



PRESIDENT UNIVERSITY
GreenMetric
It's Great to be Greener



EXECUTIVE
SUMMARY

2020

Annual Report
GreenMetric President University

Criteria 1

Setting and Infrastructure

- Total campus area of President University is 30,445.643 m², where total campus ground floor area of building is 8,524.487 m², total campus buildings are 18,109 m², total planted vegetation area is 4,329.697 m², total water absorption area is 17,642.707 m²
- The ratio of open space to total area is $\frac{8524.487}{30455.645} \times 100\% = 72\%$
- President University is located at Jababeka Industrial Estate Cikarang, Bekasi, Indonesia. As we can see from the map, we have no forrest vegetation but it surrounded by “insdustrial jungle”.
- Total area on campus covered in planted vegetation is $\frac{4329.697}{30455.645} \times 100\% = 14.22\%$
- Total area on campus for water absorption besided forest and planted vegetation is $\frac{17642.707}{30455.645} \times 100\% = 57.93\%$
- Total number of reguler students, including part-time and full-time students, is 5813 students. Total number of online students is 100 students. Total number of academic and administrative staff is 354. Estimated total population in campus during pandemic is 454.
- Total university's budget is \$ 6,777,551 and dedicated for sustainability effort \$ 11,105 or 0.2% of the total budget
- In the COVID-19 pandemic only two building routinely utilize and maintain (building A and building B)



Figure 1. Maintenance of building A and building B Lift in PresUniv campus area

- Campus facilities for disable and maternity care are: disabled access to building B President University, disabled access to building A President University, Disabled access to building A lobby President University

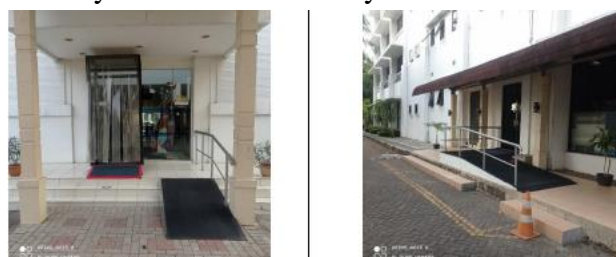


Figure 2. disabled access to building A and B

- There are several security and safety facilities provided by campus management such as 24-hours campus security, CCTV, fire hydrant, APAR, medial waste bin, etc.
- President University provides health services with comprehensive service support for the entire academic community.



Figure 3. Klinik Presiden

- Jababeka with President University collaborate to maintain and manage Jababeka Botanical Garden which located about 5 KM from the main campus of President University. Jababeka Botanical Garden is a 100 m² green open area provided by the estate management as the conservation area that planted with several kinds of trees and also as the habitat of several birds species that naturally lives at that place.

Criteria 2

Energy and Climate Change

- President University intends to realize further energy savings by using 100% LED lighting or better and greener lighting technology. We also design several building with natural lighting (during the day) and almost without Air Conditioner. Here are some pictures of them:

