



# Impact Report 2022



# Table of Contents

<b>Introduction</b> .....	<b>03</b>
<b>Highlights</b> .....	<b>05</b>
Headline Numbers .....	<b>05</b>
Incubation Graduates .....	<b>07</b>
<b>Circular Campus Programme</b> .....	<b>09</b>
Theory of Change .....	<b>10</b>
Impact Area 1: Informed .....	<b>11</b>
Impact Area 2: Motivated.....	<b>15</b>
Impact Area 3: Capable .....	<b>17</b>
Success Stories .....	<b>20</b>
<b>Capacity Building for Educators</b> .....	<b>24</b>
<b>Acknowledgements</b> .....	<b>27</b>

## Introduction

“The circular economy is an economic system where waste is designed out, everything is used at its highest possible value for as long as possible and natural systems are regenerated. The concept of circularity closely mimics nature, where there is no waste: all materials have value and are used to sustain life in a myriad of ways.” ([CIRCLE ECONOMY](#))

## Introduction

**Circular Cities Asia** is a social enterprise whose mission is to build a community that accelerates circular economy innovation across Asia.

We work with young and budding innovators to help them develop sustainable, circular solutions that address environmental waste issues and help transition us to a circular economy.

Through our flagship initiative, the [Circular Campus Programme](#), we inspire, motivate and build the capability of students in the areas of circular design thinking, lean innovation and entrepreneurship. Participants apply what they have learned during the programme with hands-on opportunities to build circular solutions and businesses.



### Circular Cities Asia Team



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(Co-Founder and Director)

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(Programme Manager)

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# Highlights



Over **4500** registrations to our programme since the inception in 2021



**21** university partners



**25** industry speakers and **12** mentors



**8** countries reached across the Asia-Pacific region



**513** students have been motivated to complete our full programme and be awarded a certificate of completion

**7** student businesses in incubation



**173** circular business ideas submitted for our innovation competition



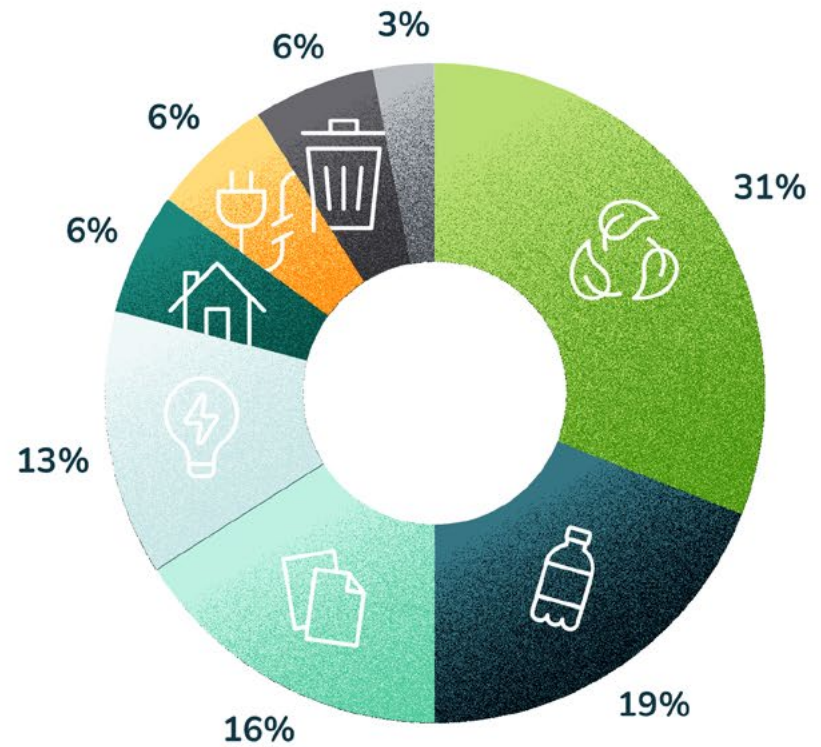
**\$24,000** USD of seed funding distributed to support the research and development of student business ideas



## Highlights

Competition finalists pitched **circular business ideas** that address various types of waste challenges:

- Biodegradable
- Plastic
- Paper
- Energy
- Built environment
- Electronics
- Waste management systems
- Other



A Net Promoter Score of **85**



### Team DURT (startup name: Griiken)

JKLU, India

#### PROBLEM IDENTIFIED:

Large volumes of cooked food from the campus canteens are thrown in the garbage. One of the reasons is that food services staff often cook for full capacity.

