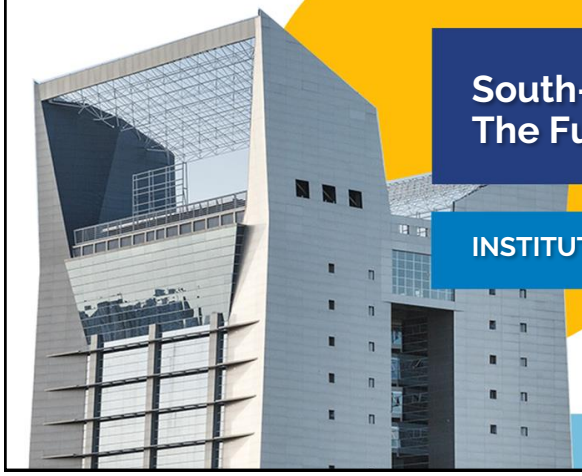


South-South Cooperation and SDGs
The Future Plans for COMSATS' Network

INSTITUT TEKNOLOGI SEPULUH NOPEMBER

its.ac.id/international

ITS ACHIEVEMENTS

ITS Ranks First in Indonesia in the SIR version of the Field of Computer Science

ITS AS A HUB FOR EASTERN PART OF INDONESIAN UNIVERSITIES (EPI-UNET)

- JOINT RESEARCH/PUBLICATION
- INTERNATIONAL OFFICE
- QUALITY ASSURANCE

CONSORTIUMS

Interweave & IMPAKT (Erasmus Mundus) **ERASMUS+**	University Mobility In Asia And The Pacific **(UMAP)**	**AUN/SEED-Net** (ASEAN University Network/Southeast Asia Engineering Education Development Network)	**ASEA-UNINET** (The ASEAN European Academic University Network)	**BRAUIC** Belt Road Architectural University International Consortium
ACNET-EngTech (ASEAN-China Network for Cooperation and Exchanges among Engineering and Technology Universities)	**WAEJUC** (Western Australia – East Java Universities Consortium)	**AIC** (Australia Indonesia Centre)	**JWGEA** (Joint Workshop for Global Engineers in Asia)	**SATU** Southeast Asian & Taiwan University Consortium
ASEAN International Mobility For Students (**AIMS**)	**GTI** (Global Technology Initiative)	**KU+EPI** (Kumamoto University and Eastern Part of Indonesia Universities)	**ASAIHL** (The Association of Southeast Asian Institutions of Higher Learning)	**COMSATS** Commission on Science & Technology for Sustainable Development in the South
	ATU-Net Asia Technological University Network	**Mevlana** Flagship Project of Turkish Government for Mobility	**FICEM** French & Indonesia Consortium in Engineering & Manag.	

INSTITUT TEKNOLOGI SEPULUH NOPEMBER (ITS)

