



# **WELCOME TO**

# **HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY**



Co-funded by the  
Erasmus+ Programme  
of the European Union





# ***HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY (HUST – VIETNAM)***

**2017**

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- ☐ Training System
- ☐ Research and Technology Transfer
- ☐ International Cooperation

# INTRODUCTION



❖ Established in 1956, the first and largest technical university in Vietnam;

- **HUST Alumni:**
  - ✓ 180.000 engineers
  - ✓ 13.000 masters
  - ✓ 850 doctors



President of the Socialist Republic of Vietnam  
awarded Ho Chi Minh Order to HUST on Oct. 15. 2016  
(60<sup>th</sup> anniversary)

**1.927 staff (1.181 faculties)**

**37.263 students**

- 3.536 graduates
- 28.758 undergraduate
- 1.439 undergraduate in International Programs
- 80 International Full-time undergraduate student

**17 Training Schools**

- 14 Engineering Schools

**Institutes & Research Centers**

- 8 Research Institutes
- 6 Research Centers

**11 Key Laboratories**

**170 Academic Programs (*11 taught in English*)**

- 63 Undergraduate (BA, ENG); 46 Master; 61 Doctoral



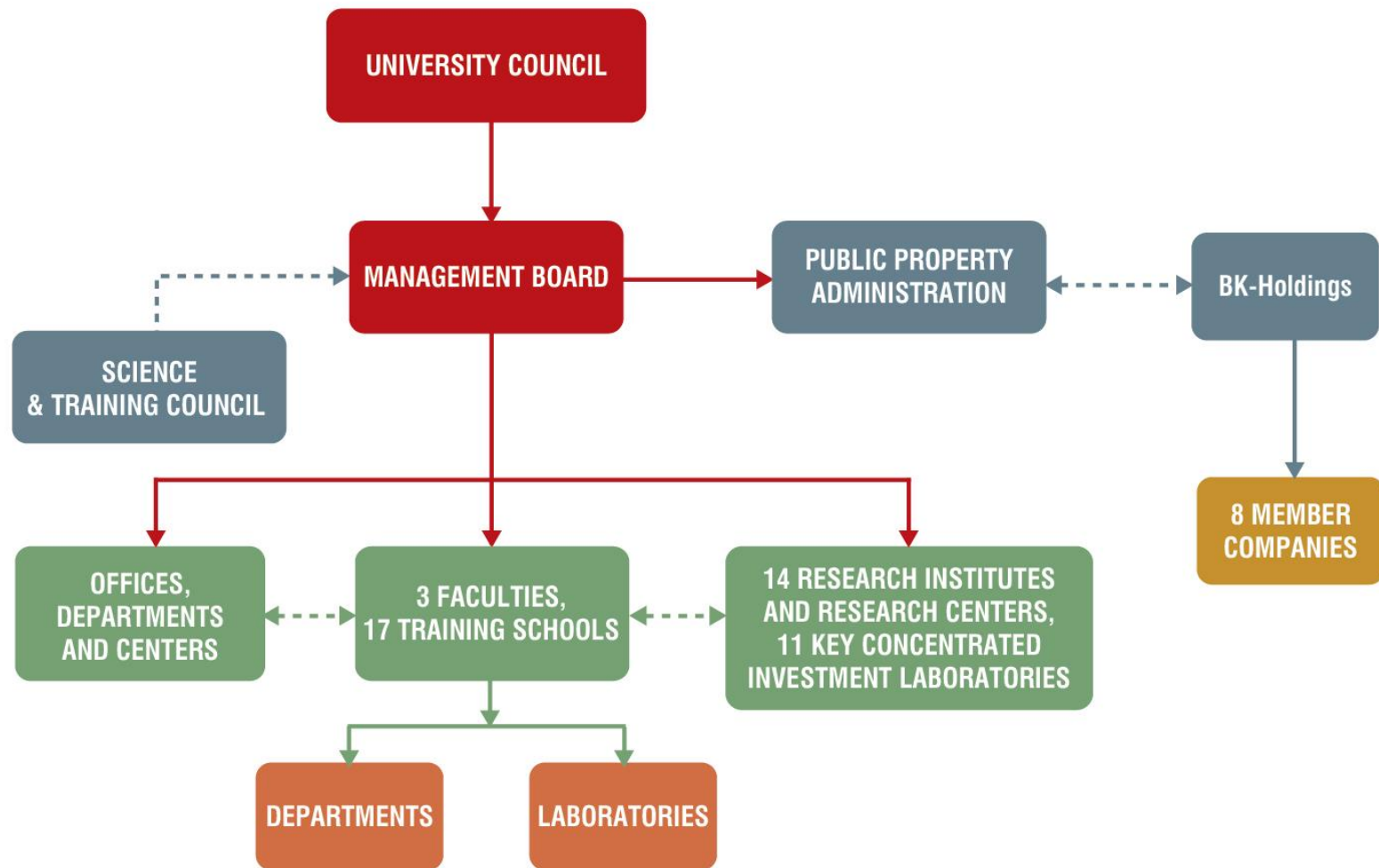
# HUST – MILESTONES & ACCREDITATION



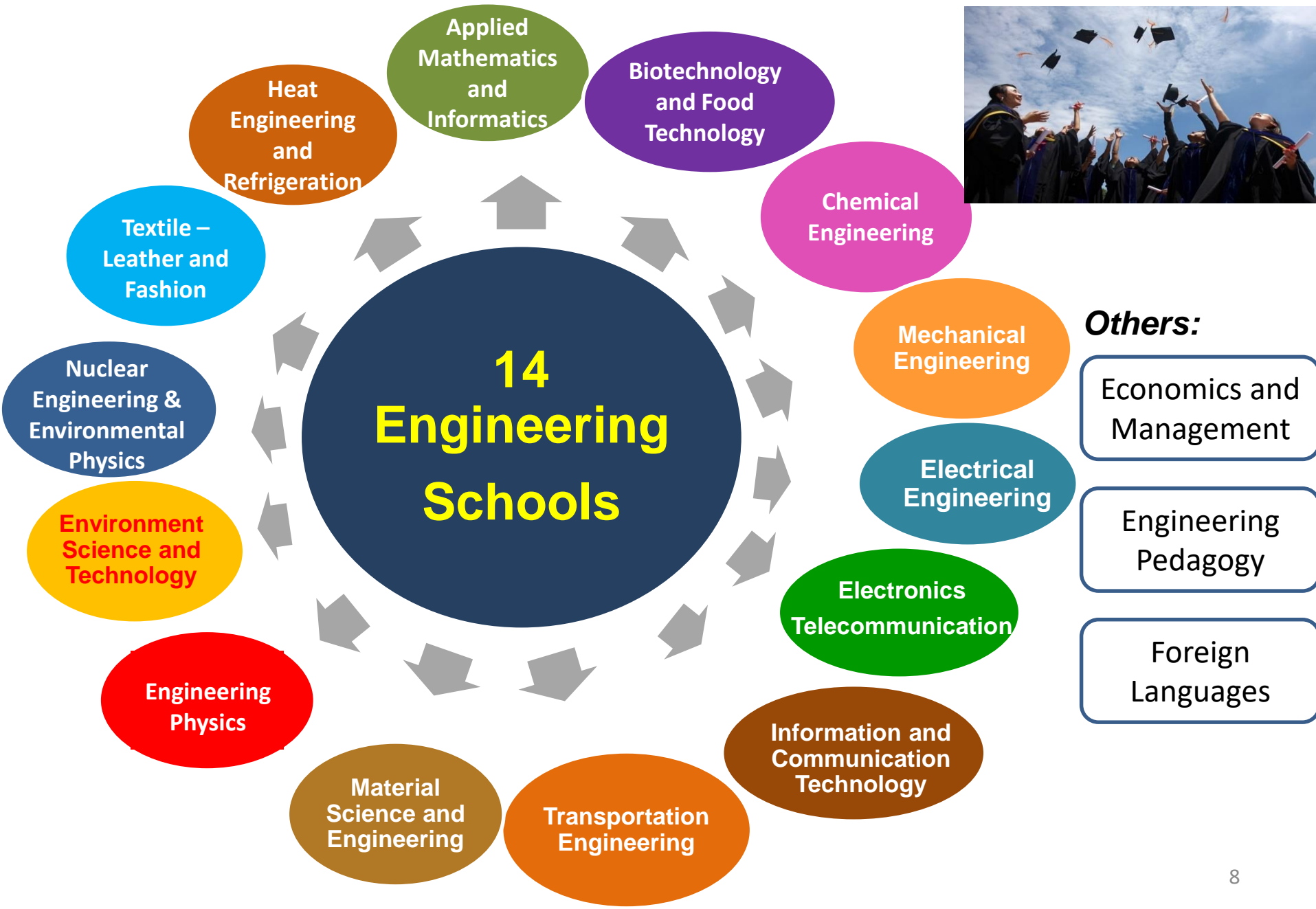
## Accreditation



# HUST - ORGANIZATION



Relationships:  
Management: ———> Cooperation: <---> Consultancy: - - - ->





## Institutes

1. Advanced Institute for Science and Technology (AIST)
2. Institute for Control Engineering and Automation (ICEA)