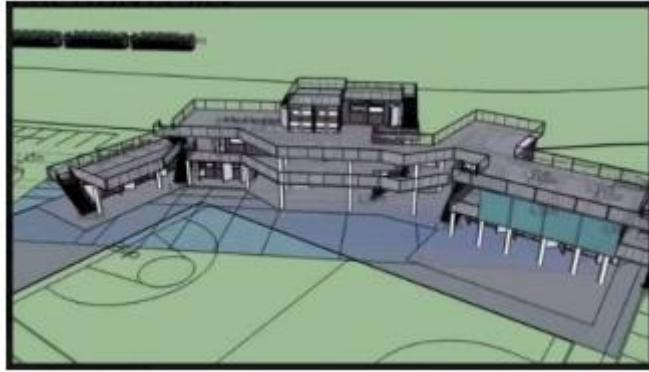


Figure 4. Canteen design



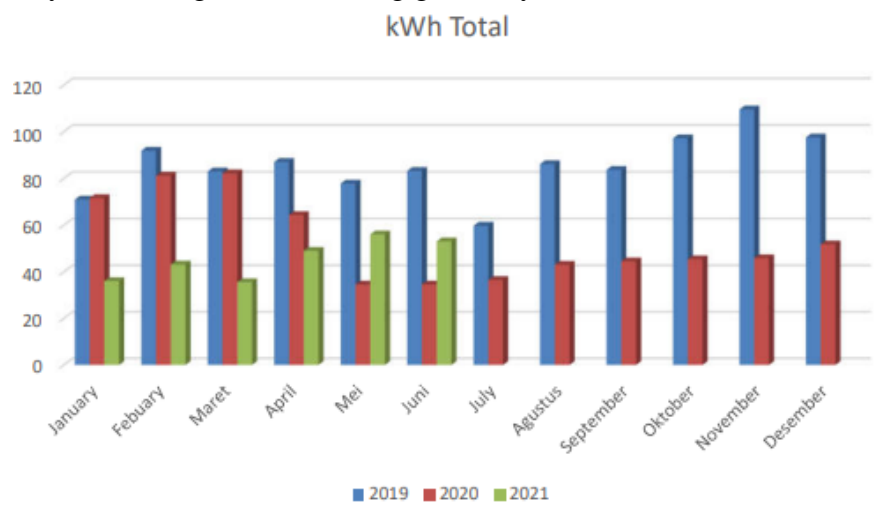
Figure 5. Canteen of President University

- The solar panel capacity is 2,000 Wh and it is used for free charging service (5 volts). Everyone may charge his or her smartphone or other small devices with low ampere requirement. The place is an Islamic Prayer Room but the design is for outdoor. Many visitors may regularly use this facility



Figure 6. f Roof and Mounted Solar Panels (President University)

- The total electricity usage of President University Campus in 2021 is 273.060 kWh (up to June only). On the main campus area electricity is used for lighting, cooling, and laboratory appliances. Due to pandemic (March 2020) electricity usage is significantly decreasing and start rising gradually until June 2021.



Electricity Usage per Year (in kWh) for 2019, 2020, and 2021

- ratio of renewable energy production divided by total energy usage per year is $\frac{2}{540,400} = 0.37\%$
- There are two elements of green building implementation as reflected in all construction and renovation policies, those are: President University's Canteen and Open Prayer Space.
- There are three campus program to reduce greenhouse gas emission: Charging parking for private vehicle to reduce vehicle in campus; Using solar panel for renewable energy. Save electricity. Also natural lighting and cooling building design; Ride sharing using shuttle bus to reduce carbon footprint.
- Carbon footprint in 2020-2021 = 502,512 metric tons
- Innovative programs during Covid-19 pandemic are parking system with sensor help us in preventing Covid 19 surface contamination, set cost or tariff at parking area

higher to further reducing carbon emissions, attendance system with face or palm recognition feature also installed to prevent surface contamination, security check, guest book, temperature check, and disinfectant booth are enforced for all students, faculty, staff, and visitors.

- President University impactful programs on climate change: 1. Start Up (entrepreneurship program) named “Olah Aja”, supported by university curriculum, focus on handling medical waste for safety and further added values. 2. Start Up (entrepreneurship program) named “cococreative”, supported by university curriculum, focus on coconut husk handicrafts. Converts waste into commercial products. 3. University Green Metric website continuously support climate change related campaign.

Criteria 3

Waste

- President university has a lot of green open land, the campus routinely carries out maintenance on existing plants. Waste treatment from plants is recycle into fertilizer. Fertilizer itself has the benefit of making plants and soil have higher and better productivity. This effort is made to make sustainable recycling in use of organic waste into what is needed.



Figure 7. Recycling Program for University Organic Waste

- There are several reduce and reuse program for an organic waste. Those programs are:
 1. In the process of reducing paper use, President University implements a reusable box for used paper. In printing the un confidential documents, to minimize the paper waste, used paper could be used .



Figure 8. Reuse Paper

2. In every lobby there is a collection box for paper and cardboard which will be recycled into environmentally friendly wood.