7 FACULTIES

1 SCHOOL

41 DEPARTMENTS

10 RESEARCH CENTERS

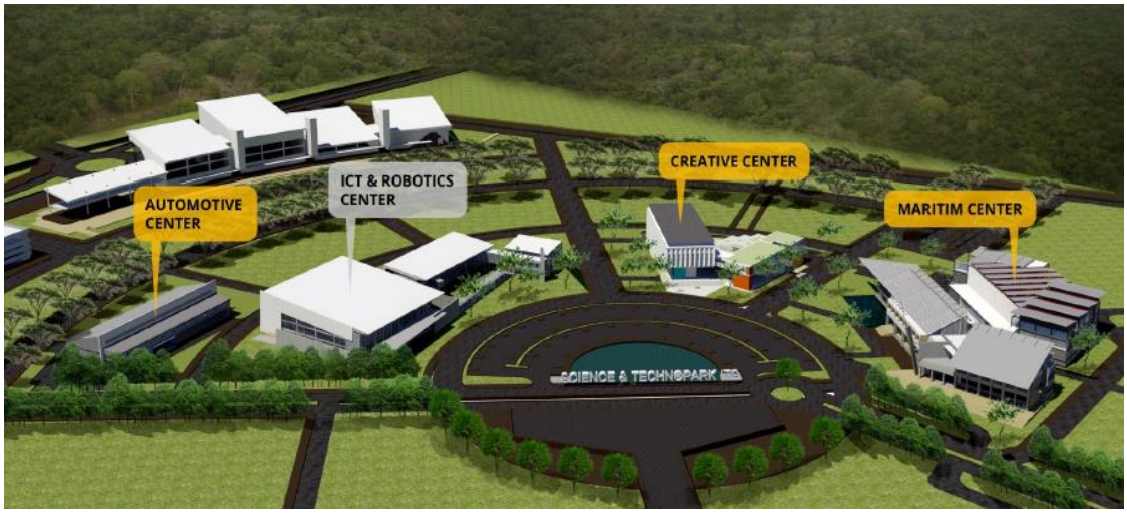
5 COMMUNITY STUDY CENTERS

4 CLUSTER INNOVATION CENTERS (SCIENCE TECHNO PARK)

Research Centres

- 10 Research Centres:
  - manufacturing,
  - transportation, and logistics, sustainable energy,
  - artificial intelligence and biomedical technology,
  - advanced materials and nanotechnology,
  - internet of things and defence technology,
  - agri-food and biotechnology,
  - climate change and disaster,
  - maritime science and technology,
  - fundamental sciences, and
  - infrastructure and sustainable environment.
- 5 Center for Studies
- 5 Center of Excellence:
  - automotive, maritime technology, ICT and robotics, AI & healthcare, and creative design.

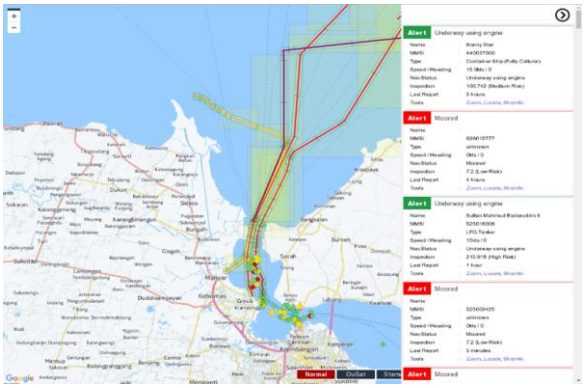
ITS TECHNOPARK



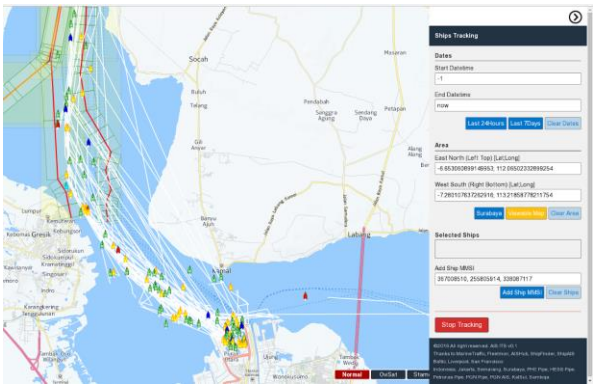
NATIONAL SHIP DESIGN & ENGINEERING CENTER