#### CIRCULAR IDEA:

An attendance management app that requires students to mark whether they will eat at the canteen or not, a few hours before food preparation starts. Students can also rate the meals on the app to help the canteen plan its menu.



**“We’ve been working harder on the project ever since the company has been formed and we are delighted to share that the incubation helped us understand our project from a business perspective.** It helped us understand the market better and improve our pitches that could appeal to investors. We also got to know what our short term goals should be throughout our testing phases and how we can improve our idea so that it’s something that the user would want to use.”



**UJJWAL SOLANKI**

### Team BIOcompoSIX (startup name: Agros)

BPSU, Philippines

#### PROBLEM IDENTIFIED:

A significant amount of biodegradable waste is generated in the province of Bataan. This biodegradable waste is often burned or ends up in a landfill.

#### CIRCULAR IDEA:

Create biocomposite boards made primarily out of agricultural waste which is shredded, incorporated with locally available binders, moulded, and compressed.



**“Circular Cities Asia contributed a lot in turning our circular idea into a reality.** At first, all that we know is that we should think of a product that will contribute to the betterment of our society, not minding that the process of creating and marketing it is a different kind of chaos. But with the help of mentors from Circular Cities Asia, slowly we are able to organise our thoughts, know where to start, determine our next steps and future plans.”



**CHARYCE DAVID**

### Team CEnnovators (startup name: Spare Square)

USTP, Philippines

#### PROBLEM IDENTIFIED:

Construction waste takes up a large portion of the landfill. Surplus construction materials from large-scale construction companies are thrown away even if they are still usable.

#### CIRCULAR IDEA:

An e-commerce app where large-scale construction companies can sell their waste materials to small-scale construction companies and others in the craft and artisan industry to use as raw materials.



**“Taking part in the Circular Campus Programme was one of the highlights of my College days.** It gave me an insight that there is more than just being a student devouring learning materials, we have the power to change the campus by how we care and how we act on it. The programme was a great influence on my life as a student, I have learned skills and information that I haven’t learned in any subject at school. It was also fun working with other people outside campus and even other departments inside campus.”



**ANGELIKA DETALLA**

### The Paperists

BPSU, Philippines

#### PROBLEM IDENTIFIED:

In Balanga City, Bataan, universities generate a significant amount of paper waste. There is currently no effective solid waste management system to prevent paper waste from ending up in a landfill.

#### CIRCULAR IDEA:

Process the paper waste into a pulp, which will then be bound together and turned into a lumber product. The lumber will be durable enough to be used for lightweight applications, such as making benches, tables and other furniture.



**“The team envisions this business to be a circular solution to the continual problem of paper waste disposal considering the amount of demand for the paper –not only in institutions but also in the commercial industry.** The paper lumber is vast, it could possibly be an alternative to conventional wood lumber used in different applications.”



**JOHN CRIS AQUINO**



# Circular Campus Programme



## Theory of Change

Our Theory of Change explains how the activities we undertake contribute to the achievement of our longer term impact and goals.

