

SURAT - TUGAS

Nomor: 297-D/1222/FT-UNTAR/III/2021

Dekan Fakultas Teknik Universitas Tarumanagara, dengan ini menugaskan kepada Saudara:

Nafiah Solikhah, S.T., M.T.

Untuk mengikuti kegiatan secara Daring dengan data sebagai berikut:

Nama Kegiatan : Training of Trainers for Design for Greater Efficiencies Program
Peran : Peserta
Waktu Pelaksanaan : 25 - 28 Januari 2021 (Semester Ganjil 2020-2021)
Penyelenggara : UK Government, International Finance Corporation, Excellence
In Design For Greater Efficiencies

Demikian Surat Tugas ini dibuat, untuk dilaksanakan dengan sebaik-baiknya dan melaporkan hasil penugasan tersebut kepada Dekan Fakultas Teknik Universitas Tarumanagara.

02 Maret 2021

Dekan



Harto Tanujaya, S.T., M.T., Ph.D.

Tembusan :

1. Kaprodi. Sarjana Arsitektur
2. Kasubag. Personalia

PROGRAM STUDI :

- Sarjana Arsitektur, Magister Arsitektur, Sarjana Perencanaan Wilayah dan Kota, Magister Perencanaan Wilayah dan Kota
- Sarjana Teknik Sipil, Magister Teknik Sipil, Doktor Teknik Sipil
- Sarjana Teknik Mesin, Sarjana Teknik Industri, Sarjana Teknik Elektro

Jl. Letjen. S. Parman No.1 - Jakarta 11440

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E : ft@untar.ac.id

www.untar.ac.id

Certificate of Attendance

This Certifies that

Nafiah Solikhah

Attended and completed

Traning of Trainers for Design for Greater Efficiencies Program



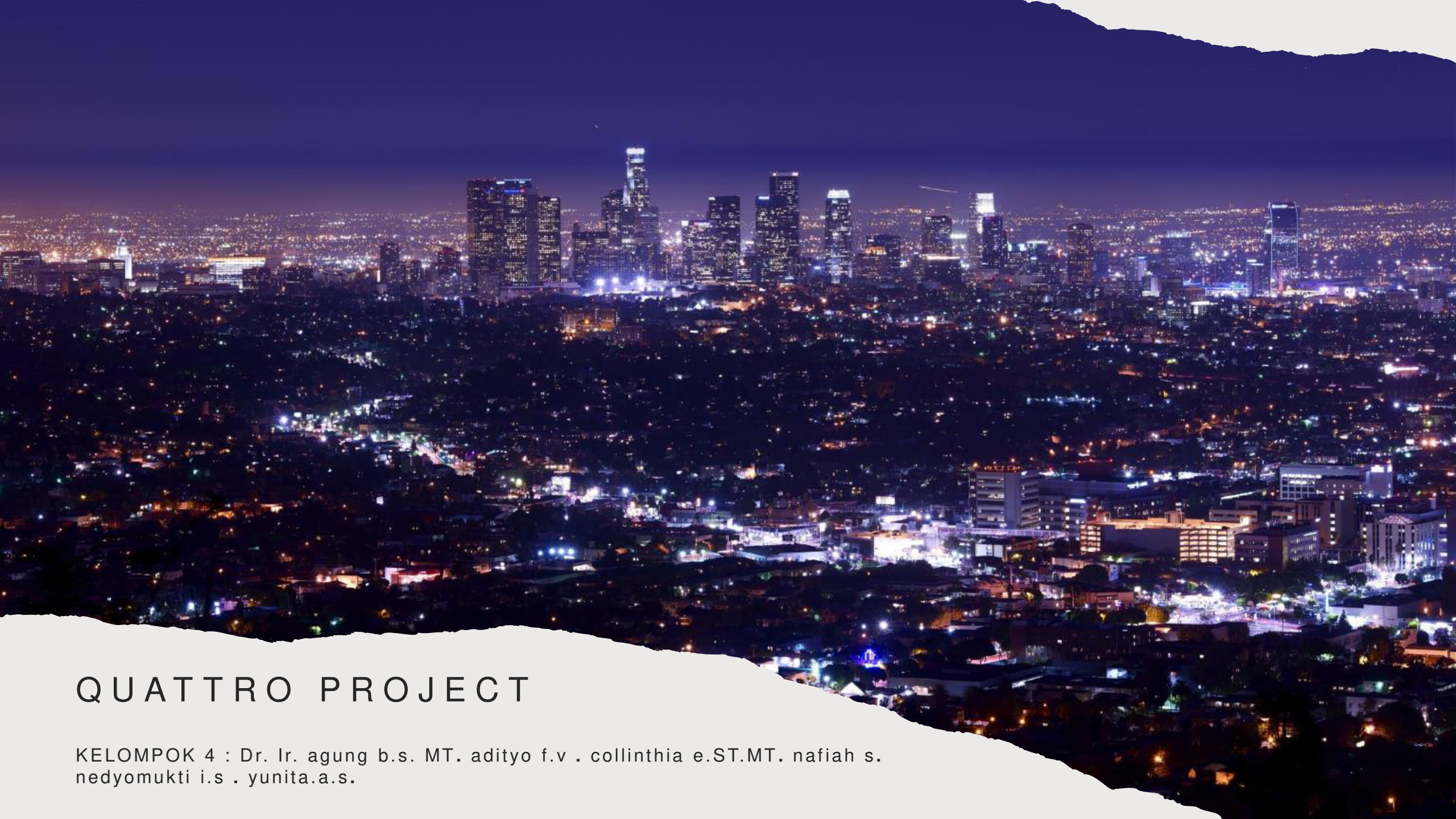
Farida Lasida Adji

East Asia Green Building Program Lead IFC

11/02/2021

Date





QUATTRO PROJECT

KELOMPOK 4 : Dr. Ir. agung b.s. MT. adityo f.v . collinthia e.ST.MT. nafiah s.
nedyomukti i.s . yunita.a.s.