HYDRODYNAMIC LABORATORY

AISITS Automatic Identification System ITS



Early Warning System for Subsea Pipeline



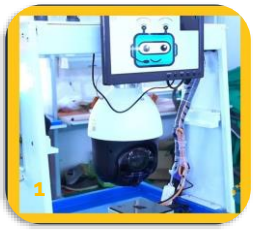
Vessel Tracking

9

http://aisits.id

ITS Innovations during Pandemic

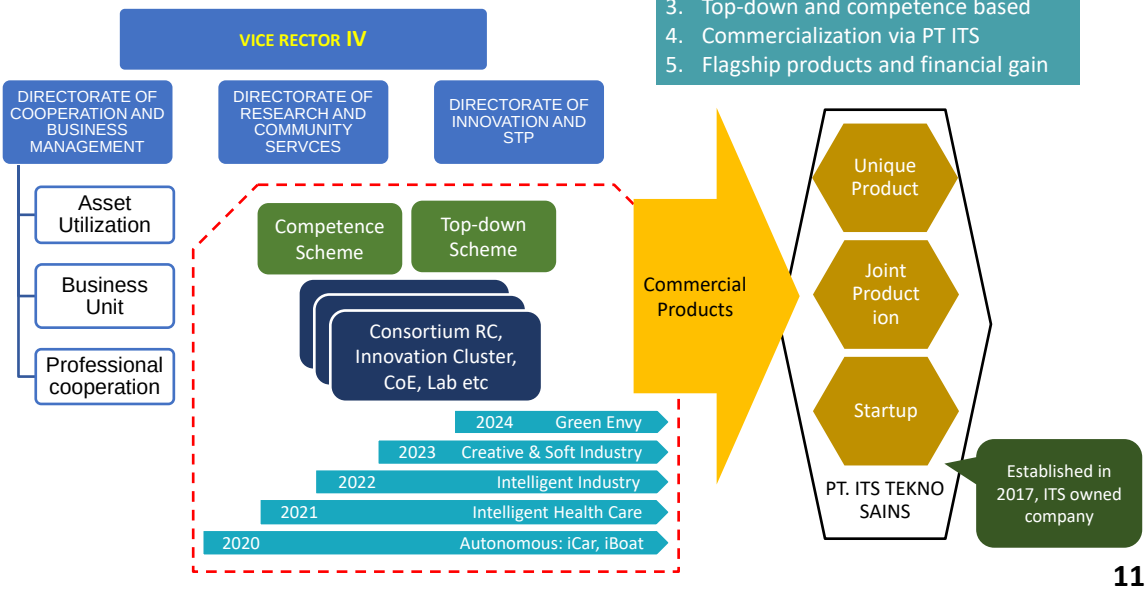
1. RAISA: Service Robot for COVID-19 Patients
2. I-Car: Intelligent Autonomous Car
3. I-Boat: Intelligent Autonomous Boat



10

Supportive Policies

1. Supporting Governance
2. Consortium strategy
3. Top-down and competence based
4. Commercialization via PT ITS
5. Flagship products and financial gain



Human Resources and Facilities

Faculties & Departments

MARTECH
- Naval Architecture and Shipbuilding Eng
- Marine Eng
- Ocean Eng
- Sea Transportation Eng
- Offshore Eng

INDSYS
- Mechanical Eng
- Chemical Eng
- Physics Eng
- Industrial and Systems Eng
- Material Eng
- Food Eng

ELECTICS
- Electrical Eng
- Biomedical Eng
- Computer Eng
- Informatics
- Information Systems
- Information Tech

SCIENTICS
- Physics
- Mathematics
- Statistics
- Chemistry
- Biology
- Actuary

CIVPLAN
- Civil Eng
- Architecture
- Environmental Eng
- Regional and Urban Planning
- Geomatics Eng
- Geophysics Eng

CREABIZ
- Industrial Product Design
- Interior Design
- Visual Communication Design
- Business Management
- Developmental Studies
- Technology Management

VOCATIONS
- Civil Infrastructure Eng
- Industrial Mechanical Eng
- Automation Electronic Eng
- Industrial Chemical Eng
- Instrumentation Eng
- Business Statistics

SIMT
- Industrial Management
- Project Management
- Information Technology Management
- Maritime Business Management
- Supply Chain Management
- Business Analytics
- Innovative Design Management
- Techno Marketing
- Doctoral-Management Technology