3. International Training Institute for Materials Science (ITIMS)
4. International Research Institute for Multimedia, Information, Communication and Applications (MICA)



5. Institute for research and Development of Natural Products (INAPRO)
6. International Institute for Computational Science and Engineering (ICSE)
7. Institute of Space and Underwater Technology
8. Vietnam-Japan International Institute for Science & Technology (VJIIST)

## Research Centers

1. Biomedical Electronics Center
2. Center for Applied Research and Technology Innovation
3. The Research Center for Polymer Materials
4. International Collaboration Center for Research and Development of Satellite Navigation Technology in SE Asia (NAVIS)



5. Center for Rubber Science and Technology (CEBER)
6. Bach Khoa Cyber Security Centre (BKCS)

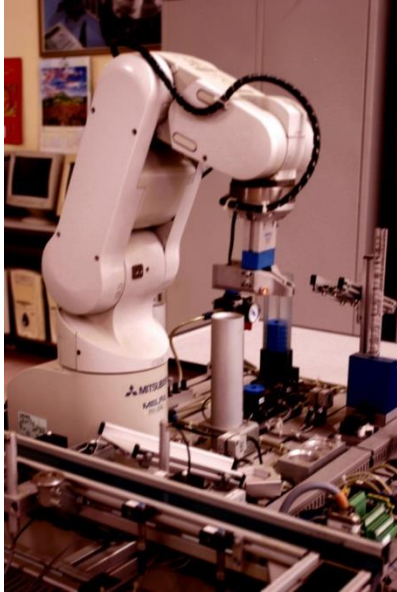




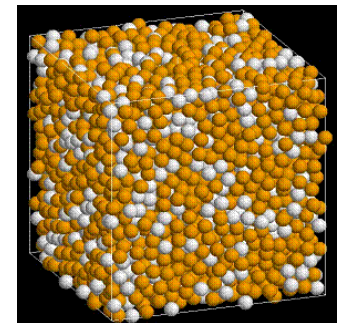
- ✓ Automation Lab
- ✓ Biological Lab
- ✓ Combustion Engine Lab
- ✓ Environmental Technology R&D Lab
- ✓ Mechatronic Lab
- ✓ Petroleum Lab
- ✓ Lab of Analyze and Measuring for Physics
- ✓ Lab of Metals Material Science
- ✓ Lab for Network Security
- ✓ Lab for Polymer and Composite Materials
- ✓ Lab for Food Technology R&D



# FIELDS OF PRIORITY



- Information Technology
- Electronics and Telecommunications
- Materials Science (new materials, Nano-materials)
- Aerospace
- Biotechnology and Food Technology
- Energy and Environment
- Chemical Engineering
- Mechatronics - Automation

