

## INCHALL CHALLENGE SUMMER CAMP 2024

Institut Teknologi Sepuluh Nopember (ITS), Surabaya, Indonesia

By Nuttakarn Sangaun



Place : Department of Industrial and System Engineering, (ITS)

Duration : July 29 – 2 August 2024

Industrial Challenge (INCHALL) x Summer Camp is an international scale competition for industrial engineering students and other relevant fields. The competition is held by Industrial Engineering Students Associate (HMTI), Department of Industrial and System Engineering, Sepuluh Nopember, Institut of Technology. INCHALL X Summer Camp main goals are to apply the core competencies of the industrial engineering discipline and develop the student's ability to solve real cases from company by designing the problems towards an improvement.



This program is planned to last 5 days. With the first 3 days we have 4 plenary sessions

## Opening Ceremony



In the morning of the first day, we will have a formal opening ceremony and a performance from Indonesia.

## Plenary Sessions

### Plenary session 1

Topic : Sustainability in Manufacturing : Best Practice in Remanufacturing

Dr. Maria Anityasari, S.T., M.Eng. Ph.D.

(Institut Teknologi Sepuluh Nopember, Indonesia)

This session provides a comprehensive look at how remanufacturing is a key driver of sustainability in manufacturing. By diving into innovative practices, it highlights ways to improve resource efficiency, reduce waste, and minimize environmental impact.

Ultimately, this session aims to provide manufacturers with actionable insights and tools to adopt and optimize remanufacturing, enhancing both sustainability in their operations and their competitive position in the market.



Brainwave Battle Activity

After the plenary session, we had a Brainwave Battle activity related to the topics we studied and engaged in activities with students from various universities.

## **Plenary session 2**

**Topic : Market Trend in Green Innovation**

**Dr. Logaiswari Indiran, Ph.D.**

**(Universiti Teknologi Malaysia)**

This session aims to explore the latest trends in environmentally friendly innovations across different industries. We will focus on how businesses are adopting sustainable practices and technologies to meet the increasing demand for eco-friendly solutions. And we have learnt about the latest advancements in renewable energy, circular economy principles, sustainable materials, and green manufacturing processes.



## **Plenary session 3**

**TOPIC: Resilience and Sustainability in Supply Chains**

**Natdanai Chanlawong Ph.D**

**(Suranaree University of Technology)**

The plenary session emphasizes integrating sustainability into supply chain management by balancing environmental, social, and economic considerations. Sustainability involves meeting current needs without compromising future generations, emphasizing long-term impacts, resilience, and the adoption of sustainable practices by businesses and governments.





#### Plenary session 4

TOPIC: Inter-organizational Relationships (Strategic alliances, collaborations, supply chain networks), Project Development and Management, Open Innovation, Engineering Economy

Asst. Prof. Diana Marie R. De Silva, Ph.D

(University of the Philippines Los Baños)

we learn about the complexities of knowledge exchange in R&D alliances, focusing on the role of epistemic communities and the tensions that arise from differing knowledge perspectives. The session explores how management controls guide knowledge sharing in these alliances, using a grounded theory approach to analyze decisions and actions. Key insights include the impact of social behaviors on knowledge exchange and practical implications for sustainable consumption and production.



## Lab Venture

We could engage directly in laboratory activities and participate in games related to the field of Industrial and Systems Engineering, tailored to the specific expertise of each lab. During this phase, they will also gain hands-on experience solving problems and challenges from each lab, aligned with the overarching theme of INCHALL X Ingenious Summer Camp 2024.



- **Ergonomic and Work System Design (EPSK) Laboratory**

EPSK is a Laboratory focuses on conducting teaching, research activities, and community services in the field of ergonomics/human factors and occupational health and safety engineering.

- **Manufacturing System (MANSYS) Laboratory**

Manufacturing System have an expertise area of Environmental Management, Multi-Criteria Decision Analysis, Management Technology, Green Manufacturing, Productivity, Quality and Manufacturing Systems, Sustainable Manufacturing, Life Cycle Management, Sustainability.

- **Quantitative Modelling and Industrial Policy Analysis (QMIPA) Laboratory**

The QMIPA is a Laboratory which supporting the achievement of the industrial and engineering Department of ITS in the field of optimizing quantitative evaluation as an alternative decision including by simulating. Achieving Sustainability Development Goals Through Data and Analytics.

- **Logistics and Supply Chain Management (LSCM) Laboratory**

LSCM is a laboratory concentrated on the fields of logistics management and supply chain management with focus study to produce an efficient flow of goods from upstream to downstream supported by information flow, coordination, and collaboration between business actors from raw material suppliers to end customers.

- **Industrial Management and System Design (PSMI) Laboratory**

PSMI laboratory which focused on managerial system of an industry in such a way that the mobilization of existing units in the industry is effective. The knowledge in the PSMI lab is very useful in a series of industrial processes.



## Patriot Outbond: Independence Day Edition

### (Game Activities)

This activity is divided into teams of 6 people. Each team will consist of students from different universities, and they will play various games together.



### Cultural Activity



Cheraw Dance



Paint Mask



## City Tour

We went to the Old Town (Kota Lama) in Surabaya is a historic area that reflects the city's colonial past. It's known for its well-preserved buildings and architecture from the Dutch colonial era. The area includes landmarks such as the Surabaya Heritage Track, which offers guided tours around the historic sites. Buildings like the House of Sampoerna and the Old City Hall are prominent features of Kota Lama.





## Company Tour



The program theme is “Accelerating Green Innovation to Achieve Sustainable Production and Consumption”. In this stage, all the participants will visit partner company of INCHALL 2024, PT Petrokimia Gresik, which is located at Jl. Jend. Ahmad Yani, Gresik 61119, East Java. The purpose of this stage is to learn and understand the elements of the company’s business processes being presented. Additionally, Company Visit stage will provide experience and knowledge to participants about the scope of Industrial and Systems Engineering in the workforce.



## Grand Final Stage

In the Grand Final round of INCHALL X Ingenious Summer Camp 2024 with the theme of "Accelerating Green Innovation to Achieve Sustainable Production and Consumption", the 5 best teams will be asked to present their previous work. The output of this final round will be a presentation of their innovative solutions. The participants will take turns presenting to a panel of judges consisting of Industrial and System Engineering professors, experts in the field, and Case Collaborators from partner companies.