Organization: Research and Innovation

Technology Readiness Level

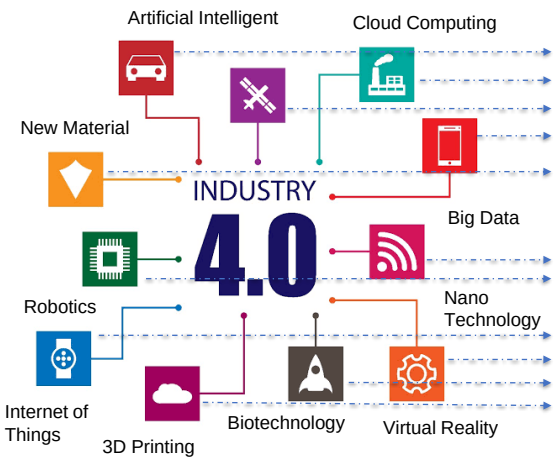
1	2	3	4	5	6	7	8	9
Basic principles observed	Technology concept formulated	Experimental proof of concept	Technology validation in lab	Tech. valid. in relevant environment	Demonstration in relevant environment	Demonstration in operational environment	System complete and qualified	Successful mission operations
Research Center					Innovation Center			

INNOVATION CENTER

1. **Maritime** Maritime Safety and Marine Installation
2. **Automotive** Automotive Control System
3. **ICT Robotic** Mechatronics and Industrial Automation;; Artificial Intelligent for Healthcare and Society
4. **Creative Industry** Creative Design

ITS TECHNO PARK

Research and Innovation Profile



10 RESEARCH CENTER

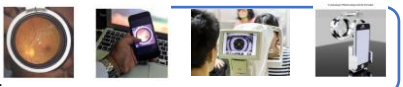
1. Manufacturing, Transportation, & Logistics; 2. Sustainable Energy, 3. Artificial Intelligence & Health Technology; 4. Advanced Material & Nano Technology; 5. IoT & Defense Technology; 6. Agri-food & Biotechnology; 7. Disaster Mitigation & Climate Change; 8. Marine-Earth Science & Technology; 9. Fundamental Science; 10. Infrastructure & Sustainable Environment.

5 COE

1. Automotive Control Systems;
2. Mechatronics & Industrial Automation;
3. Ship Safety and Installation;
4. Creative Design;
5. AI for Healthcare and Society.

4 STP

1. Automotive;
2. Maritime;
3. ICT Robotic;
4. Creative Industry.



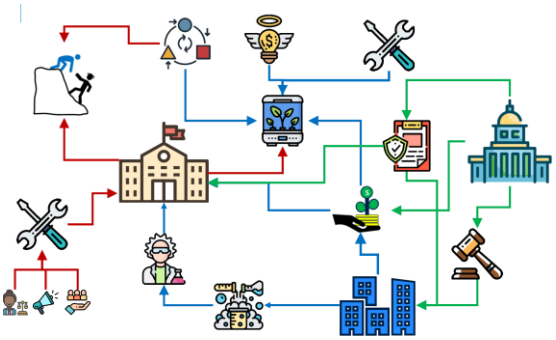
5 STUDY CENTER

1. Sustainable Development Goals (SDGs);
2. Regional Development & Community Empowerm
3. Public Policy in Business & Industry;
4. Halal;
5. Applied Technology.

Innovation Ecosystem

Includes:

- Universities, research institutions – research activity, seeds fund, policy, etc.
- Business – industries, professional adviser, network, funding, etc.
- Government – tax incentives (SME benefits, tax relief etc.), grant programs, policies
- Capital providers – banks, seed and venture capital, angel investors, etc.
- Incubators and accelerators
- Service providers – lawyers, IP agents, marketing firms, etc.



Innovative Product

iSTOW:
Stowage Planning Software

iStow is the 1st Indonesian semi-automated software for planning the position of cargo (stowage) on a ship designed with ease (user-friendly).

iStow meets both national and international industrial quality standards.

iStow is certified by National and International Association of Classification Societies (IACS) members, such as:

- Biro Klasifikasi Indonesia/ BKI (2017)
- Nippon Kaiji Kyokai/ ClassNK (2018)
- Regsitro Italiano Navale/ RINA
- Indian Register of Shipping/ IRS
- Lloyd's Register

Innovative Product

Integrated Digital Design for Medical Application

INTEGRATED DIGITAL DESIGN RESEARCH CENTER for MEDICAL

Universitas Airlangga Hospital (RSUnair) and Institut Teknologi Sepuluh Nopember (ITS)