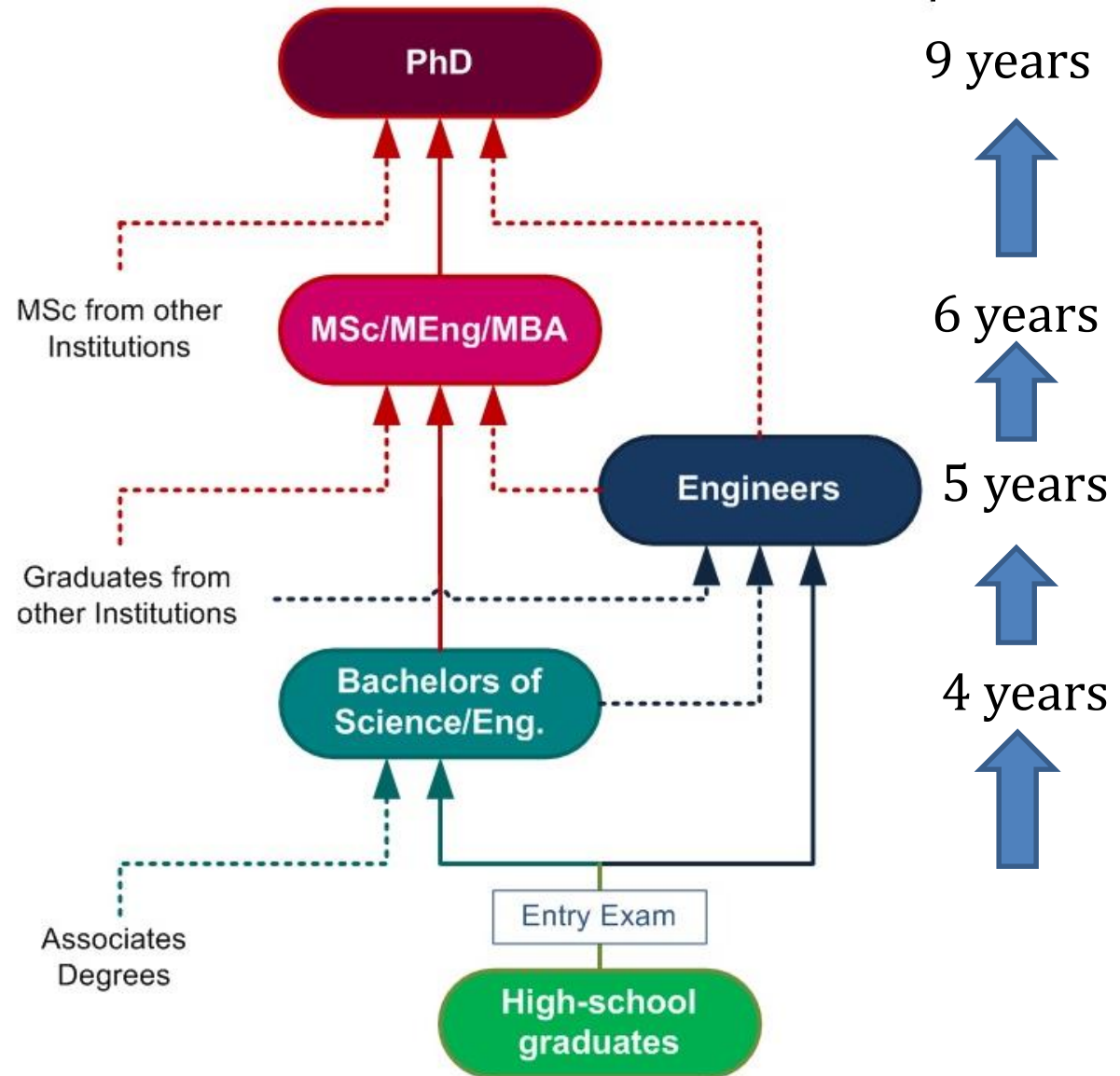






## ACADEMIC CALENDAR

- *First Semester:* mid Aug - end Dec
- *Second Semester:* Jan - Jun
- *Summer Semester:* Jul - mid Aug



# CREDIT – BASED SYSTEM



## 1. Advanced Programs (with US institutions)

→ Instructed totally in English with USA curriculum



- **Mechatronics** (*California State University at Chico*)
- **Materials Science and Engineering** (*University of Illinois at Urbana-Champaign*)
- **Biomedical Engineering** (*University of Wisconsin-Madison*)
- **Electrical and Electronic Engineering** (*San Jose State University*)



## 2. Excellent Engineers Training Programs (with French institutions) (*Programme de Formation d'Ingénieurs d'Excellence au Vietnam*)



- Aerospace – Mechanic Engineering
- Information & Communication Systems
- Industrial Informatics



*recognized by*

→ “Commission des Titres d’Ingénieurs”  
(CTI – France)

→ European Accreditation of Engineering  
Programmes (EUR-ACE)

2004 – 2010

2010 – 2016

2016 - 2022



This is to certify that the Master programme  
**Génie mécanique**  
**Mechanical engineering**

provided by

**Programme de formation d'ingénieurs d'excellence au  
Vietnam (PFIEV)**

has been ascertained by

**Commission des Titres d'Ingénieur (CTI – France)**

to satisfy the outcomes of Second Cycle programmes specified in the EUR-ACE  
Framework Standards for the Accreditation of Engineering Programmes  
and therefore is designated as a

**SECOND CYCLE EUROPEAN-ACCREDITED ENGINEERING PROGRAMME**  
for the period from **1 September 2010** to **31 August 2016**

## 3. School of International Education (SIE)

*10 joint twin training programs (undergraduate and graduate) with partners:*

Leibniz Hannover University (Germany)

Nagaoka University (Japan)

Grenoble INP (France)

Pierre Mendes (France)

Victoria Wellington (NZ)

La Trobe University (Australia)

Griffith University (Australia)

Uni. Queensland (Australia)

Troy University (USA)

## 4. Joint ICT Program with JAPAN institutions

- *HEDSPI: Human Higher Education Development Support Project on ICT*  
(ITSS: *Information Technology Skill Standards*)