DESIGN APPROACH

**Zero Net
Carbon**

0 energy

CLIENT

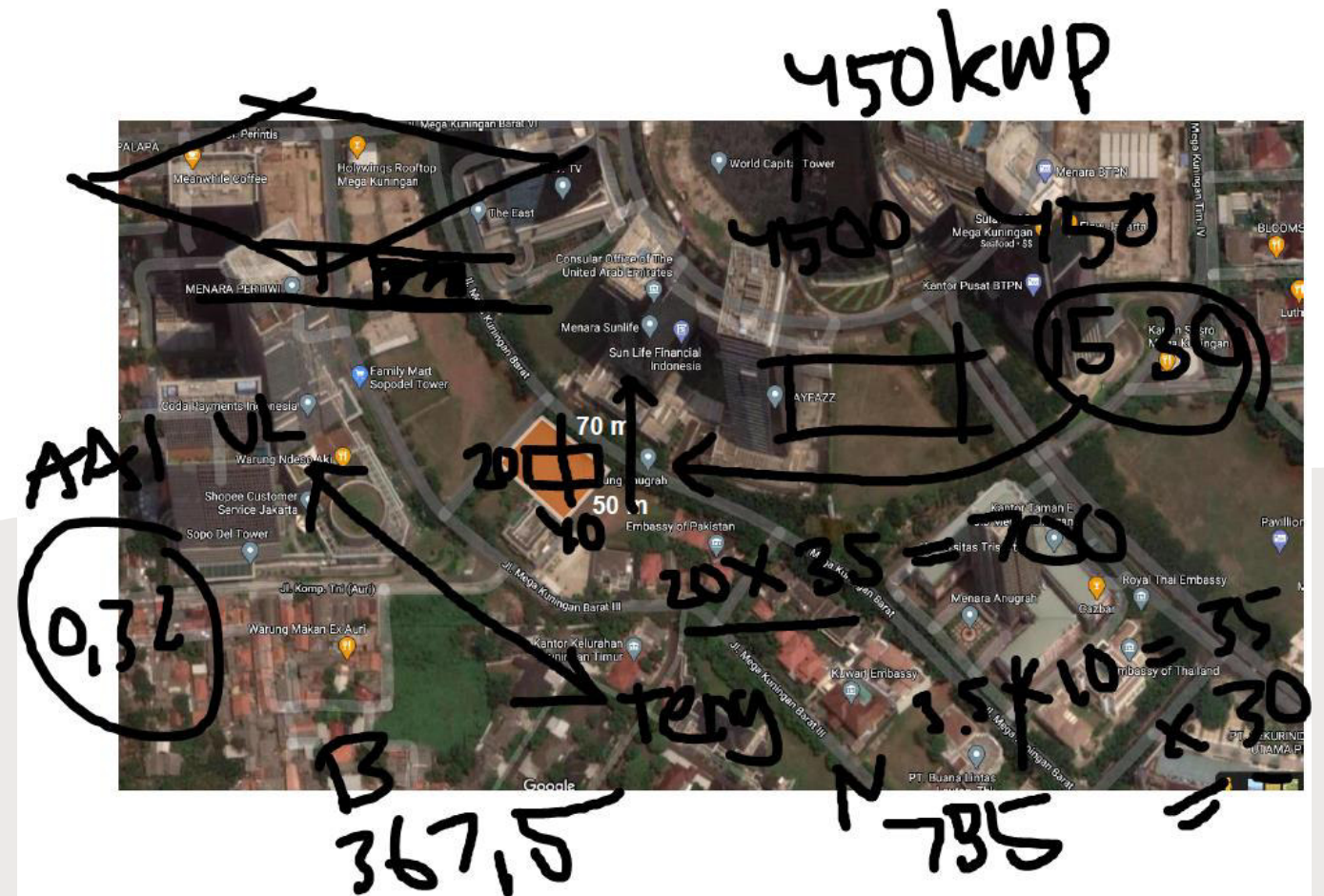
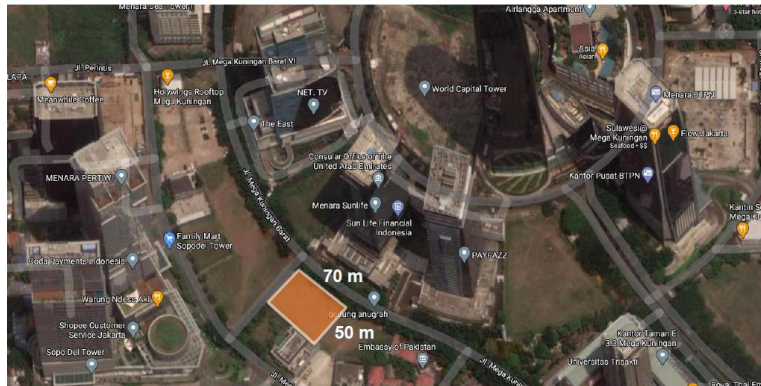
developer
office
(developer
who will own
and operate
the property)