Cranioplasty Surgery

Manufacturing Partnership

Exterior and Interior Design of Carbody Light Rail Transit (LRT)

CUSTOM DESIGN
Varian Mask of Car, Fitur & Spesifikasi sesuai kearifan lokal

LOCAL CONTENT
Riset, Teknologi, Desain, Engineering, Produksi & Assemby dalam negeri

COST LEADERSHIP
DQCD (Design, Quality, Cost & Delivery)

NATIONAL ROLLING STOCK INDUSTRY
Diproduksi oleh PT. INKA Madiun, Industri Kereta Api Terbesar di Asia Tenggara

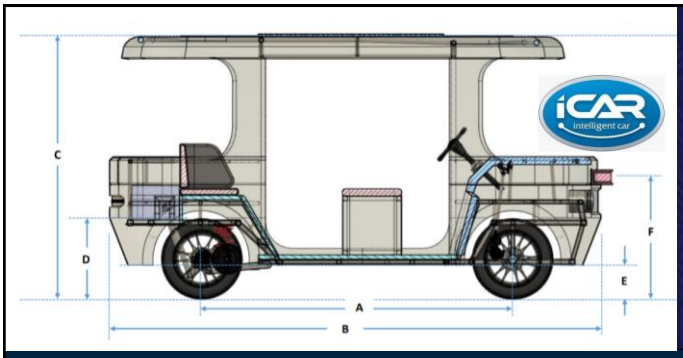
NATIONAL BRANDING
LRT Sebagai moda Transportasi Perkotaan modern di Indonesia

STATE OF THE ART TECHNOLOGY
Riset Inovasi, Teknologi Rancang Bangun, Prototyping, Testing, Produksi, Sertifikasi, Operasional & Maintanance

Innovative Product

AISITS http://ais.its.ac.id

a monitoring system for safety of marine facilities



Innovative Product

ITS Flagship

Autonomous Boat
iBoat

ITS - South-South Cooperation and SDGs The Future Plans for COMSATS' Network

- Workshop and Conference
- Research and Joint Publications
- KNB : MS and PhD Scholarships

1

Workshop and Conference 2023 at ITS

CyberDaS

Cyber Security and Data Science 2023

International Workshop on Cyber Security and Data Science 2023 (CyberDaS)

- CyberDaS is an international workshop that aims to provide hands-on training in the areas of cybersecurity and data science
- Event Date
  - 2nd – 5th of October 2023
- Event Place
  - Online (via Zoom meeting)
  - Offline (at the Informatics Department Building, ITS, Indonesia)

Invited Talks

TBD (Cybersecurity-related topic), Cardiff University, UK
TBD (Privacy-related topic), Norwegian University of Science and Technology, Norway
DevSecOps Implementation for Containerized Software Delivery on AWS, US-based Cloud Provider
Digital Forensic Techniques in Fraud Investigation, Indonesia Deposit Insurance Corporation, Indonesia
Catching the bad guy using Honeypot, Indonesia Honeynet Project & Swiss German University, Indonesia
Data Mining for Cyber Security, Indonesia Honeynet Project & Swiss German University, Indonesia
Malicious Code Attribution*, United Arab Emirates University, United Arab Emirates
Image Recognition with Deep Learning, Awl. Inc, Japan
Data Science in the Cloud, Institut Teknologi Sepuluh Nopember, Indonesia

Biodiversity and Natural Product Conference
COMSATS - ITS

2

RESEARCH AND JOINT PUBLICATION

RESEARCH AND JOINT PUBLICATION COMSATS - ITS

- MATCHING THE RESEARCH
- RESEARCH AND JOINT PUBLICATION ITS – COMSATS' NETWORK

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3

KNB Scholarship 2023 at ITS

ITS On-going KNB and AUN-KNB Students

Degree	Total Number	Department	Country
Bachelor	4 Students	• Biology • Business Management • Urban and Regional Planning • Information System	• Timor Leste • Madagascar • Zambia • Afghanistan
Master	12 Students (5 students under AUN-KNB Scholarship)	• Geomatics Engineering • Environmental Engineering • Informatics • Civil Engineering • Marine Engineering • Mathematics • Statistics • Electrical Engineering • Mechanical Engineering	• Iran • Tanzania • Bangladesh • India • Pakistan • Cambodia • Afghanistan
Doctoral	2 Students	• Chemistry • Informatics	• Afghanistan • Rwanda
Grand Total	**18 Students**		