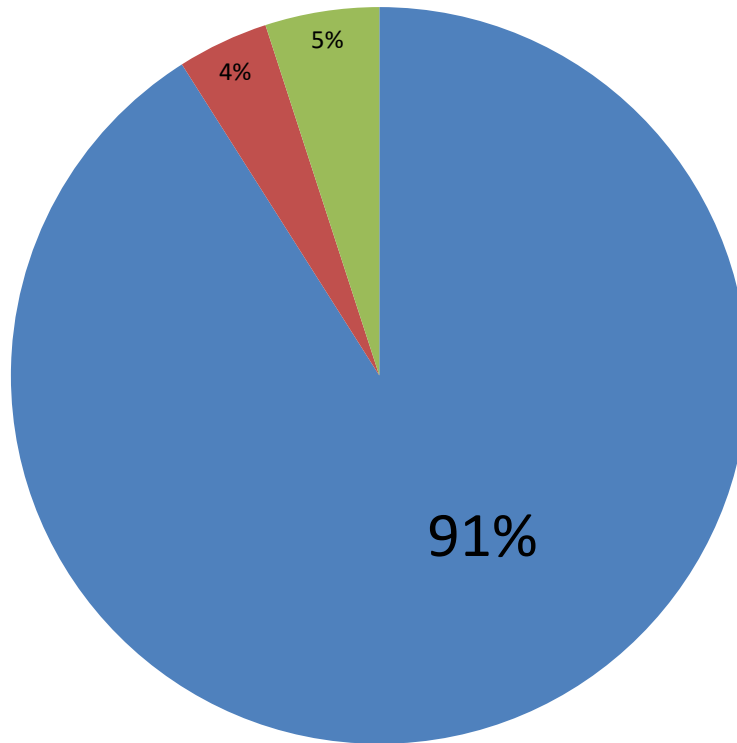
Keio University



## 5. Joint training program with Industry



## Student output: HUST Graduate Employment Ratio After 6 months (database 2016)

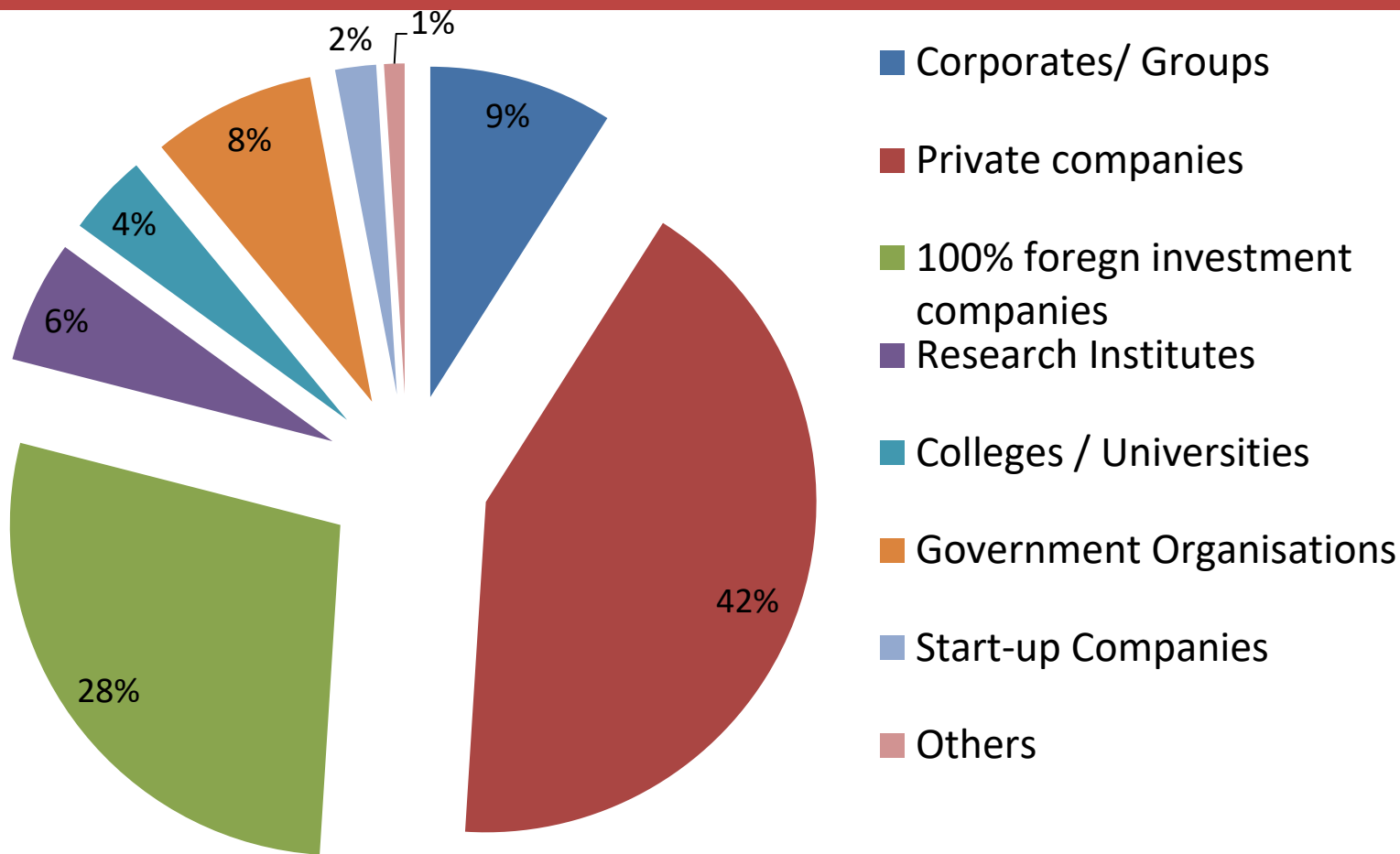


- Employed
- Study continuing
- unemployed

**Average salary: 350 USD/month**



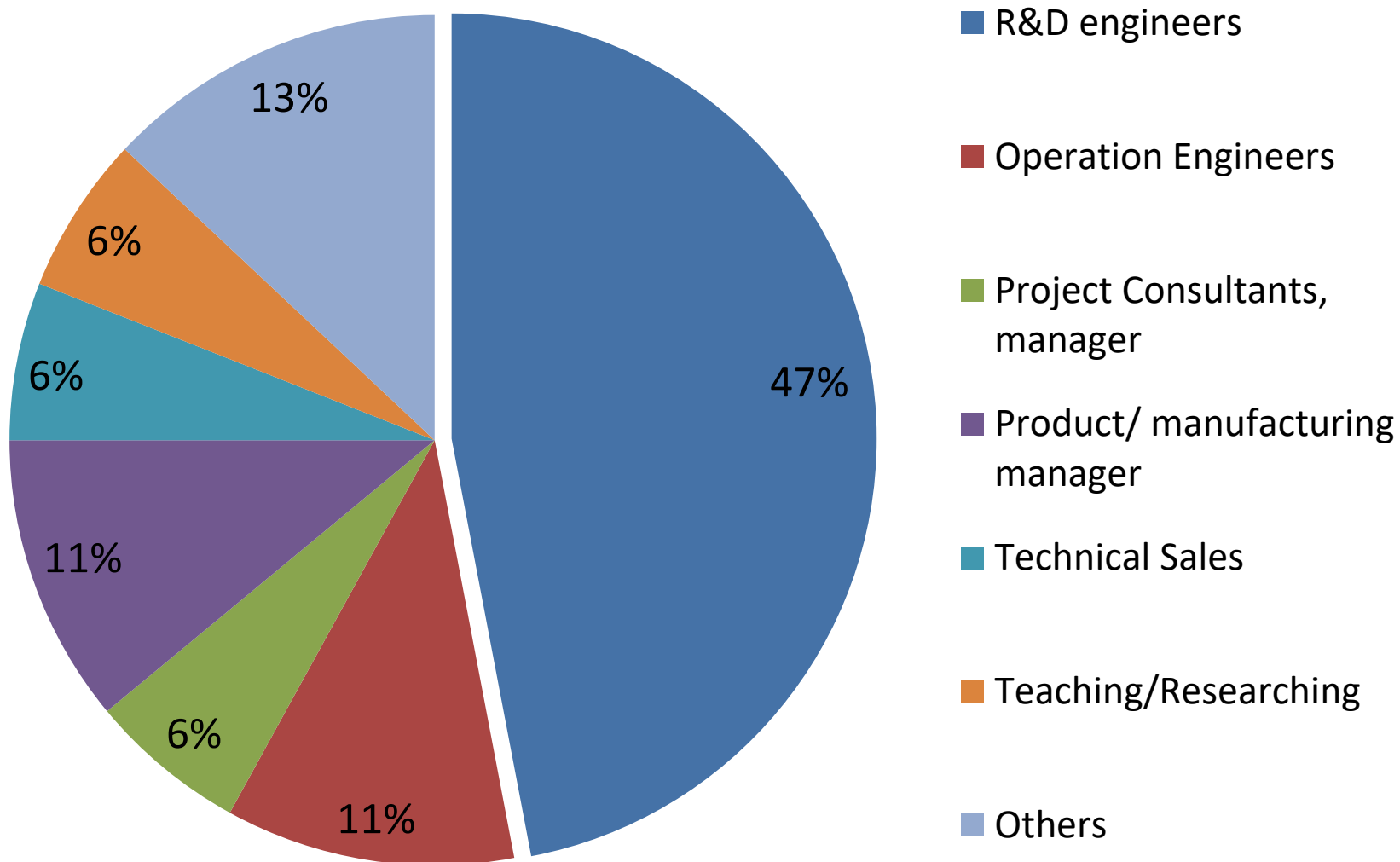
## Student output: Working Place of HUST graduates 2016



