

**waste  
plant**



**tropic  
Indonesia**

**2023**

**GARDENSHIP™**



**If we own the problem, we own the solution.**

“The future of our food system depends on how we deal with our food waste today.  
***Waste is an infinite resource. We can compost and rebuild soil*** on-location with the  
tools we have now “

It's not rocket science.

**Andrew Hayim De Vries**

*Designer & Inventor of Gardenship TM*

If we own the problem,



we own the solution.

# FOOD WASTE PROBLEM

1.

**Food waste in Indonesia has a severe and extreme impact on the environment.** This is well documented. **Indonesia's fertility and abundance of all its natural resources are severely and heavily compromised.**

2.

With a population of more than **200 million**, Indonesia generates a large amount of food loss and waste (FLW) that continues to grow every year. According to the data of the Ministry of Environment and Forestry (MoEF) of the Republic of Indonesia, in 2018, as much as **44% of waste generation in Indonesia was food waste.**

3.

Indonesia is also claimed to be **the second largest FLW** producing country in the world, reaching **300 kg per capita** per year. According to government research in 2021, **food waste in Indonesia amounts to 48 million tons** every year, equal to 1.846 x the weight of Monas in Jakarta and is estimated **to be able to support 28 million people.**

We need to  
**take**  
**ownership**  
of the waste  
problem.  
It is our  
**problem,**  
let's make it  
our  
**solution!**

# FOOD WASTE PROBLEM in Indonesia

57%

organic waste from the total waste of Indonesia

23-48

million tons food waste per year

2nd

biggest food waste producer in the world after Saudi Arabia

13-15

billion dollars Economic loss per year

We need to **take ownership** of the waste problem.  
It is our **problem**, let's make it our **solution!**

Own the problem, own the solution

# THE IMPACT IS EXTREME

If we don't manage our food waste properly.



## Decentralize Waste Stream

Decentralizing the waste stream is the key to manage waste and reduce carbon emissions.

## Simple low-tech compost system

The facilities are made out of diverse material and do not create odor due to the in-ground compost design. The facilities can be dismantled and easily relocated

## Education & Training

Education has an important role for "habit change" regarding food waste stream and management.

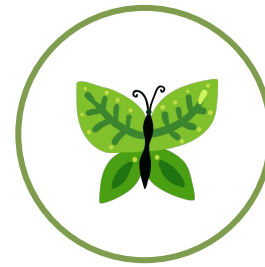


## We Benefit



### Environmental

- Soil recovery
- Diverts food and carbon waste from landfill
- Reduces harmful carbon and methane gas emissions



### Social

- Creates community across the spectrum
- Diverse collaborations across sectors related to waste streams
- Community inclusion



### Economical

- Employment: Training, Internship, Jobs
- Promotes eco-tourism
- Retail : Selling, exchange of produce



### Educational

- Creating Education eg. Living Classroom
- Event Spaces : talks, workshops, presentations





**WastePlant Tropic Indonesia** is a food waste composting facility that turns **food waste into soil and grows organic food all in the same location.**

It offers a solution and contributes substantially to the need to decentralising, the food waste process with **simple low-tech, affordable, educational, and ownership.**



**Designed for the future**



**Scalable & Adaptable**



**Food Waste Diversion**



**Food Production and Access**



**Engage & Educate Community**



## OUR COMPOST SYSTEM

- **What can be composted?**

*Scrap food, food prep waste, vegetables, fruits, onion and citrus (after 2 months), Oil, bone, meat (in small amount).*

- **How long does it takes to compost food waste in one box (100 kg)?**

*Usually take 4-10 days for one box or faster with the liquid enzymes*

- **How long does compost system last?**

*Approximately 5-6 years*

- **Why use our compost system?**

*Our compost system is very unique, it combines a vermicompost system with probiotics that make the compost process faster. This in-ground compost system also doesn't create odor and attract animals.*