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Kemitraan Negara Berkembang (KNB) Scholarship at ITS

Funding:
Directorate General of Higher Education, Research and Technology
Ministry of Education, Culture, Research and Technology Republic of Indonesia

Degree: Master and Doctoral
Master Program = 3 Years (2 semester for Learning Bahasa + 4 semester Master program)
Doctoral Program = 4 Years (2 semester for Learning Bahasa + 6 semester Doctoral program)

Scholarship Coverage

All scholarship coverage is meant for a **single person** only. KNB does not provide family allowance.

- **Living allowance**
- **Research and book allowances**

  will be given during the Study (Master's or Doctoral) Program

- **Health insurance**
- **Round trip international ticket**
- **Immigration fee**
- **Tuition fee**

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Master's and Doctoral Degree at ITS

Study Program	Master	Doctoral	Study Program	Master	Doctoral
Architecture	✓	✓	Geomatics Engineering	✓	
Biology	✓		Industrial Engineering	✓	✓
Physics	✓	✓	Informatics	✓	✓
Chemistry	✓	✓	Metallurgical and Materials Engineering	✓	
Mathematics	✓	✓	Environmental Engineering	✓	✓
Information System	✓		Ocean Engineering	✓	✓
Statistics	✓	✓	Mechanical Engineering	✓	✓
Electrical Engineering	✓	✓	Civil Engineering	✓	✓
Physics Engineering	✓		Marine Engineering	✓	
Chemical Engineering	✓	✓			

Timeline

- Application deadline : February 18, 2023
- Academic test : March 13 – April 14, 2023
- Interview and psychological test: April 17 – May 12, 2023
- Announcement : the 1st week of June 2023
- The confirmation deadline: July 23, 2023
- The new KNB awardees are expected to arrive in Jakarta: second week July, 2023

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3

COMSATS - KNB Scholarship at ITS

AUN – KNB Scholarship

ASEAN University Network (AUN) & KNB (Kemitraan Negara Berkembang), or shortly known as AUN-KNB, are collaborating this year to provide **Master's Degree Scholarship at ITS for 2 years study period**.

Since 2017, the program has been offered to Master Degree candidates (alumni or final year of Bachelor Degree) from AUN members. All academic programs (lecturer and thesis) **will be conducted in English**.

Funding: Directorate of Higher Education, Ministry of Education and Culture

its.ac.id/international

Eligible Universities

Country	University	Country	University
Malaysia	• Universiti Teknologi Malaysia (UTM) • Universiti Putra Malaysia (UPM) • Universiti Malaya (UM) • Universiti Sains Malaysia (USM)	**Thailand**	• Burapha University (BUU) • Kasetsart University (KU) • Thammasat University (TU) • International School of Engineering (ISE) • Chulalongkorn University (CU) • Sirindhorn International Institute of Technology (SIIT) • King Mongkut's Institute of Technology (KMITL)
Philippines	• De La Salle University (DLSU) • University of the Philippines – Diliman (UP) • Mindanao State University – Iligan Institute of Technology (MSSU-IIT)	**Vietnam**	• Ho Chi Minh City University of Technology (HCMUT) • Hanoi University of Science and Technology (HUST)
Myanmar	• University of Yangon (UY) • Yangon Technological University (YTU)	**Cambodia**	Institute of Technology of Cambodia (ITC)
Laos	National University of Laos (NUOL)		

International Students Activities

International Student Summit 2022

City Tour

Bahasa Class

Easter Day

Bali Trip

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Thank You

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ITS International Office