Priority

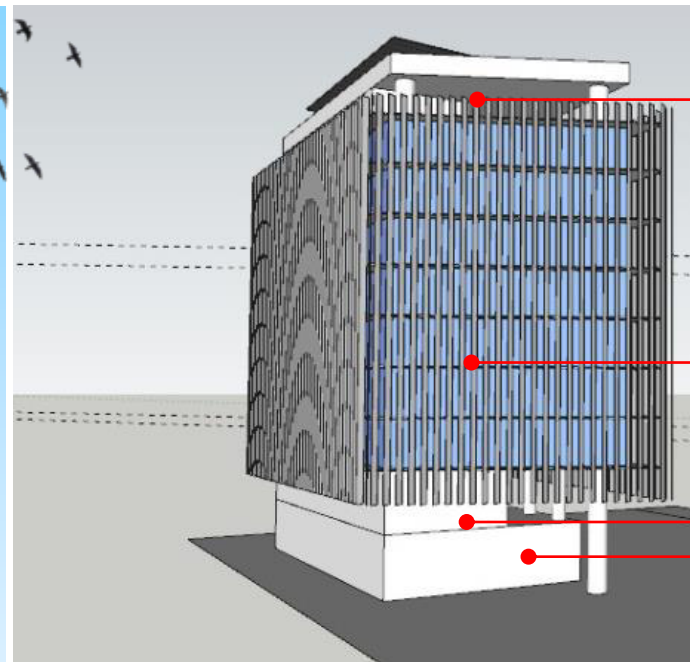
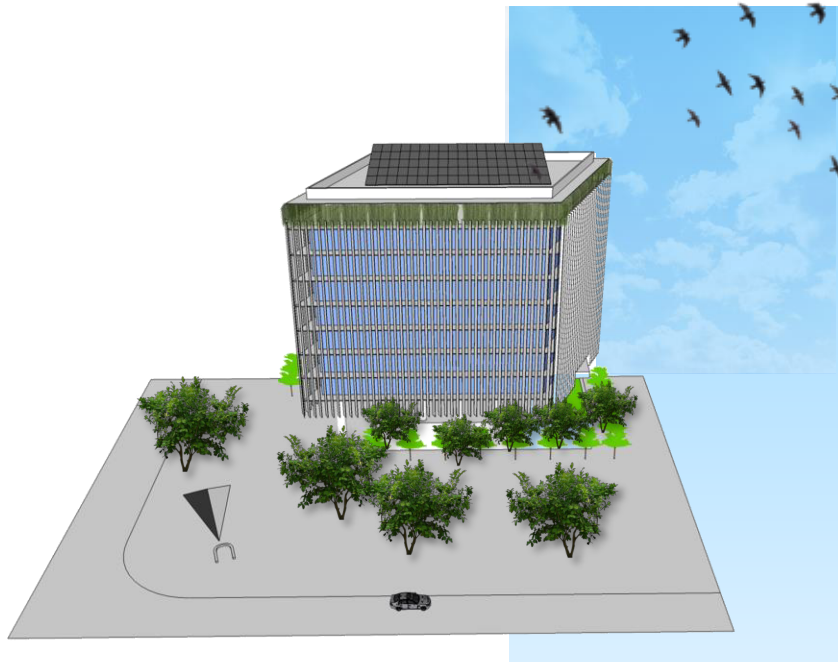
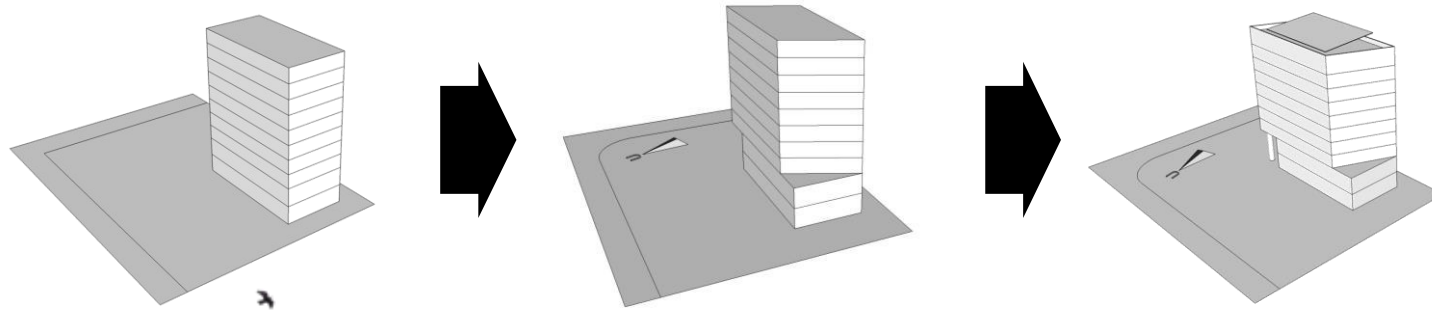
brand recognition
operational cost
walking the talk
occupant comfort
resilience
first cost
access to green funds
higher sales/rental
price

SITE ANALYSIS

PROJECT SITE- Mega Kuningan-CBD, Jakarta



THOUGHT PROCESS



leisure

office

meeting rooms

lobi, pemasaran

key design

Brand image
Modern, high class, attractive

Zero net

form bangunan
kompak
(15x30x10)