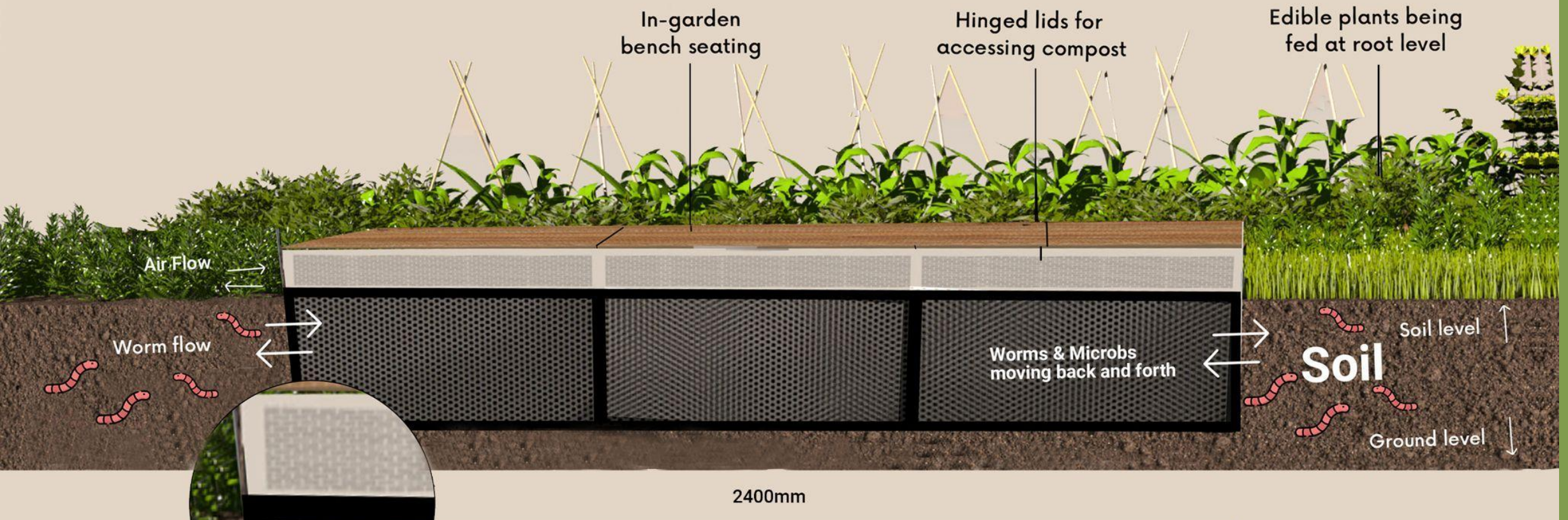
- **How is the compost system maintained?**

*WastePlant is not only a compost facility but an educational platform. All things related the maintenance will be trained and documented in the manual book.*

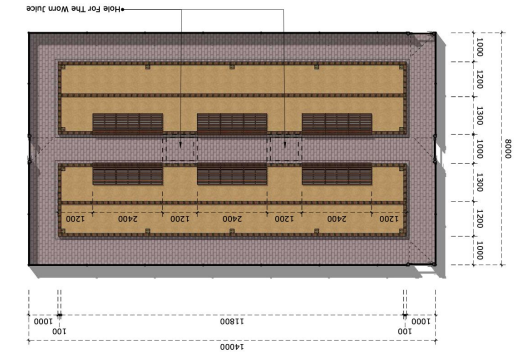


# Below Ground Composting

Gardenships are 'powered' by our below-ground compost systems, which use **worms and microbes** to process food and green waste efficiently, supporting the growth of nutrient-rich fresh produce - which is fed at root level.



