



**OUTREACH, NETWORKING & TECHNICAL VISIT TO
INSTITUTE OF TECHNOLOGY BANDUNG (ITB) INDONESIA
CITARUM RIVER RESTORATION PROJECT
TELKOM BANDUNG DIGITAL VALLEY, BANDUNG, INDONESIA**

by Prema Sivanathan

Prema Sivanathan is currently a committee member in Project Management Technical Division (PMTD).

IEM's Project Management Technical Division (PMTD) recently organised a technical visit to Indonesia. The trip includes three different technical visits. Ir.Dr.Ahmad Anuar B.Othman, PMTD Chairman, Vice Chairman Ir.Vincent and 7 other PMTD committee's have participated in this wonderful technical visit along with one IEM secretariat. On the 12th March 2017, upon arrival at Bandung, meet and greet by a local guide and transfer to Hotel. At night we had dinner together and back to the Hotel. The summary of technical visits as below:

1st Visit – 13 March 2017

After breakfast at hotel, we departed to (ITB) at about 8.30 am.

The first visit was Institute of Technology Bandung (ITB). ITB is the oldest technology-oriented university in Indonesia. ITB was considered the top choice among Indonesia's high school students and has been credited as one of the most prestigious universities in Indonesia.

2nd Visit – 13 March 2017

The second technical visit was Citarum River Restoration Project after lunch at about 2.30 pm. Cikapundung Amphitheatre which the construction was completed last year and functions as an icon and info gallery of Citarum River Restoration Project. Since the amphitheatre is located at the bank of Citarum River, hence the participants also will be toured around the river engineering component of this project. This river restoration project has utilised Integrated Water Resource Management (IWRM) concept, which has integrated flood mitigation, drought management, water quality control and public awareness components in the project. After this visit, at night we had a delicious dinner with local authentic cuisine.

3rd Visit – 14 March 2017

Free & easy activities in the morning, then after lunch about 2.30 pm lastly, we visited Telkom Bandung Digital Valley (BDV). BDV is an initiative of Telekomunikasi Indonesia Tbk. (Telkom) in developing the ecosystem and expected to be a starting point to support acceleration of information and communication technology (ICT) penetration in Indonesia. The integrated ecosystem is local industries like application developer, content provider and telecommunication instrument industry. BDV brings all technopreneur and technoventura to a cooperation platform mutually beneficial. This cooperation is a form of a long-term investment for sustaining ICT business in Indonesia in which it becomes big business centres in the future.

The Objectives of these technical visits are:

- To expose the members to the international project management expertise.
- To oversee how the concept of project management is being used in multi-disciplinary engineering project.
- Allow the members to have a face-to-face interaction with the Indonesians team, which creates a platform for knowledge sharing and technology transfer between Malaysia and Indonesia.

I. INSTITUTE OF TECHNOLOGY BANDUNG (ITB)

Upon arrival refreshment was served by Faculty of Civil and Environmental Engineering. Followed by sharing session with Head of Undergraduate of Civil Engineering, Ir. Muhamad Abduh ,MT,Ph.D.

In the year 1970's- Idea for establishing an educational package which is needed by Construction Management profession.1978- ITB's Civil Engineering Undergraduate Study Program Curriculum with Construction Management Specialization established.1980- Curriculum with Construction Management Specialization implemented.2005- 25 Years (Silver) Anniversary of Construction Engineering and Management Education in Indonesia. In year 2017, ITB completing 37 Years and still counting.



Figure-1. Ir.Dr.Ahmad Anuar B.Othman, (PMTD Chairman) gave token of appreciation to Ir. Muhamad Abduh (Head of Undergraduate of Civil Engineering)

He shared about activities conducted by Faculty of Civil and Environmental Engineering which is:

Educational - Courses Implementation (Undergraduate, Master, and Doctoral).

Research – Conducting Research with Undergraduate, Master and Doctoral students.

Community Service - Engaging in various studies in developing Indonesia's Construction Industry through Ministry of Public Works and Indonesia CIDB (LPJK)

Educational Activities

Undergraduate Course Implementation

- Mandatory courses
 - Construction Management
 - Engineering Economic,
 - Construction Methods & Equipment
 - Engineering System.
- Elective Courses
 - Construction Cost Estimation.

Master and Doctoral Course Implementation (CEM)

- Mandatory Courses
 - Construction Productivity
 - Project Planning and Controlling System
 - Construction Business Management
 - Contract Management & Legal Aspects
 - Cost Engineering
 - Construction Operational Design and Analysis
- Elective Courses
 - Construction Quality Management
 - Decision Making in Uncertainty
 - Risk Management in Construction Project
 - Construction Safety
 - HRM in Construction Industry
 - CEM Special Topic



Figure-2. Ir. Muhamad Abduh (Head of Undergraduate of Civil Engineering) gave token of appreciation to Ir.Dr.Ahmad Anuar B.Othman, (PMTD Chairman) left top. A group photo was taken at the main entrance of the Civil Faculty with Dr. Ir. Rizal Z.Tamin (First row, third from left)

Last but not least, during the Q&A session we had a serious discussion with Dr.Ir. Rizal Z.Tamin (Professor Construction Management). After that, we had a chance to visit the faculty laboratory as well.

