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ANAEROBIC DIGESTER



Product

DESCRIPTION





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The Marriott International logo is centered within a large green circle. The logo consists of the word 'Marriott' in a bold, black, sans-serif font, with a stylized 'M' icon to its left. Below 'Marriott' is the word 'INTERNATIONAL' in a smaller, black, all-caps, sans-serif font.

Marriott
INTERNATIONAL

Marriott Indonesia

- Marriott Hotel is one of the **biggest** hospitality chains in the **world**
- Marriott has **goals** about **sustainability** and **social Impact**, but are yet to spread their goals in Indonesia
- Indonesia is a **developing** country with a **low level** of concern for food waste

Sheraton Grand Jakarta

01. Food waste management

- The hotel produces **food waste** in a **considerable** quantity and it all goes to the same **landfill**
- This happens because they **do not track** their food waste before delivering it to the landfill.
- The hotel **does not implement tracking** and **analyzing** as much as needed
- They work with **SOS** and **donate** their food

02. Undeveloped food waste issue

- Little **awareness** and **education** in Indonesia
- Guests want **abundance**, are **not interested** in how much food they waste
- Employees are **not conscious** of their waste





Key Users

• Executive Chef

- Is in charge of the kitchen
- In charge of bringing change
- Makes sure the waste management is done correctly

• Stewards

- Control food waste
- Are educated and conscious about impact

• HomeBioGas

- Provide the system
- Installation
- Maintenance
- Education

• Kitchen staff

- Sort their waste
- Are educated and conscious about impact

• Farmers

- Close collaboration with the hotel
- Receive feed for cows
- Provide manure
- Receive bio-fertilizer

• Guests

- Raised awareness
- Ecologically cooked food for them



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Solution

Anaerobic Digester

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- Uses food waste to **produce hot water** and **bio-fertilizer**
- Reuses **all** food waste of the hotel (except citrus)
- **Reduces gas** and **water** bill



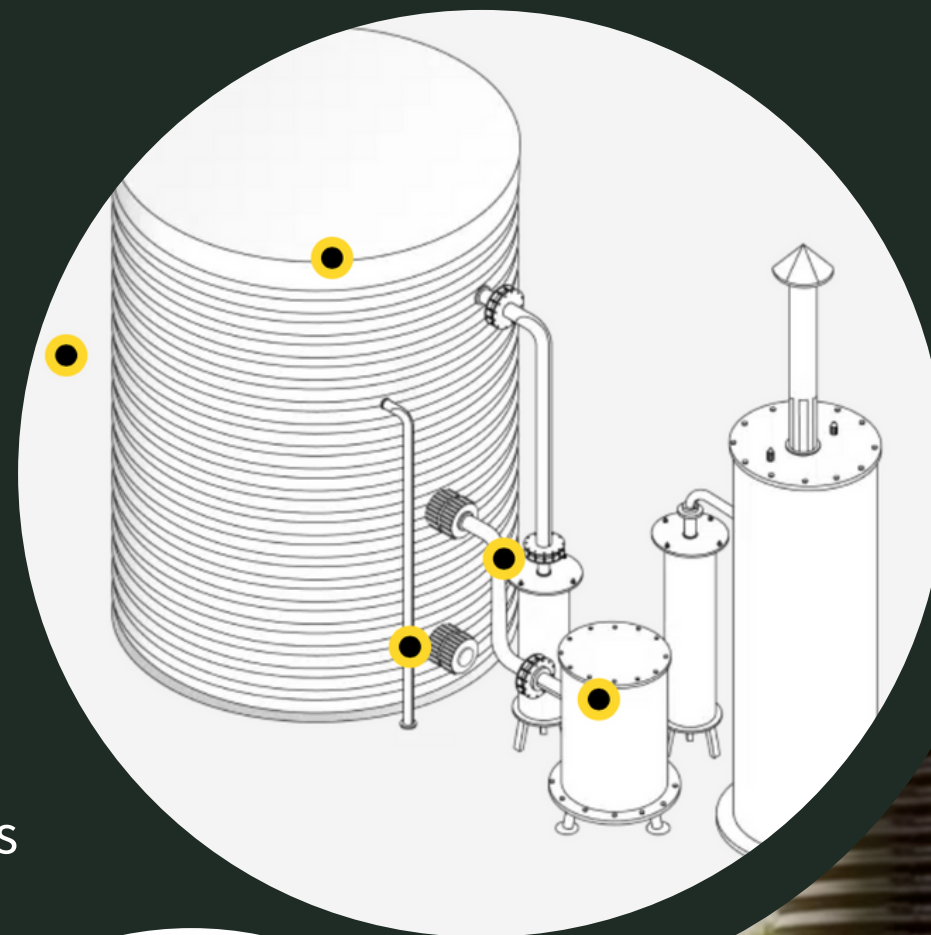
Commercial System

General

- Uses **all types** of food waste (except citrus)
- Produces **warm water** for the hotel
- Produces **bio-fertilizer** that can be **sent to farms** or used on plants in and around the hotel