Figure 9. Collect Paper Used

3. Strict canteen regulations in reducing the amount of plastic waste, especially straws and styrofoam from outside and it is written in the campus regulations with the canteen seller, it is forbidden to use styrofoam packaging and the use of straws
4. President students and staff are used to carrying personal bottles that can be refilled with mineral water provided by the campus



Figure 10. No Mineral Water in Bottle

- The result of organic waste management, provides many benefits back to campus, especially eco enzymes whose functions help a lot in daily routines to maintain the environment. Eco enzyme can be used as a general purpose cleaner, as plant fertilizer, as a repellent for various plant pests and as a conservator of the surrounding environment where eco enzyme can neutralize various pollutants that pollute the environment. Food waste as an organic waste could use in making liquid fertilizer using composter. The liquid fertilizer may used for fertilized the plant around campus.
- COVID-19 pandemic is still a big problem in Indonesia and also the world. The number of people affected continues to grow, while the vaccine itself is still at the trial stage. One of the transmission sources of this virus is medical waste, such as tissues, used masks, and gloves. A wave sensor will be able to detect so that the trash bin will open automatically without any touch. This feature will undoubtedly reduce the risk of waste disposal to contract the COVID-19 virus.
- Waste banks are an alternative waste solution. Cardboard and bottle waste has a large enough value to be reprocessed. from waste we can get profit which will be reused to

care for the environment. President University students already start in making Waste Bank, but activities stopped along the pandemic covid 19



Smart Trash Bin in President University

- The hazardous wastes generated by President University are only from laboratory facilities as the result of experimental and research activities. The toxic wastes are collected in the closed chemical resistant plastic tank and placed in the specific container in the Laboratory. Regularly the collected sealed tank is transferred to the PT Jababeka Infrastruktur's Temporary Hazardous Waste Storage. The storage had got licensed from Local authority Government. President University is a Education Foundation under the Jababeka Group, that located in Jababeka Education Park. So there many collaboration between President University and Jababeka Group, as the example in managing toxic waste between President University and PT Jababeka Infrastruktur (a subsidiary company of Jababeka Group). The toxic waste that storage in PT Jababeka Infrastruktur's Temporary Hazardous Waste, periodically (at least 1x 90 days) are collected by PT PPLI. PT PPLI is the company who have license for managing of hazardous waste from Ministry of Environment and Forestry. In this case 100% of toxic waste generated by President University are stored, collected, and disposed to the PPLI.
- The sewage wastewater generated by President University is discharged to the sewerage system of Jababeka Education Park that flow to the centralized of Jababeka 's wastewater treatment plant (WWTP). The technology of WWTP is applying Food Chain Reactors processes, that is the one of the latest technology which high energy efficiency with less hazardous sludge production. The treated water from WWTP is reuse for watering plant surrounding the Education Park.

Criteria 4

Water

- The rainwater harvesting is planned as the water conservation program. Currently the program is at the promoting stage and preparation of design. The study was focus in Building B.

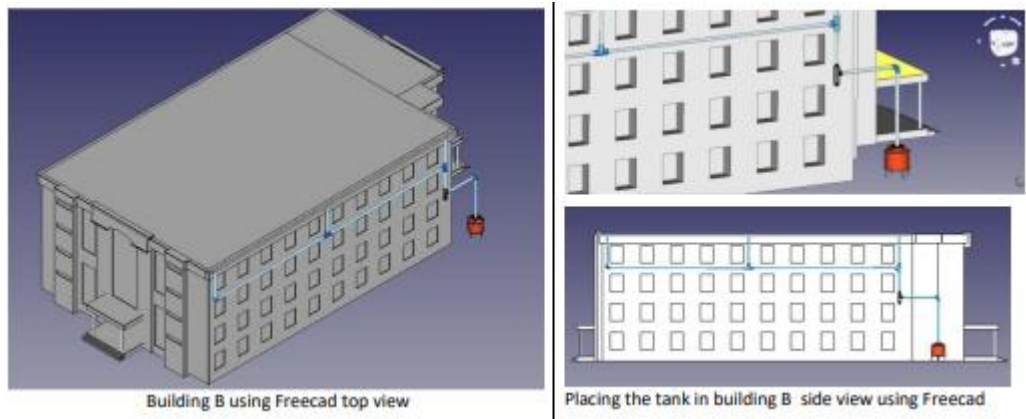


Figure 11. Rain Water harvesting Program is under design finalization

- The water recycling is under promotion and preparation a feasibility study. The program is recycle the ablution wastewater to be reused as alternative water sanitation at second grade. The recycled water can be used for Toilet flushing, Car washing, Floor cleanin and plants watering. The programs are under preparation and promotions.
- Some examples of water conservation application are instaling automatic control of urinal flushing, low flush WC's and low flow taps . The number of eco-water efficient appliances is 51.5 % of total appliances.



low flush WC's



automatic control of urinal flushing



low flow taps



- President University is located in Jababeka Education park. The drinking water for President University consumption is 100 % supplied by PT Jababeka Infrastruktur who managed and supply to all treated drinking water consumers in Jababeka Education Park. The raw water source of drinking water treatments is come from the West Tarum River which is as the main source of surface water in the region.
- Disinfectant chambers provide on the campus main gate and several faculty buildings. Meanwhile, the figure shows handwashing facilities placed near every entrance of buildings. Hand sanitizer containers place in every corner of the buildings, where handwashing facilities are impossible to install.