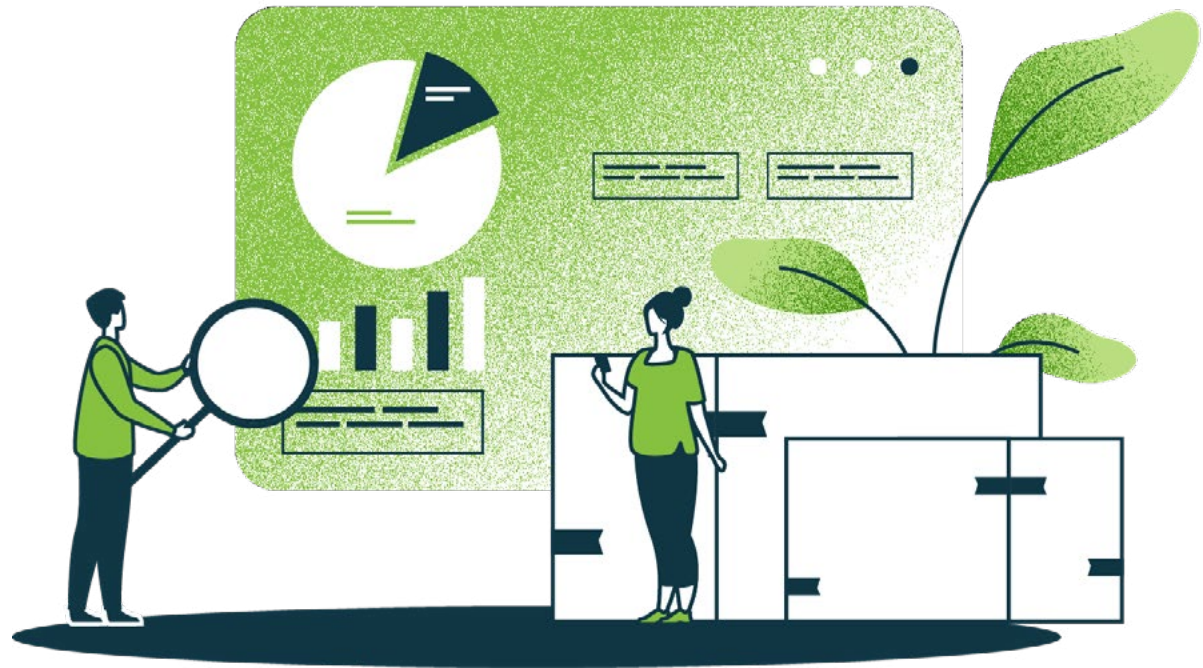


**IMPACT:** Accelerated circular economy leading to improved social, economic and environmental conditions

**STAKEHOLDERS:** students, faculty, university campuses, communities, industry

## Impact Area 1

### Informed



After completing our programme sessions, participants are informed about circular economy principles, lean innovation and local environmental waste issues. In the medium term, this may influence their lifestyle and career choices.

## CORE PROGRAMME

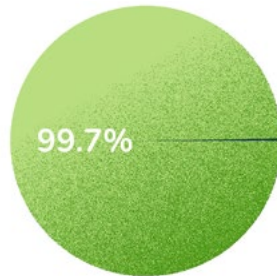
### Introduction to Circular Economy Innovation

This webinar introduces participants to the circular economy and outlines why innovation is a key component to help accelerate the transition to a circular economy. The Circular Cities Asia team gives an overview of our framework for circular innovation and highlights some opportunities that exist for innovative intervention and entrepreneurship.

*Introduced in this session:*  
[CCAsia's Circular Innovation Framework](#)

Has this webinar improved your understanding of the circular economy?

● Yes ● No



**AVERAGE RATING: 4.7/5**

### Circular Innovation Workshop on Problem Identification

This workshop focuses on investigating waste challenges that exist in the local context of participants. We guide students through the process of identifying problems worth solving using a lean and life cycle approach and discuss the importance of problem validation before moving on to solutioning.

*Introduced in this session:*  
[Part 1 of the Circular Innovation Toolkit](#)

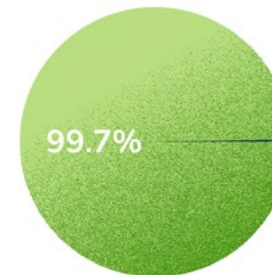
Has this webinar improved your understanding of lean innovation?

● Yes ● No



Will the content of this workshop help you to apply a circular mindset to your problem identification process?

● Yes ● No



**AVERAGE RATING: 4.6/5**

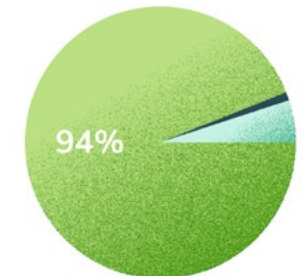
### Circular Innovation Workshop on Ideation

This workshop focuses on the 'what if' or 'what could be the future'. Participants take the inspiration and knowledge they gained from the problem phase and come up with a circular business idea that could help solve the resource waste problem they identified. The Circular Cities Asia team shares some circular design strategies and discusses circular business models.

*Introduced in this session:*  
[Part 2 of the Circular Innovation Toolkit](#)

Will the content of this workshop help you to design circular solutions for waste issues?

