with Universities & Research Institutes

SUCCESS CASE



Since the signing of a strategic cooperation agreement in 2015, JITRI and National University of Singapore (NUS) have jointly carried out a series of international joint R&D, joint postdoctoral training and industrialization projects with fruitful results.

Joint Projects between JITRI and NUS

- Preparation of probiotic biofilm
- On line monitoring system for laser forming of high performance precision metal structure
- R&D and large-scale preparation of stable separation nanofiltration membranes for harsh systems
- EEG signal acquisition electrode
- Intelligent tool monitoring system driven by big data
- Development of low cost beam scanning array antenna based on passive beam forming network reconfigurable devices
- Infrastructure defect detection system based on machine learning enhanced sensor network
- Large scale preparation of polycrystalline metal organic framework membranes for liquid separation
- Rehabilitation robot
- Hybrid reality application technology

Cooperation Models



Joint R&D with
JITRI's Institute



Joint R&D with JITRI's
Industrial Partner



Joint Postdoctoral
Program



Start-up Incubation

Collaborating for Innovation, Talent and Industrialization

Partnership with Universities & Research Institutes



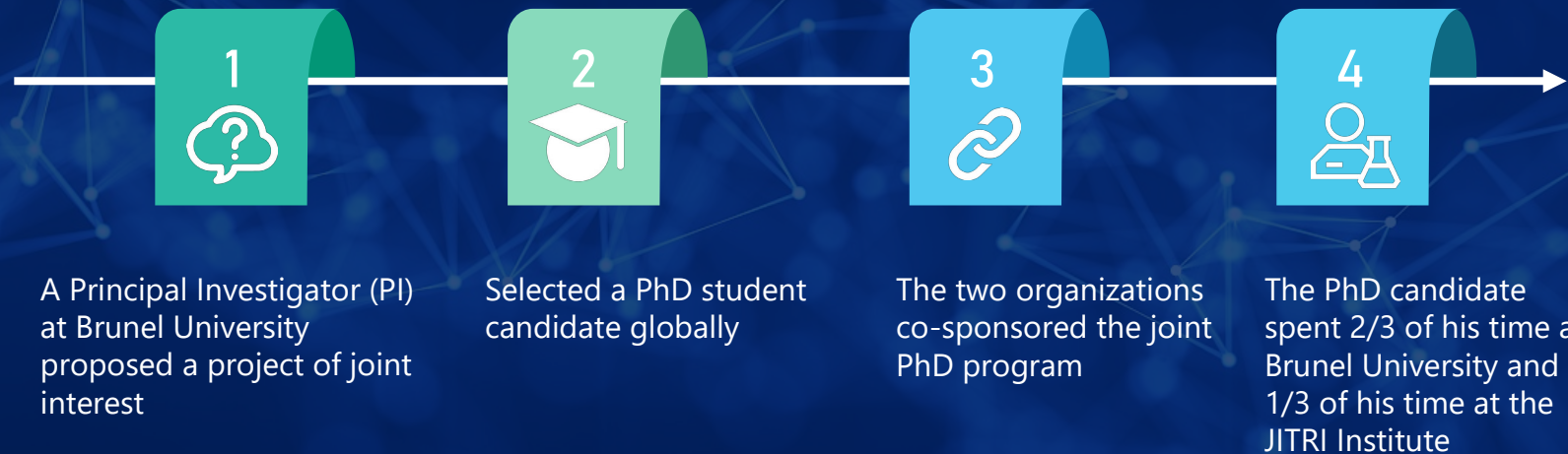
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SUCCESS CASE



Joint PhD Program

Brunel University & JITRI Institute of Ultra-Precision Processing



JITRI HQ provided matched funding support to this joint training program.

Collaborating for Innovation, Talent and Industrialization

Partnership with Multinational Corporations



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Research & Development: Jointly develop and implement industrial R&D projects



Personnel Training: Initiate joint training programs based on cooperative projects



Exchange Activities: Conduct seminars, workshops and other technical exchange activities

JITRI's Global Innovation Partners

SIEMENS

DUPONT™



PHILIPS

Danfoss

DXC.technology

ARaymond®
MORE THAN FASTENING

SCHOTT

PLASTIC OMNIUM

Aptar

RESOURCE HUB

Xometry

TREMEC

HUTCHINSON

Uniting Global Corporations and Local Research Institutes for Success and Growth

Partnership with Multinational Corporations



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- Improved research and development capabilities through shared expertise and knowledge
- Leveraging Philips' strong brand reputation in the healthcare industry
- Developing a skilled local workforce for the Yangtze Delta region

Success Case:

JITRI-PHILIPS Innovation Lab



PHILIPS

- Leveraging JITRI's local knowledge and experience
- Opportunity to develop a skilled workforce through the training of young engineers
- Potential for increased revenue through joint R&D projects and new product development



Joint Research

Initiating joint research projects, with a focus on forward-looking exploratory topics.



Engineer Training

Training young engineers from JITRI institutes and partner universities.



Knowledge Exchange

Sharing project outcome, technology roadmaps, and insights from experts.

Establishing Joint Innovation Lab to Share Expertise

NICE's Core Capacities



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R&D
Services



Industrial
Partnership
& Best Source
Solutions



Project
Landing
Facilitation



Funding for
Collaborative
Projects



Open
Innovation Ecosystem





NICE — A Partner for Global Collaboration

Thanks for your attention!

For more details, see NICE/JITRI's website here: <http://en.jitri.cn/>

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