Compostwell unit 2400 mm long, 400 mm below ground, and 160mm above ground



# MODULE 1

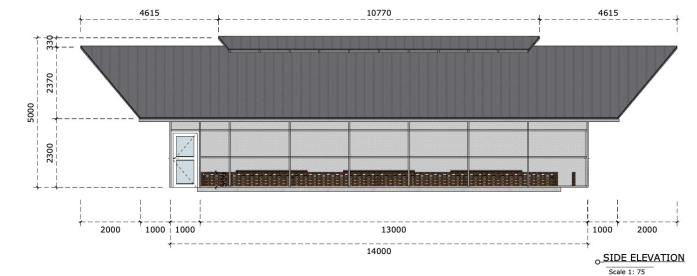
*Composting Building Organic Soil*

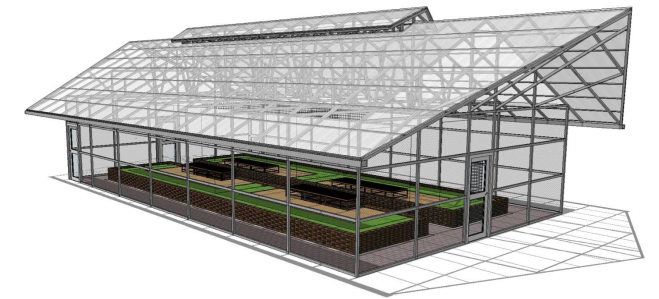
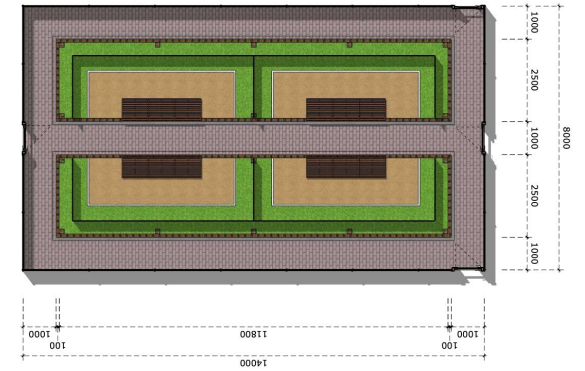
**6 Compost Boxes**

Food Waste: 600 kg/week **31.2 Tons per year**

**Size 14 m x 8 m | Footprint 112 MSq.**

**Estimated Building Time 4-6 weeks**





## MODULE 2

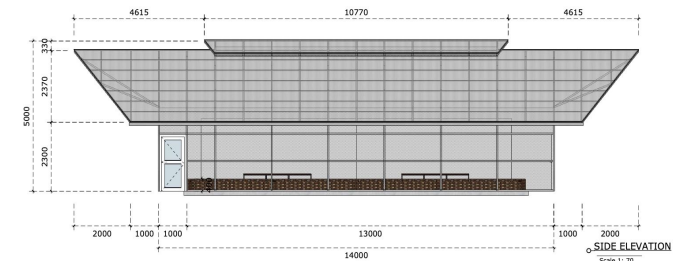
*Building Organic Soil, Growing Organic Food*

### 4 Compost Boxes

Food Waste: 400 kg/week **20,8 Tons per year**

**Size 14 m x 8 m | Footprint 112 MSq.**

**Estimated Building Time 4-6 weeks**





## MODULE 3

*Building Organic Soil, Growing Organic Food & Create Community/Educational Space*