**Key Number: 79% students recruited by Companies**  
**2% in Start up companies**  
**HUST is linked by nature with industry**



# HUST graduate working positions (database 2016)



- **Established in 2009  
based on the Vocational  
Training Center**
- **15 specialisations  
belonging to 5 faculties.**
- **~6,000 students**

## Faculties

- **Faculty of Mechanical Engineering**



**Students: 800**

**Training: Welding Technical,  
Automobile Engineering, Metal cutting  
and sharpening, Mechatronics Eng.**

- **Faculty of Electronics and Telecommunications**



**Students: 700**

**Training: Applied Electronics,  
Industrial Electronics**

- **Faculty of Information & Communication Tech.**



**Students: 1200**

**Training: Office Informatics, Network  
Administration, Software Engineering,  
Multimedia Design**



**Students: 900**

**Training: Civil Electrical, Industrial  
Electrical, Industrial Installation and  
Control**

- **Faculty of Economics and Management**

**Students: 600**

**Training: Enterprise Accounting**

Publications	2016
Domestic Publications	580
International Publications	310
-- <u>including ISI</u>	<u>210</u>
Domestic Conferences	299
International Conferences	249





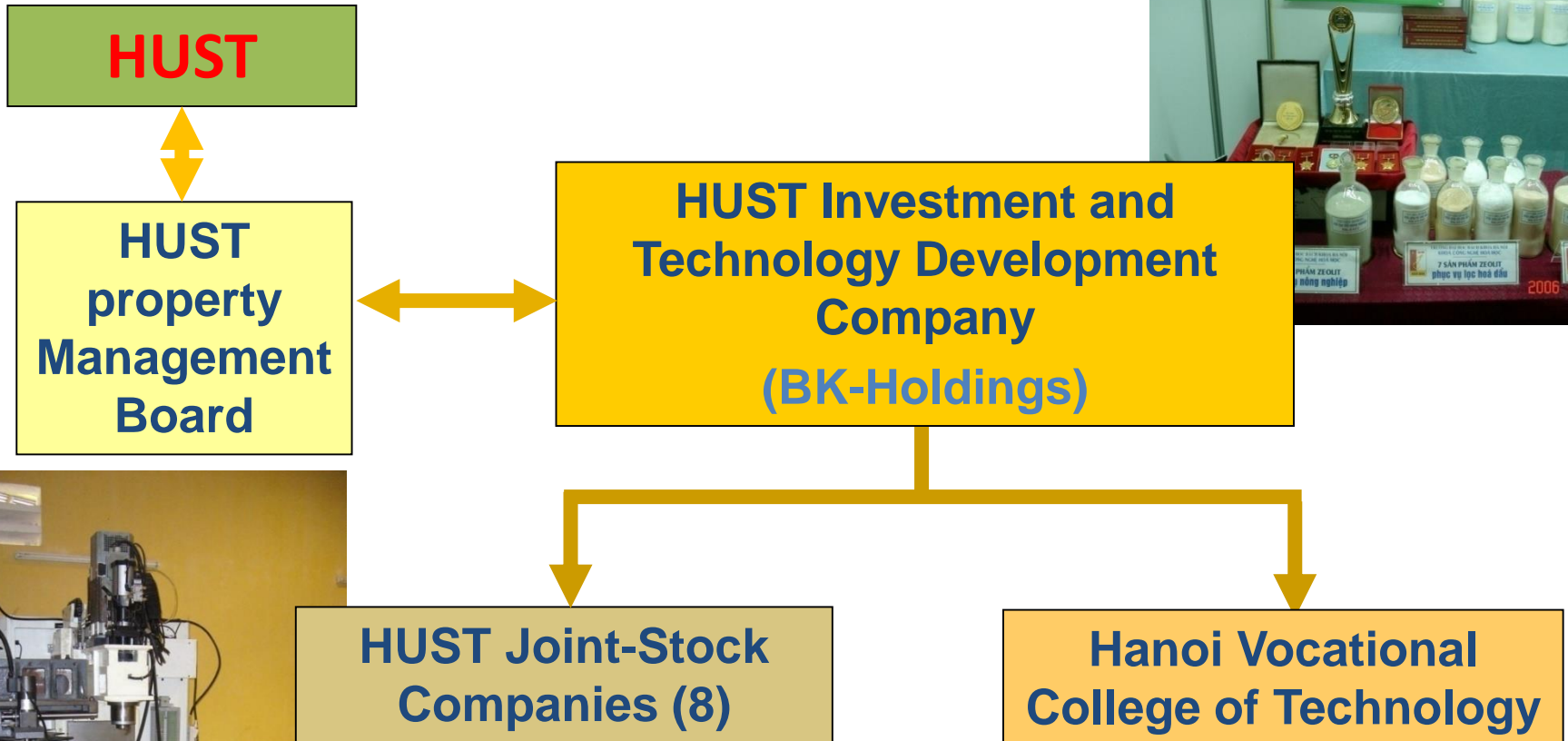
# HUST RESEARCH: PROJECTS

	2016
<b>State-level Projects</b>	
- State level	16
- Nafosted	72
<b>Ministerial – level Projects</b>	<b>95</b>
<b>University – level projects</b>	<b>253</b>
<b>International Joint Projects</b>	<b>15</b>
<b>Others</b>	<b>3</b>
<b>TOTAL</b>	<b>441</b>



## 2011-2016

- 26 bilateral Projects
- 04 World Bank funded Projects
- 03 FP7 and 01 H2020 funded Projects
- 10 VLIR funded Projects
- 26 AUN/SEED-Net – JICA funded Projects
- 04 KOICA funded Projects





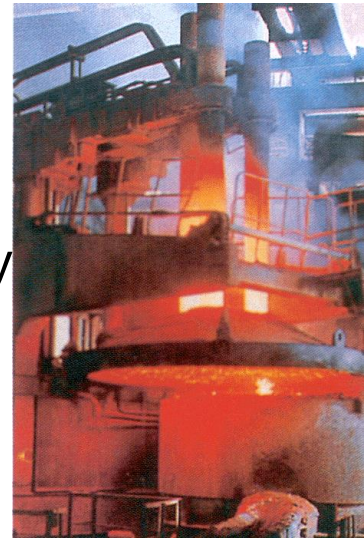


Cooperating with many international and local corporations, industry group and companies.