Criteria 5

Transportation

- During pandemic the campus population had many decrease about 10 % compare to normal population. As the result the number of vehicles of cars and motorcycles also decreased very significantly that showed many empty spaces in parking plot
- University sites in Jababeka Education Parks. The dormitories of students are located around the campus. There is separation location between male and female students dormitories. The President University Student Housing (PUSH) is provided for female students, while The Elvis Apartment Area and New Beverly Hills (NBH) area are provided for male students.
- Shuttle service are provided by university in regular schedule and for free. The routes of shuttle services for going to campus is started in The New Beverly Hills (the most far), then go to the Elvis Complex apartment Area, and then go to PUSH the nearest location before arriving at Main Campus. The routes for going to the dormitory is started in Main campus, PUSH, Elvis, and NBH.
- Around University sites are cyclist and pedestrian friendly. Bikes are provided by University for free. Students can use the free bikes for their activities at surrounding campus in the convenient bikes path. The dedicated bikes path route also provide for circulating students at dormitories going to / back to main campus
- Total parking area is 830.467 m² or 2.73% of total main campus area
- The following programs are to limit or decrease the parking area on campus for the last 3 years (from 2018 to 2020):
 1. Limiting membership parking facilities only for Management , lectures and defined staffs
 2. High price parking charge for non member
 3. Free bicycle on campus
- There are 3 initiatives for reducing private vehicles in campus: shuttle/bus campus from student dormitories to campus; free bicycle on campus; car Sharing pool for staff activities / operations
- The pedestrian policy in president University campus are:
 1. Separator between road for vehicle and pedestrian path
 2. Suitable pedestrian path for people with having physical disabilities
 3. Pedestrian marking for safety
 4. Sheltered pedestrian path in some parts
 5. Interconnecting safe & convenient pedestrian between buildings
 6. Entered building pedestrian with disinfection facilities
 7. Pedestrian signage for disinfection safety queuing

Criteria 6 Education

- There are in total 327 non internship/streams/final project courses, and 50 courses related to sustainability or 15.29% of the total courses.
- Total research funding on sustainability is described below

| Year | Total Funding | in US dollars (1\$ = 14320) | Sustainability funding | in US dollars (1\$ = 14320) |
|--------------|--------------------------|-----------------------------|------------------------|-----------------------------|
| 2019 | Rp 9,264,708,000 | \$646,976.82 | Rp4,585,751,000 | \$320,234.01 |
| 2020 | Rp 775,329,000 | \$54,143.09 | Rp 349,845,000 | \$24,430.52 |
| 2021 | Rp3,003,442,030 | \$209,737.57 | Rp2,848,942,030 | \$198,948.47 |
| total | Rp 13,043,479,030 | \$910,857.47 | Rp7,784,538,030 | \$543,612.99 |

- In average, there are 46 scholarly publication on sustainability per annum for the last 3 years
- In average, there are 87 events related to sustainability per annum for the last 3 years
- There are 5 students organizations related to sustainability: AIESEC, President University Chairy Club, DiverVenture, HIPMI PT President University, PUMA Enviromental Engineering
- There are more than 3 cultural events on campus during the year of 2021. Some events are SOPU, IE Festival Competition, Creativity behind the viewfinder, etc.
- There are several university programs to cope with covid-19 pandemic. Some of those programs are: PUMA Electrical Engineering Discusses Covid-19 Vaccination from the Psychological side, -President University Supports the Berani Program, Bekasi Regency, PresUniv Holds a Vaccination Program, etc.
- There are 7 events of sustainability community services organized and/or involving students
- There are 5 startups related to sustainability: CeritainId, Olah Aja, Cococreative, Prosthiki, Growjob.