

# The Team

We are group of 6 students both from Vietnamese – Germany University, Vietnam and Technique University of Darmstadt, Germany.

We gladly to have a chance to develop our ideas which related to circular economy concept to recover the “waste” – coffee ground to grow mushrooms.

## LIST OF MEMBERS:

- 1 – NGUYEN PHUONG KHANH – **VGU** - PROJECT MANAGER
- 2 – JULIUS BRAUN – **TUD** – PROJECT MANAGER
- 3 – ASHER PAUL LE BRUN – **TUD** – RESEARCHER
- 4 – NIHAL SUDE ALTER – **TUD** – RESEARCHER
- 5 – SARA GHIONNA – **TUD** – RESEARCHER
- 6 – VICTORIA PASTERNAK – **TUD** - RESEARCHER

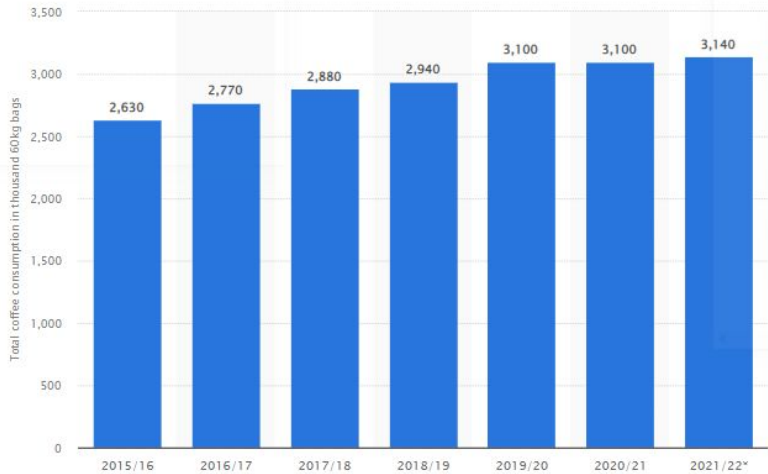


# Circular Innovation Overview

- In Vietnam, the demand for mushrooms as food and medicinal purposes has been increasing rapidly (*Vietnamnet*).

- Vietnam export \$450-500 million tons of mushrooms a year by 2020, while the domestic output and consumption is covered to rise to 1 million tons (*The Ministry of Agriculture and Rural Development (MARD)*).

**=> HIGH DEMAND OF EATING MUSHROOM**



- In the 2020/21 period, approximately **3.1 million 60kg bags of coffee** was consumed in Vietnam.
- By 2023, increase the consumption of coffee in the domestic market to **3 kg per person per year** from the rate of 1.68 kg per person per year in 2009

**=> LARGE AMOUNT OF GROUND COFFEE**

**"USED COFFEE GROUND (COFFEE WASTE) TO MUSHROOM" IDEA**



# Project Goals

Regarding the project goals, first we need to say that able to understand, learn and apply the concept of circular economy to real life is already our first achievement.

More and more we do the research on the issue, more and more we want to apply the project.

Here are our short term and long term goals for our project

## Short-term Goals

- ✓ Give solutions for resilience the vulnerability of the food system
- ✓ Propose a pilot project – Test the ideas

## Long-term Goals

- Remove waste, complexity and toxicity from products for more effective end-of-life resource management
- Keep raw materials in use for as long as possible and at their highest quality
- Return materials to environment

# Impact & Results

After about 5-6 months implementing the project, we are really happy that we can bring up something that very positive to the environment.



Recycle plastic bottle



Recycle coffee ground



Starting to grow

# Impact & Results



The biggest success that we consider is to promote more about the concept of circular economy and the importance of 3R concept to surrounding people (through the process we collect the “coffee waste” and growing the mushroom).

People behavior is one of the most crucial thing in changing the world and make it more sustainable development.

We reuse the water bottle, transform it into “a place” for growing the mushroom.

In the progress of asking for coffee ground, we have “built a connection” with the coffee shop owners. They always keep the ground for us and wait for us to come to collect.

Moreover, when they asked us why we need these “coffee waste”, we have shared them about this “coffee ground to mushroom project”, and spread the knowledge on the circular economy.

# Micro Grant

The micro grant from Circular Cities Asia and The Regional Project Energy Security and Climate Change Asia-Pacific ([RECAP](#)) of the Konrad-Adenauer-Stiftung has given us one of the best opportunity to implement our pilot project, to test whether the mushroom can really be grown by the coffee ground.

-With the money of the Grant, we have used it mostly for the research part and use it for paying for transportation to see and go survey where can we grow the mushroom, which farm is suitable to grow the mushroom.

-We also pay the money to buy the mushroom embryo, the water bottle sprayer and pay for the one who took care of the mushroom in case we are busy and need to go away for quite long time.



# Lessons Learnt

We have earned a very good opportunity to learn about circular economy concept, how to work with each other, how to “gardening”, and learn that

**“WASTE IS NOT ALWAYS JUST A WASTE”**



After beginning to do our project, we find out that growing mushroom is not as easy as we think.

Our first thought is to rent a small farm to test growing the mushroom and in the future we can easily enlarge the scope. However, after talking with some farm managers, we found the issue that the mushroom from coffee ground cannot be ensured about the quality in case we want to sell or export these mushrooms.

Therefore, finally, we decided, during the first stage, we will just grow the mushroom at home/dorm, to check on the quality of the mushroom, and will do more research later

## Next Steps

We want to make our project from small to big scale and share this circular economy concept to everyone and develop a qualified mushroom farm from coffee-ground

Once again, we are really thankful to receive the Grant and use it for this meaningful project.

In the future, we hope that we can receive more grant to continue our project, implement more pilot project that not only one type of mushroom but many other mushroom to see which one fit the best with the nutrients of the coffee waste.

Moreover, we will keep continue to do more research to ensure the quality of the coffee ground to ensure the best quality to the mushroom