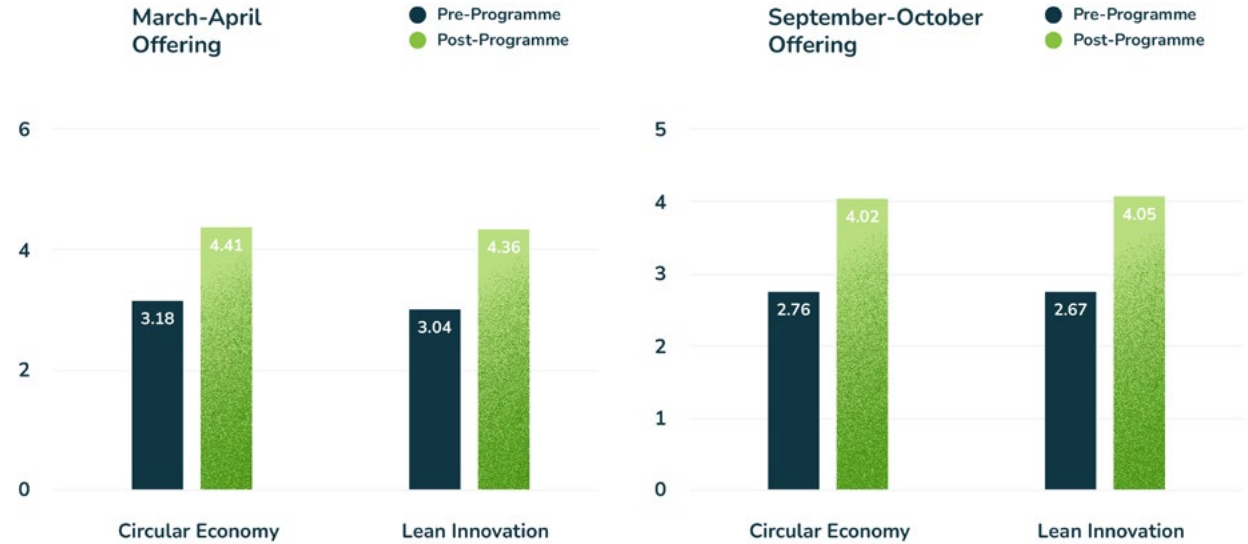
● Yes  
● No  
● Not Sure



**AVERAGE RATING: 4.5/5**

## FEEDBACK FROM PARTICIPANTS

Before the programme and after completing the core sessions, we asked the participants to rate their level of understanding of the circular economy and lean innovation. Participants reported an increase in understanding:



Has the programme inspired you to pursue opportunities in clean technology or circular economy innovation?



Do you think you will apply what you have learned about the circular economy and innovation to your work or academic pursuits in the future?



## KEY LEARNINGS FROM PARTICIPANTS

“Before, I thought that recycling was the best solution to minimise the amount of waste in landfills and to reduce its harmful emissions, such as carbon dioxide and methane. However, upon engaging in the Circular Campus Programme, the idea of upcycling and circular economy was introduced to me. The programme helps me develop an innovative perspective of utilising the amount of waste into a much higher value product.”

“I learned a lot from the program. From the importance of the circular economy to our environment to how we can input this knowledge into the business idea that we want to establish as a team. Circular economy became the main focus of our idea that aims to innovate and target different UN goals which impact the environment and can be beneficial to the future generation.”


“It has been an amazing journey and experience. What I enjoyed the most were all of the sessions; they were all informative and I learned a lot from them. Those sessions made me realise that there is still a lot of hope in changing one community, or, on a larger scale, the world if a lot of people consider it and think about it thoroughly.”



## Impact Area 2

### Motivated

We offer opportunities for students to put what they have learned during the programme into practice. Our aim is to motivate students to ideate solutions for environmental waste issues while also building entrepreneurial and circular design mindsets.



173

**business ideas** submitted since the programme inception in 2021



32

**teams** who have created a pitch deck and taken part in our pitch competition



88.5%

We asked participants who submitted a business idea if the experience of entering the competition **increased their confidence in developing business ideas**: 88.5% said yes.

“**The circular sessions were really helpful and the business resources and materials helped us a lot in developing our circular idea for the competition.**”

“Taking part in the workshop on pitch presentation was our first time interacting with different nationalities, and it was such an experience.”

“I enjoyed learning more about refining our innovation idea. We also had fun preparing for our pitch!”

“Being able to present our idea was the most exciting for me as we were not only able to share the concept we have to support the circular economy but also listen to the ideas of other groups all over Asia.”



### Impact Area 3

## Capable



Circular Cities Asia ran interactive boot camps to help the winning teams of the competition refine their business models and pitch decks before applying for our incubation and seed funding. The students received access to pre-recorded lectures, industry-recognised frameworks and live feedback sessions.