Technology transfer budget:  
150 – 170 bil./year



- ✓ Human resource training
- ✓ Cooperation in research and technology transfer.
- ✓ Technical and technology consulting



- **Innovation & Entrepreneurship Courses:**  
*the first step to start-up a business*



INSTITUTE OF  
INTERNATIONAL  
EDUCATION



Innovation and Entrepreneurship Workshop

- **Start-up and Co-working Space**



Open in June 2016



Open in Nov. 2016



## Bilateral cooperation

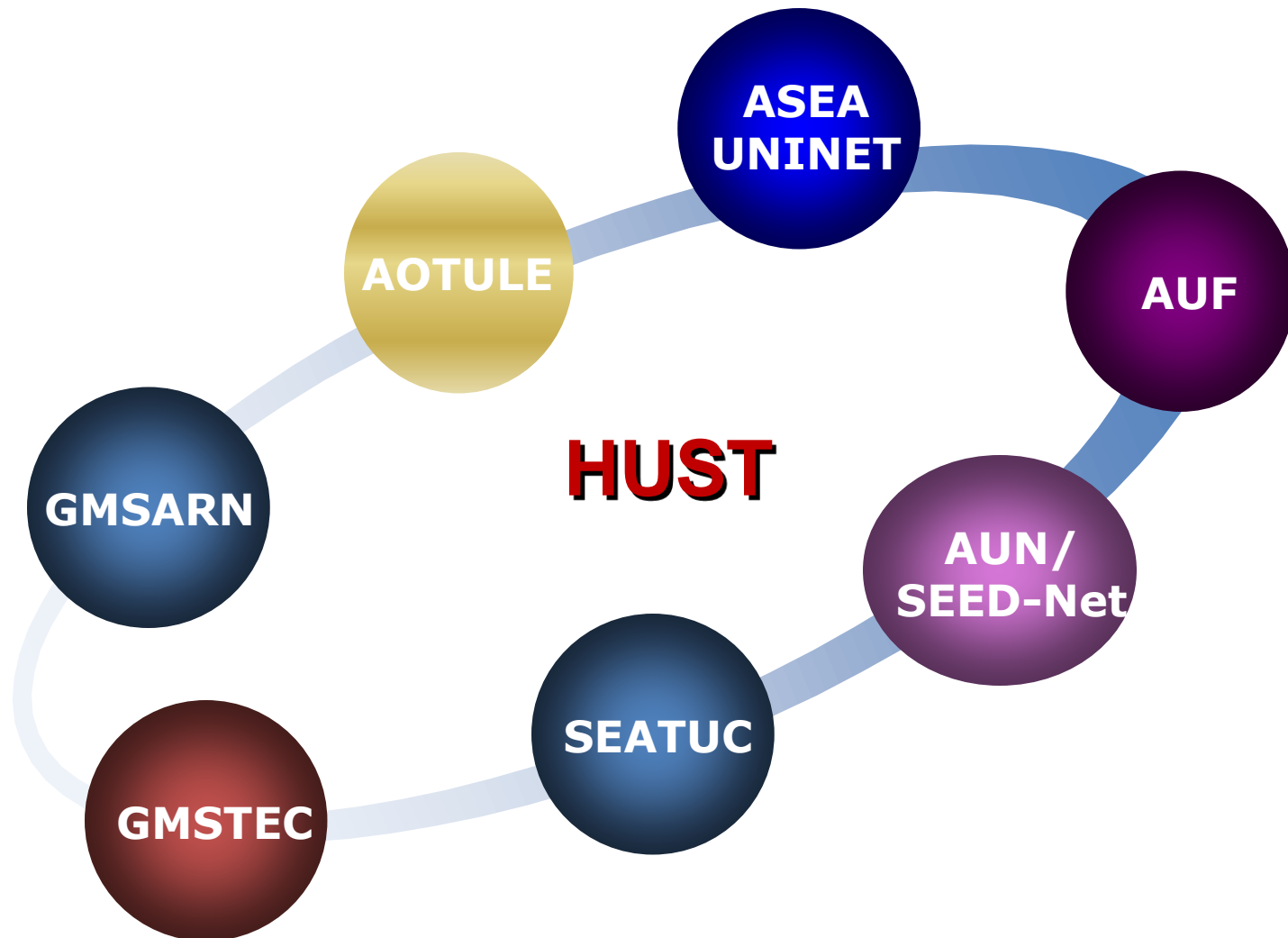
- Relation with more than 400 universities, institutes, companies from 35 countries all over the world.
- Annually: more than 1,000 foreign guests visit HUST and more than 500 HUST members visit and study abroad.





## Multilateral cooperation

HUST is active member of 7 University Networks



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HUST is active member of 7 University Networks



1. [Asia-Oceania Top University League on Engineering \(AOTULE\)](#)
2. [Association of Universities of the Francophonie \(AUF\)](#)
3. [Asean-European Academic University Network \(ASEA-UNINET\)](#)
4. [Greater Mekong Subregion Academic and Research Network \(GMSARN\)](#)
5. [Greater Mekong Subregion Tertiary Education Consortium Trust \(GMSTEC\)](#)
6. [South East Asia Technical Universities Consortium \(SEATUC\)](#)
7. [ASEAN University Network \(AUN\)/Southeast Asia Engineering Education Development Network \(SEED – NET\)](#)