II. CIKAPUNDUNG

CIKAPUNDUNG RESTORATION

Model Restoration of Central River City in Babakan Siliwangi Area - Leuwi Limus Kota Bandung was officiated by MINISTER FOR PUBLIC WORKS AND HUMAN SETTLEMENTS. DIRECTORATE GENERAL OF RIVER WATER SOURCES CITARUM RIVER.

On October 27th, 2013, the first stone laying of river restoration activities in "Terrace Cikapundung" or formerly known as "Cikapundung Amphitheater" was performed.

The Cikapundung river restoration is done in three stages:

1. Phase I (2013): construction of amphitheater and jogging track
2. Phase II (2015): natural area, commercial spot, operational area, sculpture area, education area, landscape, mechanical electrical
3. Stage III: rice terraces, organic gardens, and sky walk, check dam (plan).



Figure-3. Master plan of Cikapundung River.

- River length 28 km.
- Across 11 districts in three districts / cities; Bandung City, Bandung Regency and West Bandung Regency.
- Area of Cikapundung River Basin 278,2 km².
- Upstream River in Cigulung and Cikapundung, Maribaya (West Bandung District).
- Empire to Citarum River at Bale Endah (Kab.Bandung)
- One of the major tributaries that supplies water to the Citarum River.



Figure-4. Ir. Dr. Ahmad Anuar B. Othman, (PMTD Chairman) gave token of appreciation to BBWS Cikapundung staff.

III. TELEKOM INDONESIA

BANDUNG DIGITAL VALLEY (BDV)

- Misi- Digital Product Innovation
 - Scoping Innovation Area
 - Coherence Strategy
 - In-house Innovation
 - Open Innovation
 - Research Standardization, Quality Assurance
 - Big Data Analytic
 From digital creative to digital Commerce.

Purpose of Development of Digital Creative Industry

- MEGA
 - National Strategic Value
 - Improve competitiveness, independence, and economic growth National through the development of the Digital Creative Industry (IKD).
- MACRO
 - National Economic Value
 - Enhance the growth of digital creative business with Increase the number of Digitalpreneur. National Economic Value
- MICRO
 - Stakeholder Value
 - Creating Digitalpreneur that started from digital creative
 - To digital commerce both domestic and global scale,
 - Through the provision of creative containers, mentorships, and funding in incubation and acceleration activities

Immersion Programs in BDV consist of all these below:

- SV Overview
- Pitching
- Fundraising
- Product Market Fit

The best Indigo startup has a chance to follow Silicon Valley Immersion Program and will meet directly with Luminary and Entrepreneur at Partner office in Silicon Valley for 1 week. While holding a "pitch" meeting with

Investors from Silicon Valley. Facilities for Indigo Startup Indigo provides facilities to startup in the form of Work Space, mentoring, Funding, Platform Telkom Group, market access to Telkom Group and Follow on Funding SV. Quad Helix - Indigo Program involving the people related stakeholders - Include Academic, Business, Community and Government (Government).

People: Indigo Startup Program

Indigo participants since 2013 - 2016

> 2212 Startups participated since 2013,

> 76 Startups incubated Indigo Incubator participant since 2013-2016:

2013: 439 proposals 15 Startups selected

2014: 398 proposals 17 Startups selected

2015: 709 proposals 23 Startups selected

2016: 666 proposals 25 Startups selected

Few of Startup Selection Results Indigo Incubator as below:

- Smash

Smash is a web & mobile based application that aims to support Bank Waste operations throughout Indonesia.

- Stomach Story (Cerita perut)

Stomach Story as a culinary directory also innovates with featuring features that relate with culinary and certain events in different cities.

- The Sea Market (Pasar Laut)

The marine market is a site of buying and selling fish and seafood online. The marine market provides a comprehensive list of fish and seafood commodities at affordable prices to the community. For now, the "Pasar Laut" serve large quantities of purchases (wholesale).

- Jarvis Store Online

This is e-commerce platform which is designed for multi- platform, both web and mobile easily with various options

Available design template.

- Kampong Monster

The Animated Vientta Land of the Last Country taking place

In areas with historical and destination values

Tours in Indonesia.



Figure-5. Ir. Dr. Ahmad Anuar B.Othman, (PMTD Chairman) gave token of appreciation to Bandung digital valley staff.