## BOOT CAMPS

We gave the students tasks to identify and communicate their:

- Market size and segments
- Business financials
- Value propositions
- Customer validation strategy
- Action plan for next steps

During the boot camp, the teams also learned more about what makes a business circular versus linear and opportunities to build a business that can make positive environmental, social and economic impacts.



## 12 out of 14 feedback survey respondents strongly agree that they:

- have more confidence in how to make their business enterprise a reality
- have a better understanding of what makes a circular business



**“The most valuable thing I have learned from boot camp is the importance of considering our product’s target market.** If we are to start a business, this should be identified with clarity. In addition, I gained an understanding of business planning and the internal and external factors we must be prepared to address. *We can generate profits while simultaneously achieving a sustainable planet.*”

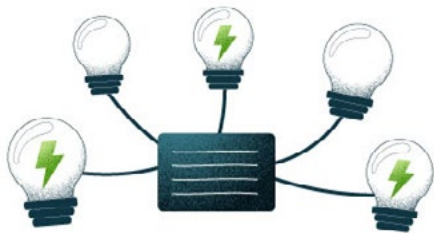


**“I learned that a lot goes into the process of launching a business idea, and a circular one at that.** As someone with a background in engineering, business principles were not taught in our curriculum. This boot camp really helped us understand the process.”

## The Circular Campus Programme is built on the idea that the campus can be a living lab for young innovators to test and prototype circular business ideas.

We co-incubate the students' circular businesses in partnership with participating universities in Asia. Students can access facilities, resources and academic guidance on their campus while also receiving mentoring and coaching support from Circular Cities Asia and other industry experts.

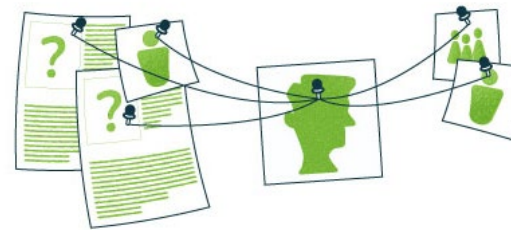
### PILLARS OF OUR INCUBATION PROGRAMME:



Innovation Framework



Mentoring and Coaching



Networking and Partnership Building



Investment Readiness

[LEARN MORE ON OUR WEBSITE](#)

## Success Stories

# Team BIOcompoSIX

from Bataan Peninsula State University

INCUBATION GRADUATES FROM THE  
SEPTEMBER - OCTOBER 2021 COHORT



*Insights from one of the team members, Charyce David*

### **Why did you decide to apply to take part in the incubation programme?**

We wanted to enhance our project idea and search for funding to make it a reality.

### **What was the most valuable thing that you learned from the Circular Campus Programme Incubation?**

We are a group of engineering students. As such, the most valuable things that we learned were about the marketing and business side of our circular idea. They helped us understand how to enhance our idea and make it valuable, how to search for possible investors and how to market it.

### **What was your team's biggest achievement?**

Completion of the machine for the production of biocomposite products.



**Tell us more about what is happening with your business now.**

It is the forefront startup of the newly established business incubator of our university.

**What was the most challenging aspect of working on your circular business? How did you deal with this challenge?**

Thinking of how to make our product look appealing to the market. The mentors helped us finalise what product is needed and will gain more customers.

**What skills have you learnt that you will continue to use in your studies or work?**

The communication skills that I eventually developed throughout the online meetings held, as well as the knowledge on marketing and business that I've learned from the mentors.

**What has changed for you as a result of taking part in this programme?**

I am able to explore different fields aside from engineering and have improved myself in different aspects.

## Success Stories

# Team CEnnovators

from the University of Science and Technology of Southern Philippines

INCUBATION GRADUATES FROM THE MARCH - APRIL 2022 COHORT



**Team CEnnovators entered the Circular Campus Programme competition with an idea called “Spare Square”.**

The team’s concept was to create an e-commerce marketplace for scrap/excess construction materials that would otherwise end up in landfill. After reaching the finals of our pitch competition, they went on to complete a boot camp and successfully applied for seed funding and admission to our virtual incubation

programme. Their motivation for joining this programme was to get more exposure to the world of entrepreneurship and take their idea from a concept to reality.

Since completing the programme, their app is now ready and they are looking for their first customer. In addition to this, they have established a partnership that will help them in collecting and selling used construction waste.