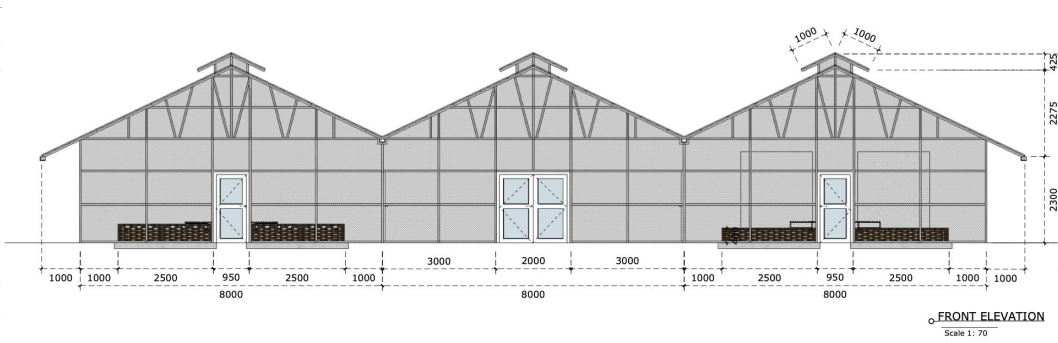
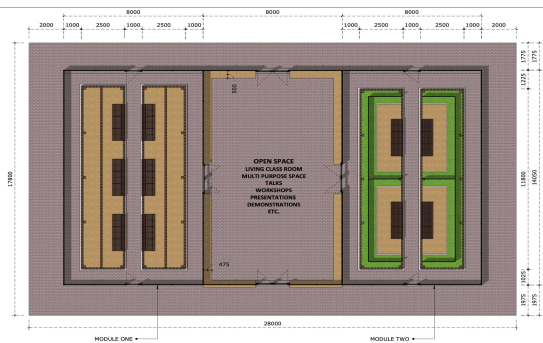
**8,10 or 12 Compost Boxes**

Food Waste: 800,100,1200 kg per week

41.6 Tons, 52 Tons, 62,4 tons per year

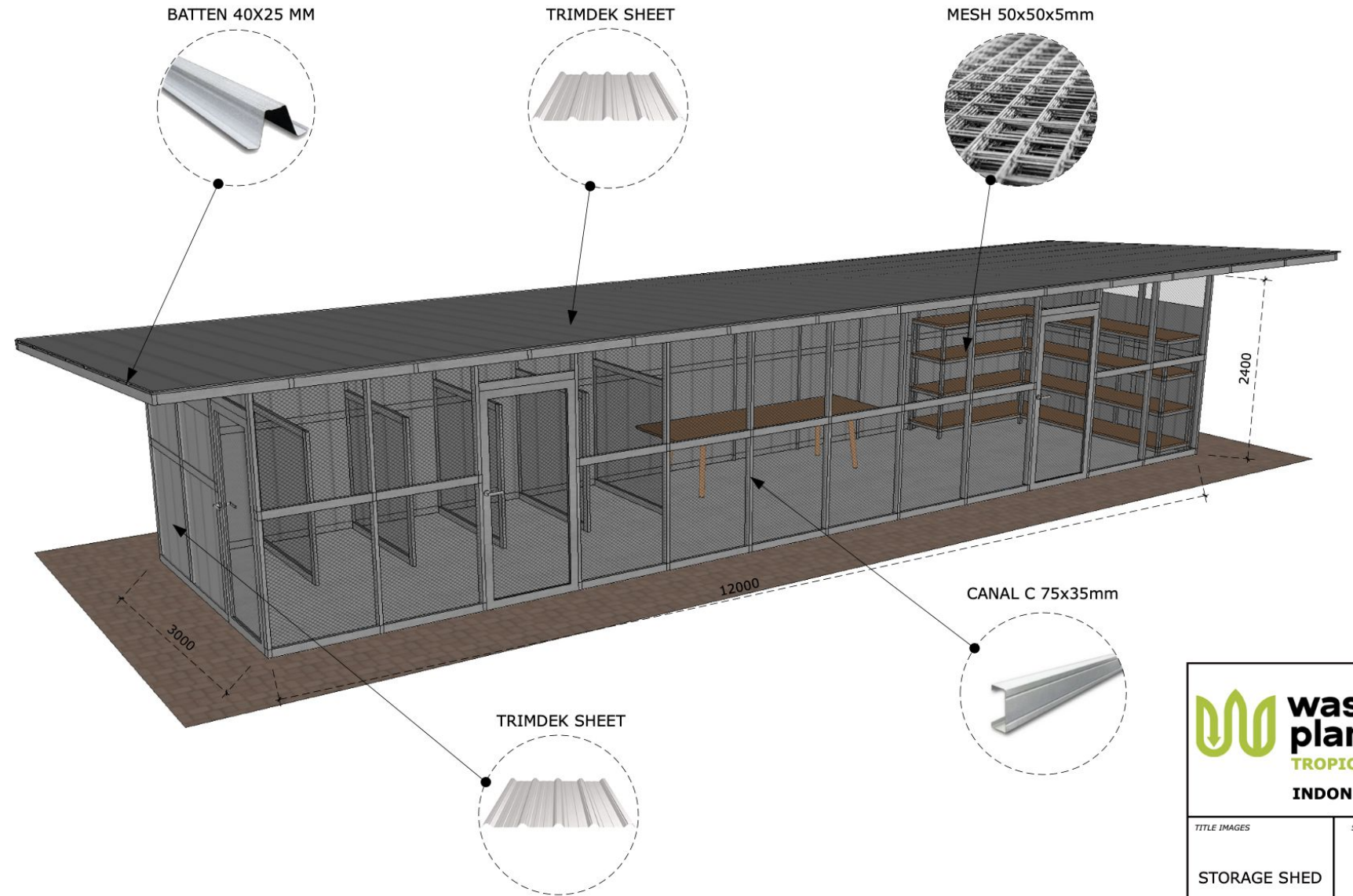
**Size 18 m x 28 m | Footprint 504 MSq.**