## Asia-Oceania Top University League on Engineering (AOTULE)



# HUST – COOPERATIVE AREAS

**HUST**

**INTERNATIONAL  
PARTNERS**

## Exchanges

- Faculty and Student
- Scientific and Teaching Materials

## Joint Training Programs

- Short term
- Co-supervision
- Degree program

## Joint Research Projects, Joint Research Centers

- Joint project
- Technology transfer

## Joint Seminars and Conferences

### INTERNATIONAL ORGANISATIONS

UNDP, UNIDO

### UNIVERSITY NETWORKS

AUF, AUN/SEED-Net, ASEA-UNINET, GMSTEC and SEATUC

# HUST – INTERNATIONAL INDUSTRIAL PARTNERS



**DENSO**



**Schneider Electric**



**Schlumberger**

**BOSCH**

**Microsoft**

**ABB**

**SAFRAN**

**Rockwell Automation**



Haesung Vina\*



**CISCO**



**SONY**



**IHI**  
Realize your dreams

**Panasonic**

**Honeywell**

**NOKIA**  
CONNECTING PEOPLE

**SIEMENS**



**FUJI CORPORATION**

**MITSUBISHI**  
HEAVY INDUSTRIES, LTD.

**IBM**

**ANSYS**



**HITACHI**

**cadence**

**LOTTE**

**SAMSUNG**

**NATIONAL INSTRUMENTS**

**TOSHIBA**

**POSCO**

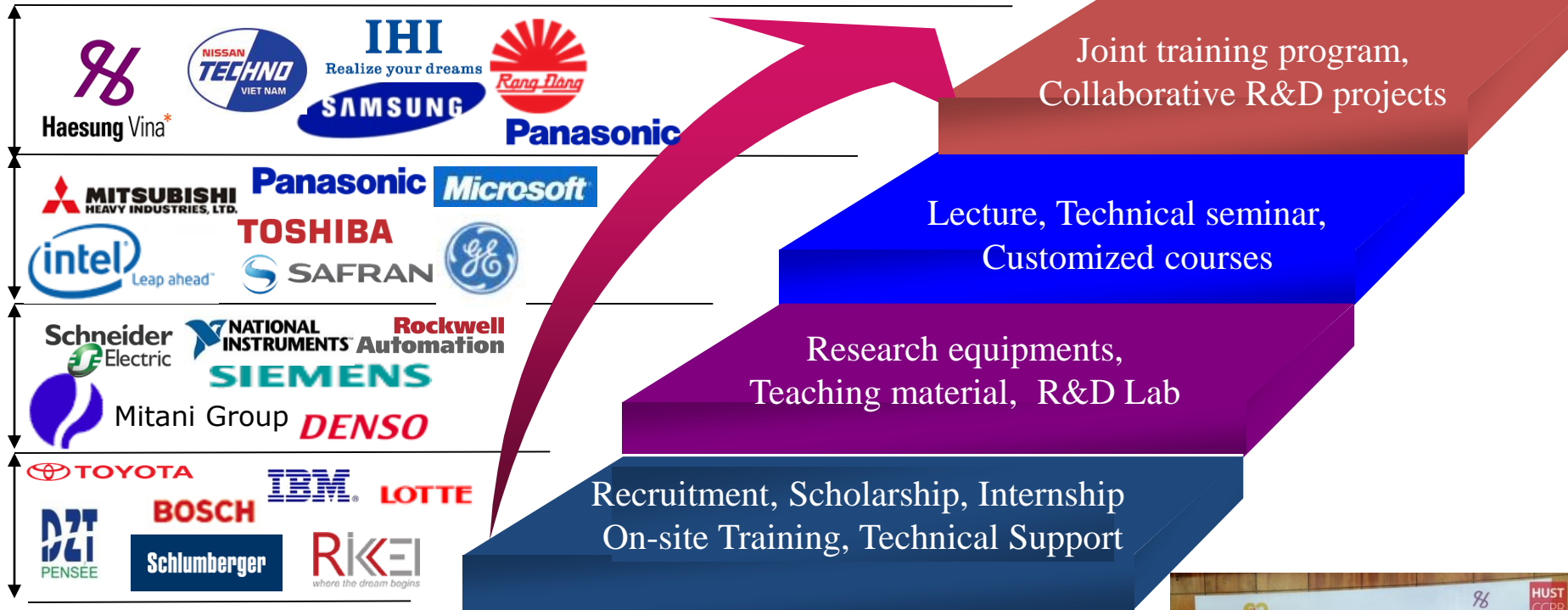
**DANAHER**

**LG**  
Life's Good

**NEC**  
Empowered by Innovation



# U – I Linkage Activities



# EXCHANGE ACTIVITIES WITH EU PARTNERS

EMA2-Projects	Mobility	EMA2-Projects	Mobility
Eurasia 1	6 / 3	Techno II	9
Eurasia 2	6	Areas	<u>8</u>
Maheva	7	One More Step	13
Bridging the Gap	14 / 4	Gate	4
Lotus I	16	Lotus Unlimited	7 / 4
Lotus II	9	Areas+	15 / 4
Lotus III	6	Swap & Transfer	6 / 2
Techno I	8		
TOTAL: 16 Projects		152 from HUST 21 from EU to HUST	

- ❑ ~ 18 partnership in Erasmus + Key Action 1

- ❑ 11 projects in Erasmus + Key Action 2

(ECORED, INTENSE, ASIFOOD, NUTRISEA, LMPI, ALIEN, TACTIC, VETEC, CATALYST, V2WORK, INTENSE)

- ❑ 02 Horizon 2020 in Navigation (BELS, BELS PLUS)

# ***School of Environmental Science and Technology***



**C10 building, HUST  
Dai Co Viet Road, Hanoi, Vietnam  
Tel. 84-24-38681686 Fax. 38693551  
Email. [inest@hust.edu.vn](mailto:inest@hust.edu.vn)**