In October 2022, team CEnnovators was the **Grand Winner of the Technology Category in the Business Idea and Development Awards (BIDA), organised by the Philippine Chamber of Commerce and Industry (PCCI).**



# SPARE SQUARE

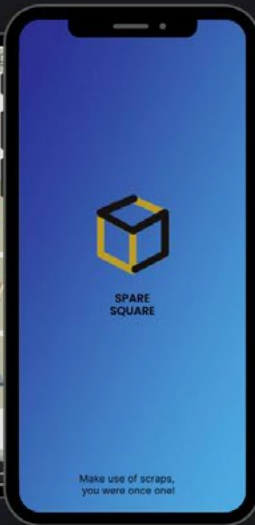
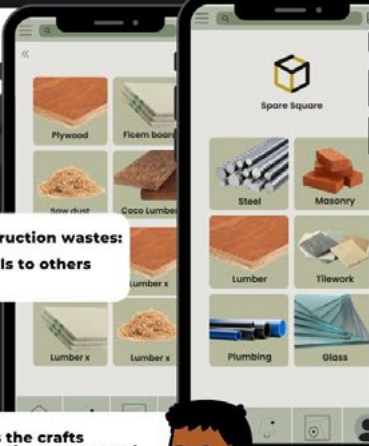
MAKE USE OF SCRAPS, YOU WERE ONCE ONE!

Construction materials are discarded after its first use when in fact it can still be useful to others.



**Resource recovery on construction wastes:**

- retains quality
- will serve as raw materials to others
- saves landfills



Construction wastes harms the workers moving in a very dynamic working environment.



**FOUNDERS' DREAM:**  
To have a standard practice in construction and demolition wastes management.



The app allows the crafts industry to use these recovered resources as raw materials in their projects.



The app allows the construction industry to effectively dispose their waste by recovering useful resources.



The team shared that this experience has not only helped them to learn more about circular business, but also developed their communication, social, decision-making and leadership skills.



“The Circular Campus Programme moulded us to become better individuals not just for our school or for our country, but for the world. They have given us hope that the world can still continue to develop without destroying it through the concept of circularity. The programme never failed to guide us and give us the support that we needed in our journey.” **-MILES IPANAG**



“Thank you for this program. I’ve been able to improve both my learning and social skills to a point where it has also helped me grow as a person. Each time I connect with our mentor and fellow incubatees, my learnings and way of thinking continue to expand. I’ve learned to structure my ideas and thoughts around a system of collaborative teamwork. Those experiences I encountered made me realise how to achieve my goals in life. Because of this program, I must say that I have already grown as a person. Thank you for everything.” **-PRINCESS ELLEVERA**

# Capacity Building for Educators





**In 2022, we developed a training programme to help university educators increase their domain knowledge of the circular economy and how it can be applied in entrepreneurship and innovation.**

Our goal was to equip educators with the tools and confidence to mentor their students to ideate and grow entrepreneurial ventures that address waste issues in their country.

After completing the training, participants have a better understanding of how to help students go deeper into problem identification and ideation using a circular mindset. They are able to improve the viability of circular business ideas that students design as a result of the Circular Campus Programme. The educators also received a toolkit with frameworks and resources they can use with their students and case studies of circular businesses.



**AVERAGE RATING FOR THE FACILITATION OF THE WORKSHOP: 4.6/5**

We asked workshop participants if the workshop content met their expectations:  
**100% said yes**

“We continue to be a trusted partner for universities who want to help their students acquire in-demand skills for the growing circular economy, and a source for institutions who want a pipeline of student startups to induct into their technology business incubators.”

- **SUZANNA POMEROY**, DIRECTOR OF CIRCULAR CITIES ASIA



“Driven by its commitment to become a sustainable university, BPSU has been an active partner with the Circular Campus Programme since 2021 by co-creating circular solutions within and around the campus.

CCP has opened a novel perspective on the circular economy by empowering our students on how the knowledge and technologies generated in the academe can catalyze circularity and sustainability. More than winning the innovation competition, BPSU has proven that, aside from producing quality and competitive students, we can also champion sustainable development.

We will continue to take part in this programme because we believe that innovation is the engine for sustainability.”



- **GIL CRUZ**, BATAAN PENINSULA STATE UNIVERSITY CAMPUS LIAISON

# Acknowledgments

## SPONSOR



## PROGRAMME PARTNERS



## UNIVERSITY PARTNERS



## GUEST SPEAKERS



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