Orientasi
Utara-Selatan

PROPOSED DESIGN

key design

Brand image

Modern, high class, attractive

Zero net

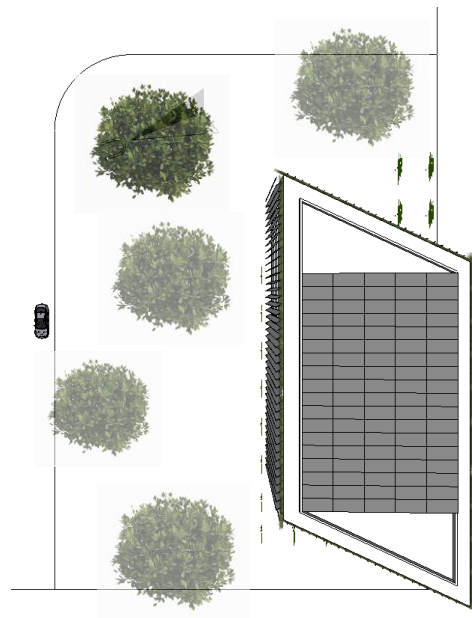
form

bangunan
kompak
(15x30x10)

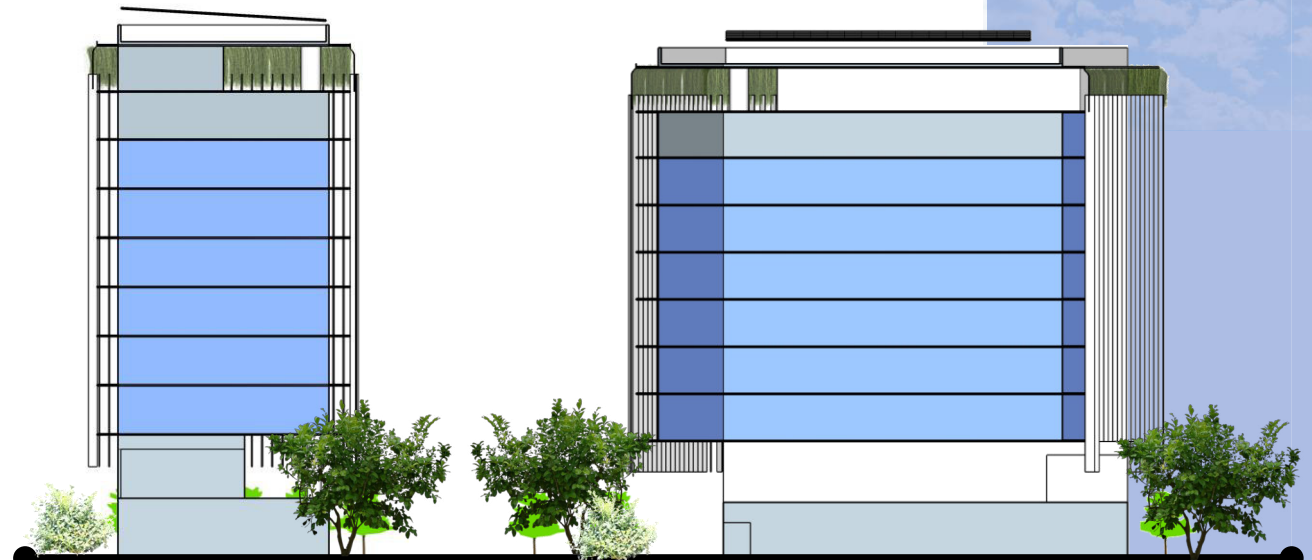
Orientasi

Utara-Selatan

SITE PLAN



ELEVATION



PROPOSED DESIGN

key design

Brand image

Modern, high class, attractive

Zero net

form bangunan
kompak
(15x30x10)

Orientasi
Utara-Selatan



100 %
Energy Savings



44.12 %
Water Savings



46.68 %
Less Embodied Energy
in Materials

LIST OF MEASURES



100 %
Energy Savings

ENERGY

OFE01 Reduced Window to Wall Ratio – WWR of 61.67%
North & South : 70%
East & West : 45%

OFE04 External Shading Devices – AASF of 0.63 (combined overhang)

OFE07 Low-E Coated Glass : U-value of 3 W/m²K and SHGC of 0.45

OFE11 VRF Cooling System – COP of 3.5

OFE24 Energy – Saving Light Bulbs – Internal Spaces

OFE25 Energy – Saving Light Bulbs – External Spaces

OFE27 Occupancy Sensors in Bathrooms, Conference Rooms, and Closed Cabins

OFE28 Occupancy Sensors in Open Offices

OFE29 Daylight Photoelectric Sensors for Internal Spaces

OFE30 Solar Photovoltaics – 100% of Total Energy Use (100 % of Annual Electricity)

LIST OF MEASURES



100 %
Energy Savings

ENERGY

OFE30 Solar Photovoltaics – 100% of Total Energy Use (100 % of Annual Electricity)

✓	OFE30 Solar Photovoltaics - 100% of Total Energy Use	⋮
% of Annual Ele...	100	Capacity (kWp)
		787.1

membutuhkan
7871m² dimana
4500m² atap
efektif

LIST OF MEASURES



100 %
Energy Savings

passive

active

ENERGY

OFE01 Reduced Window to Wall Ratio – WWR of 61.67%

North & South : 70%

East & West : 45%

OFE04 External Shading Devices – AASF of 0.63 (combined overhang)

OFE07 Low-E Coated Glass : U-value of 3 W/m²K and SHGC of 0.45

OFE11 VRF Cooling System – COP of 3.5

OFE30 Solar Photovoltaics - 100% of Total Energy Use



% of Annual Ele...