**Estimate time of building: 8-10 weeks**



# STORAGE AREA

- Storage area is recommended to build alongside with Modules 1, 2 and 3.
- A storage area used to store building material, composting material and organise tools that use during the building and maintenance the Gardenship TM



**PERSPECTICVE**  
Scale NTS



TITLE IMAGES		SCALE
STORAGE SHED		-
CODE	NUMBER	TOTAL
ARCH	8	8



# Educate & connect people

Rebuild soil.  
Grow food.



## create

Creating educational opportunities throughout all stages.



## connect

Connecting people, community, institutions, business, professionals, academics and more.



## collaborate

Collaborating with local people around the sites to share knowledge & support local economies.

# Previous Project



Talala Retreat



Habitat



Malabulgimah



Santos Organics



Periwinkle School



Spell



# Upcoming Project



PALEMBANG



BALI



MATARAM



[Click here for inquiry](#)



Andrew, Ivonne and Internship Students  
from Islamic School Kiai Mardogan, South Sumatra

## Ongoing Project | Palembang 2022/2023



### Why Indonesia?

Buddhi Farm, Palembang - September 2022 | Video Duration: 02.57

[Click here to see the video](#)



### The Gardenship

Buddhi Farm, Palembang - September 2022 | Video Duration: 01.46

[Click here to see the video](#)



### The Gardenship Journey

Buddhi Farm, Palembang - 18 August - 17 October 2022 | Video Duration: 01.57

[Click here to see the video](#)



Scan here to  
follow our project  
or [click this link](#)





## Andrew Hayim De Vries

*Founder, Inventor & Director of WastePlant Tropic Indonesia 2023*

*Designer, Inventor, Co-Founder, and Co-Director of Subpod 2017 - 2020 ([subpod.com](http://subpod.com))*

**Ecological designer, project manager and public speaker, based in Ubud, Bali and consulting internationally.** With over 40 years of experience in the home, garden, and integrated compost design, and having consulted commercially in these disciplines over the past decade. My passion is to bring a wealth of functional design and experience to every project.

[Listen to Andrew's journey](#)



## Arum Christina H

*Assistant to the Director of WastePlant Tropic Indonesia 2023*

*Graphic Designer, photographer, program manager, teacher & writer based in Bali.*

More than 15 years of experience in design and branding communication. For the past 10 years working with the community, institutions, and education for environmental projects and awareness.

We are in  
transitioning process  
of becoming  
WastePlant Consulting.

**Andrew Hayim De Vries**

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