# ***Missions***

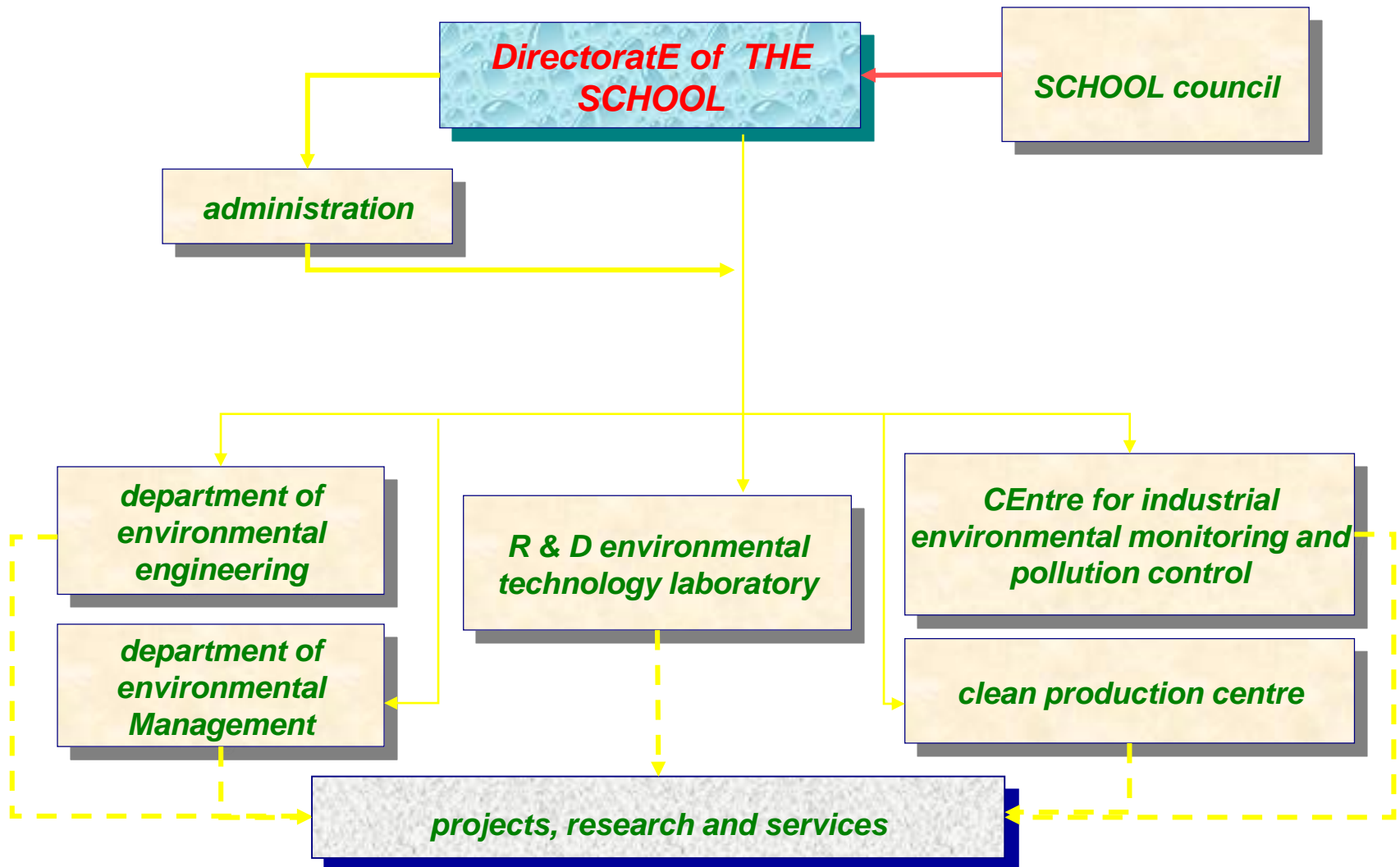
To study and to develop the field of **environmental science and technology** to serve industrial sustainable development of Vietnam.

To develop highly qualified human resources in the field of **environmental science and technology (B.Sc, MSc. PhD)** and to offer the training courses on **environmental technology and management**.

To provide high quality services in the field of environmental science and technology (EIA, CP Assessment, Consultancy, Transfer and Evaluation of Environmental Technology and Policy, Industrial Environmental Monitoring, application of environmental economy).

To cooperate with national and international organizations and experts in environmental protection activities.

# Structure



# ***History***

- 1984**    **Group Study on Environmental Engineering**
- 1990**    **Department of Environment under Faculty of Inorganic –  
Electro - Chemistry Technology and Environment**
- 1994**    **Centre for Environmental Science and Technology**
- 1998**    **Institute for Environmental Science and Technology  
(INEST)**        *Decision by Minister of Education and Training No.  
2995/QD - BGDDT-TCCB, dated Sep. 4, 1998.*

# ***Human Resource***

**Total : 76**

**Teaching staffs : 32**

**Research and Administrative : 40**

Professors : 9

Collaborative professors : 3

Doctors : 19

Masters : 28

Engineers and BSc. : 25



# Capacity

## Education and Training

### *Environmental Engineering and Management*

(annually)

Undergraduate : 120 students

### *Environmental Engineering*

Bachelor (4 years)

Engineer (5 years)

Postgraduate : 30 Master/5-6 PhD

### *Master of Environmental Engineering*

### *Master of Environmental Management*

### *and Natural Resources*

PhD in *Environmental Engineering*



# ***Capacity***

## **Training the professional abilities and certificate**

Urban and industrial pollution management

Environmental impact assessment.

Waste treatment system management

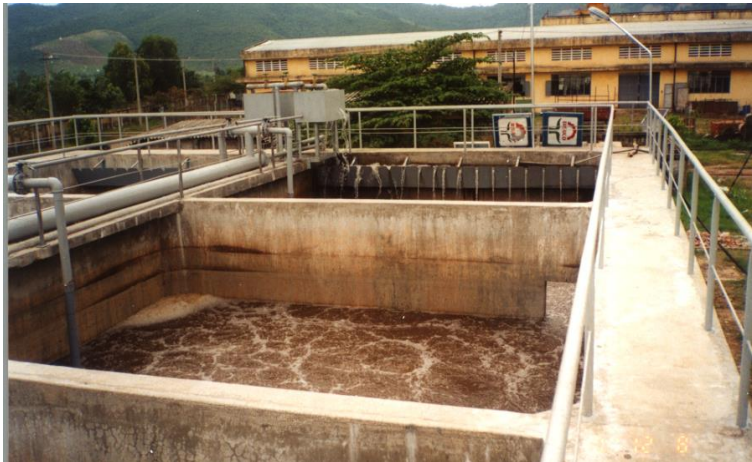
Industrial Environmental monitoring

Cleaner production assessment

# Capacity

## Scientific research activities

INEST has carried out many research themes and projects at National, ministerial and provincial levels in the field of the environmental protection



## Services

- Environmental impact assessment
- Cleaner production assessment
- Environmental quality analysis and industrial environmental monitoring
- Consult in wastewater, dust, gas emission treatment technology
- Build up industrial waste treatment systems by package procedure,



# Capacity

## International cooperation

To cooperate with national and international organizations and experts in environmental protection projects and activities



# Consortium for Green Technology Management and Research





# GOALS



```
graph TD; G1((GOALS)) -.- G2((Exchange of scientific materials, publications and information;)); G2 -.- G3((Exchange of faculty and students;)); G3 -.- G4((Joint research and scientific communication;)); G4 -.- G5((Joint hosts for the International Forum on Green Technology and Management (IFGTM))); G5 -.- G1;
```

Exchange of scientific materials, publications and information;

Exchange of faculty and students;

Joint hosts for the International Forum on Green Technology and Management (IFGTM)

Joint research and scientific communication;



# HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY



**Thank you for your attention**

**[www.hust.edu.vn](http://www.hust.edu.vn)**