100

Capacity (kWp)

548.2

LIST OF MEASURES



100 %
Energy Savings

lamp

sensor

ENERGY

OFE01 Reduced Window to Wall Ratio – WWR of 61.67%
North & South : 70%
East & West : 45%

OFE04 External Shading Devices – AASF of 0.63 (combined overhang)

OFE07 Low-E Coated Glass : U-value of 3 W/m²K and SHGC of 0.45

OFE11 VRF Cooling System – COP of 3.5

OFE24 Energy – Saving Light Bulbs – Internal Spaces

OFE25 Energy – Saving Light Bulbs – External Spaces

OFE27 Occupancy Sensors in Bathrooms, Conference Rooms, and Closed Cabins

OFE28 Occupancy Sensors in Open Offices

OFE29 Daylight Photoelectric Sensors for Internal Spaces

OFE30 Solar Photovoltaics - 100% of Total Energy Use



% of Annual Ele...

100

Capacity (kWp)

439.9

LIST OF MEASURES



44.12 %
Water Savings

fixtures

recycle

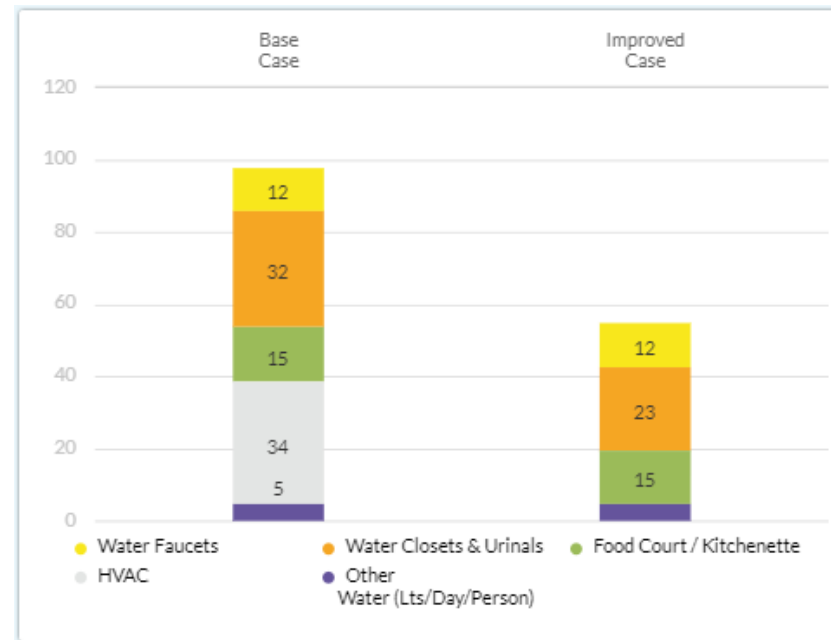
sensor

WATER

OFW03 Water – Efficient Urinals in All Other Bathrooms – 2 L / flush

OFW07 Grey Water Treatment and Recycling System

OFE27 Occupancy Sensors in Bathrooms, Conference Rooms, and Closed Cabins



comparison
to base case

LIST OF MEASURES



46.68 %
Less Embodied Energy
in Materials

common
material

MATERIALS

OFM01 Floor Slabs – In-Situ Reinforced Concrete Slab > 30% PFA

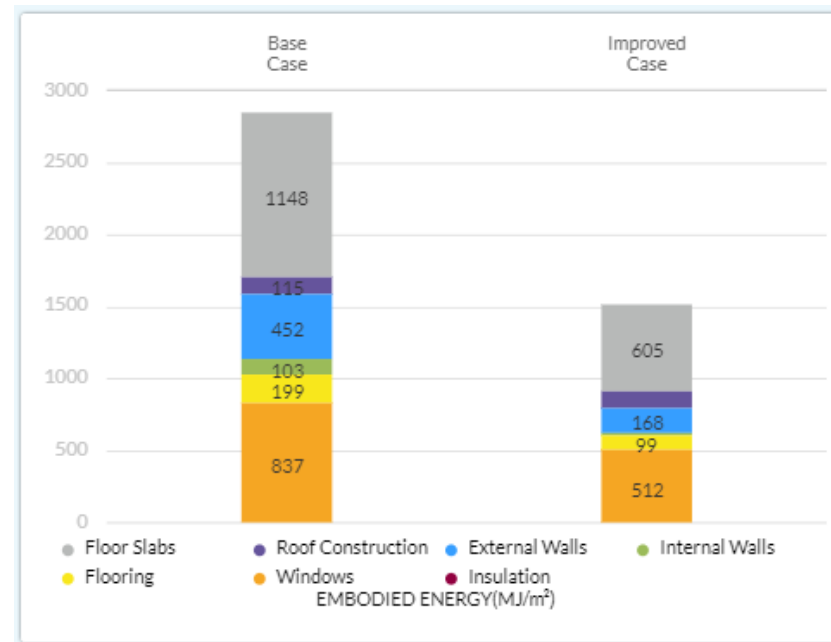
OFM02 Floor Slabs – In-Situ Reinforced Concrete Slab

OFM03 External Walls – In Situ Reinforced Wall

OFM04 Plasterboards on Timber Studs

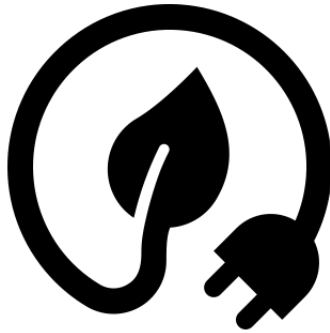
OFM05 Flooring – Terrazzo Tiles

OFM06 Window Frames – UPVC (Single Glazing)

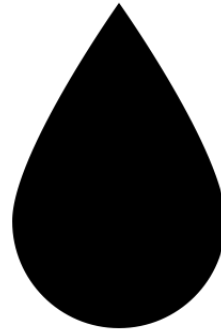


comparison
to base case

EDGE RESULTS



100 %
Energy Savings

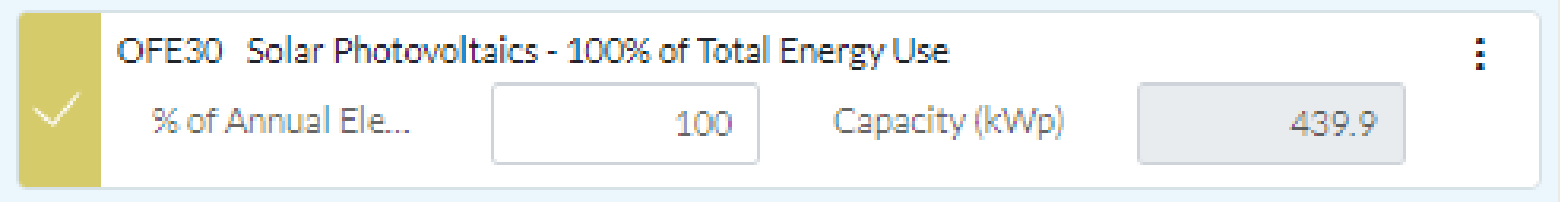
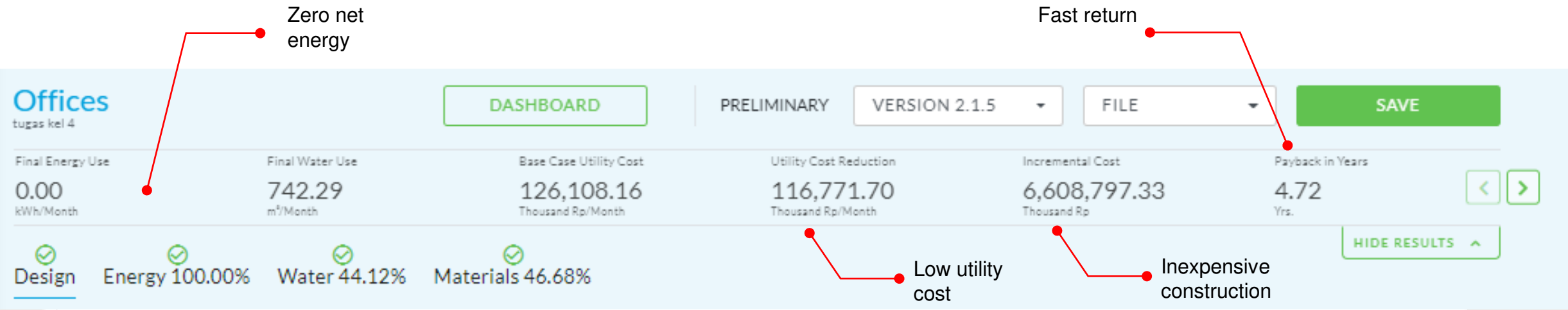


44.12 %
Water Savings



46.68 %
Lesss Embodied Energy in Materials

BENEFITS



final roof needed
4399 m² from
4500 m²
(95%)

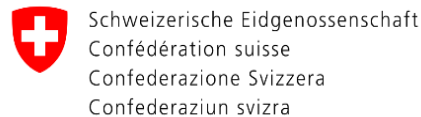
Additional protection to roof surface

TRAINING OF TRAINERS

Design for Greater Efficiencies

Indonesia, 26 – 28 January 2021

WITH THE SUPPORT OF



AGENDA ACARA

DAY 1 – 26 January 2021*

Time	Min	Agenda	Speaker
08.30 – 08.40	10	Introduction	Jatmika Suryabrata
08.40 – 08.45	5	Opening Remarks	Farida Lasida Adji
08.45 – 09.30	45	Green Building Lecture for University Students: Background and Update	Prashant Kapoor
09.30 – 10.50	30	Q&A Session	Prashant Kapoor (moderate by Jatmika)
09.50 – 11.20	90	MODULE 1: The Need of Green Building & EDGE Program	Recording Video from Autif
11.20 – 12.00	40	Coaching Clinic & Group Work	Jatmika
12.00 – 13.00	60	LUNCH BREAK	
13.00 – 15.30	150	MODULE 2: Form, Skin, Climate (Bio-Climatic Design) – part 2	Recording Video from Autif
15.30 – 16.00	30	Explanation of Final Design Exercise guide	Jatmika
16.00 – 16.15	15	CLOSING DAY 1 - REST ROOM BREAK BEFORE COACHING CLINIC	
16.15 – 17.15	60	Coaching Clinic & Group Work	Jatmika

**) length of time for each session can be adjustable*

DAY 2 – 27 January 2020*

Time	Min	Agenda	Speaker
08.30 - 09.45	75	MODULE 3: HVAC & Control	Recording Video from Autif
10.00 – 11.00	75	MODULE 4: Daylighting & Lighting System	Recording Video from Autif
11.00 – 12.00	60	Q&A and Discussion	Jatmika
12:00 – 13:00	60	LUNCH	
13:00 – 14:30	90	MODULE 5: Water & Materials	Recording Video from Autif
14:30 – 15:00	30	Q&A and Discussion	Jatmika
15:00 – 15:15	15	CLOSING DAY 2 - REST ROOM BREAK BEFORE COACHING CLINIC	
15:15 – 17:45	150	Coaching Clinic & Group Work	Jatmika

**) length of time for each session can be adjustable*

DAY 3 – 28 January 2021*

Time	Min	Agenda	Speaker
08:30 – 09:15	45	Discussion on Class Presentation	Jatmika
09:15 – 10:15	60	MODULE 7.1: Making the Business Case – Client Perspective	Recording Video from Autif
10:15 – 11:15	60	MODULE 7.2: Making the Business Case – Design Firms Point of View	Recording Video from Autif
11:15 – 12:00	45	Q&A and Discussion	Jatmika
12:00 – 13:00	60	LUNCH	
13:00 – 15:30	150	Class Presentation	Jatmika
15:30 – 15:45	15	REST ROOM BREAK	
15.45 – 16.45	60	Closing Discussion for overall material	Jatmika

**) length of time for each session can be adjustable*

TATA CARA TRAINING



1. Gunakan Nama Lengkap pada Microsoft Teams
2. Harap mengisi daftar hadir yang akan dilakukan pada (tersedia di chat)
3. Microphone Peserta Training harus selalu dalam kondisi "mute"
4. Pertanyaan dapat disampaikan melalui kolom "chat" (*conversation*).
5. Apabila ada kendala atau hal yang ingin disampaikan, harap menyampaikan melalui kolom "chat"
6. Dalam ToT ini akan ada beberapa tugas yaitu:
 - a. Tugas Kelompok: Pembagian kelompok akan disampaikan di sesi Penjelasan Tugas
 - b. Tugas individu: hasil dikirimkan melalui google classroom
7. Diakhir pelatihan, peserta diharapkan untuk mengisi form survey terkait training kali ini. Form survey tersebut dapat diakses melalui link survey yang akan diberikan pada "chat"

SPEAKER INTRODUCTION

FARIDA LASIDA ADJI

*Regional Green Building Lead - East Asia, Climate Business
Department, IFC Climate Business Group*



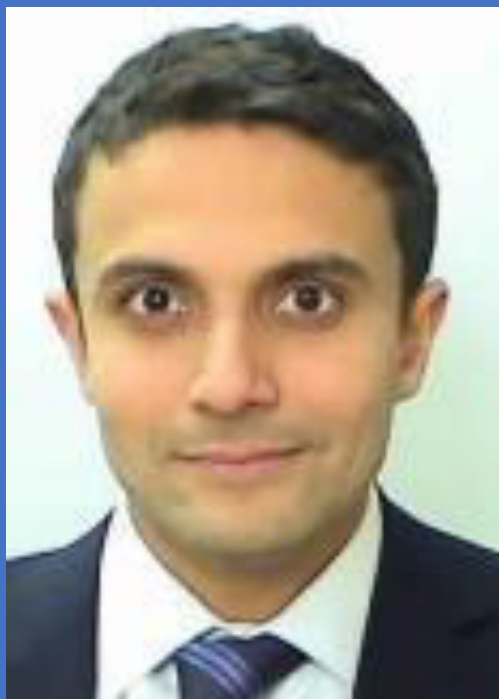
Ida is Regional Green Building Lead - East Asia for IFC Climate Business Group and is based in Jakarta.

In 2010-2015 she was involved in early development of EDGE and led IFC's Green Building Program in Indonesia following successful engagements with the Provincial Government of DKI Jakarta, Municipality of Bandung, and the Ministry of Public Works and Housing to introduce green building codes at the regional and national levels.

She rejoined IFC Green Building team in mid 2020 after a 5-year assignment in IFC Manila, Philippines, working on investment policy and business regulatory reform. Ida received her MBA from University of Edinburgh, Scotland, UK; and a Bachelor in Economics from University of Indonesia

PRASHANT KAPOOR

*Chief Industry Specialist, Green Buildings and Cities, IFC
Climate Business Group, Climate Change Group*



An internationally recognized thought leader and expert in bioclimatic design, Prashant Kapoor is a passionate advocate for solutions that align the interests of developers, financial institutions, governments, and homeowners to create more sustainable cities.

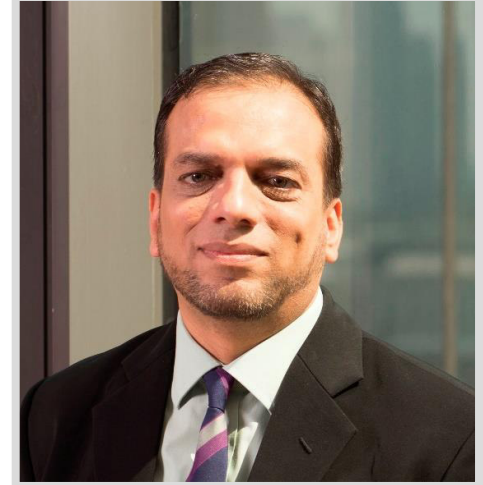
As the person who created EDGE (“Excellence in Design for Greater Efficiencies”), Prashant also invented IFC’s EDGE green buildings program as a coordinated investment-advisory approach to transform construction industry.

Prior to joining IFC, Prashant worked as a Director at WSP consultants in London. He led the engineering planning of Masdar City, an innovative zero-carbon city in Abu Dhabi, and developed the Dubai Urban Development Framework, including green building regulatory for the city.

INSTRUCTORS

Autif Sayyed

Green Building specialist with IFC, with over 20 years experience in building design, energy efficiency analysis and green building consulting to developers, architects and governments.



Jatmika Suryabrata

Jatmika Adi Suryabrata has been lecturer at Universitas Gadjah Mada for more than 30 years with special interests in Green Buildings/Bioclimatic Designs. He also a member of Architecture and Planning Board in Jakarta (TABG) since 2013



Introduction

Institut Teknologi Bandung

Introduction

Institut Teknologi Sepuluh Nopember

Introduction

Universitas Diponegoro

Introduction

Universitas Gadjah Mada

Introduction

Universitas Indonesia

Introduction

Universitas Tarumanagara

PRESENTATION GROUPS

- Groups have been formed across universities
- If you have question, please contact instructor (Jatmika)
- Each group will have their own WhatsApp Group for discussion and working on Class presentation on 28 January 2021

KELOMPOK 1

Nama	Universitas
Erni Setyowati	Universitas Diponegoro
Satriya Wahyu Firmandhani	Universitas Diponegoro
Fermanto Lianto	Universitas Tarumanagara
Maria Veronica Gandha	Universitas Tarumanagara
Alya Farah Taufiqoh, S.Ars.	Universitas Gadjah Mada
Fenty Ratna Indarti, S.T., M.Arch.	Institut Teknologi Sepuluh Nopember

KELOMPOK 2

Nama	Universitas
M Donny Koerniawan	Institut Teknologi Bandung
Denny Husin	Universitas Tarumanagara
JM. Joko Priyono Santosa	Universitas Tarumanagara
Dr Eng Ir. Sri Nastiti Nugrahani Ekasiwi, M.T.	Institut Teknologi Sepuluh Nopember
Coriesta Dian Sulistiani	Universitas Indonesia
Ir. Martin Halim, M.T.	Universitas Tarumanagara
Dr. Ima Defiana ST, MT	Institut Teknologi Sepuluh Nopember

KELOMPOK 3

Nama	Universitas
Desliana Putri Pratiwi	Institut Teknologi Bandung
Eddy Prianto	Universitas Diponegoro
Agustinus Sutanto	Universitas Tarumanagara
Dr. Ir. Naniek Widayati Priyomarsono, M.T	Universitas Tarumanagara
Dr. Arina Hayati, S.T, M.T.	Institut Teknologi Sepuluh Nopember
Tria Amalia Ningsih	Universitas Indonesia
Nur Zahrotunnisaa Zagi	Universitas Gadjah Mada

KELOMPOK 4

Nama	Universitas
Nafiah Solikhah	Universitas Tarumanagara
Adityo Fajar Vakumoro	Universitas Diponegoro
Collinthia Erwindi ST. MT	Institut Teknologi Sepuluh Nopember
Dr. Ir. Agung Budi Sardjono, MT	Universitas Diponegoro
Yunita Ardianti Sabtalistia	Universitas Tarumanagara
Nedyomukti Imam Syafii	Universitas Gadjah Mada

KELOMPOK 5

Nama	Universitas
Hafshah Salamah	Institut Teknologi Bandung
DR.Ir.Agung Dwiyanto, MT	Universitas Diponegoro
Ir. Mieke Choandi, MT.	Universitas Tarumanagara
Surya Gunanta Tarigan	Universitas Tarumanagara
Budi A.Sukada	Universitas Tarumanagara
Ova Candra Dewi	Universitas Indonesia
Nabila Afif	Universitas Gadjah Mada

KELOMPOK 6

Nama	Universitas
Dr. Ir. Rudy Trisno. MT. IAI. HDII	Universitas Tarumanagara
franky liauw	Universitas Tarumanagara
Aswin Indraprastha	Institut Teknologi Bandung
Dr. Eng. Agus Hariyadi, ST, M.Sc.	Universitas Gadjah Mada
Fisa Savanti	Universitas Diponegoro
Nurfahmi Muchlis, S.T., M.Ars.	Institut Teknologi Sepuluh Nopember
Baskoro Laksitoadi	Universitas Indonesia

KELOMPOK 7

Nama	Universitas
Irma Handayani Lubis, ST., M.Sc.	Institut Teknologi Bandung
Thomas Wiwandaka Pepe	Universitas Diponegoro
Suwardana Winata	Universitas Tarumanagara
Titin Fatimah	Universitas Tarumanagara
Intan Chairunnisa	Universitas Indonesia
Ar. Iwan Adi Indrawan, ST. M.Ars.	Institut Teknologi Sepuluh Nopember

KELOMPOK 8

Nama	Universitas
Masyiana Arifah Alfia Riza, ST., M.Arch.	Universitas Diponegoro
Budijanto Chandra, S.T., M. Ars.	Universitas Tarumanagara
Johanes Krisdianto, ST., MT	Institut Teknologi Sepuluh Nopember
Rudy Surya	Universitas Tarumanagara
Dr.Ir.Samsu Hendra Siwi, M.Hum	Universitas Tarumanagara
Esti Setyaning Jati	Universitas Gadjah Mada