Numbers

- **Maximum food waste capacity:** up to 1000 kg/day
- **Digester Volume:** up to 54m³
- **Generated Heat Energy:** up to 576 kWh/day
- **Water Heated by 50°:** up to 9600 liter/day
- **Concrete surface necessary:** up to 8X6.2 m²
- **Bio-fertilizer production:** up to 1060 liter/day





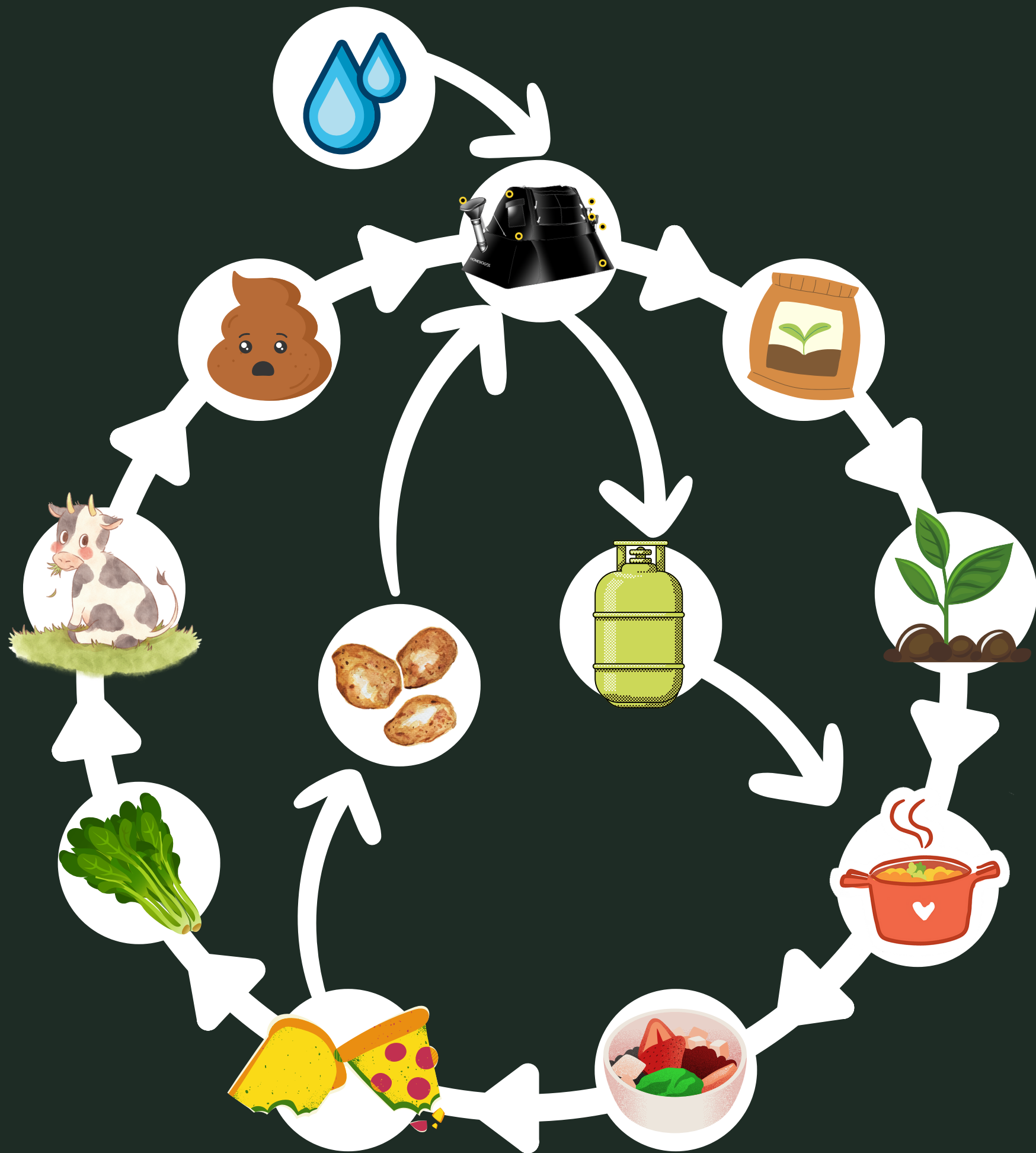
Household System Machine

Household System Machine

- Uses **not edible** to human and **animal type** of food waste
- Produces **bio-fertilizer** that can be **sent** to the **farms** or used on plants all around the hotel
- Produces **gas** that can be used to **cook**

Numbers

- **Maximum food waste capacity:** up to 18 liter/day
- **Gas Tank Volume:** up to 2500 liters/660 gal
- **Digester Tank Volume:** up to 4300 liters/ 1136 gal
- **Maximum daily wuantity of animal manure:** up to 108 liters/ 29 gal of slurry or 36 liters / 10 gal of manure + 72 liters / 19 gal water
- **Stove cooking time on a double burner:** up to 6 hours daily



Circular Flow

Scan Here

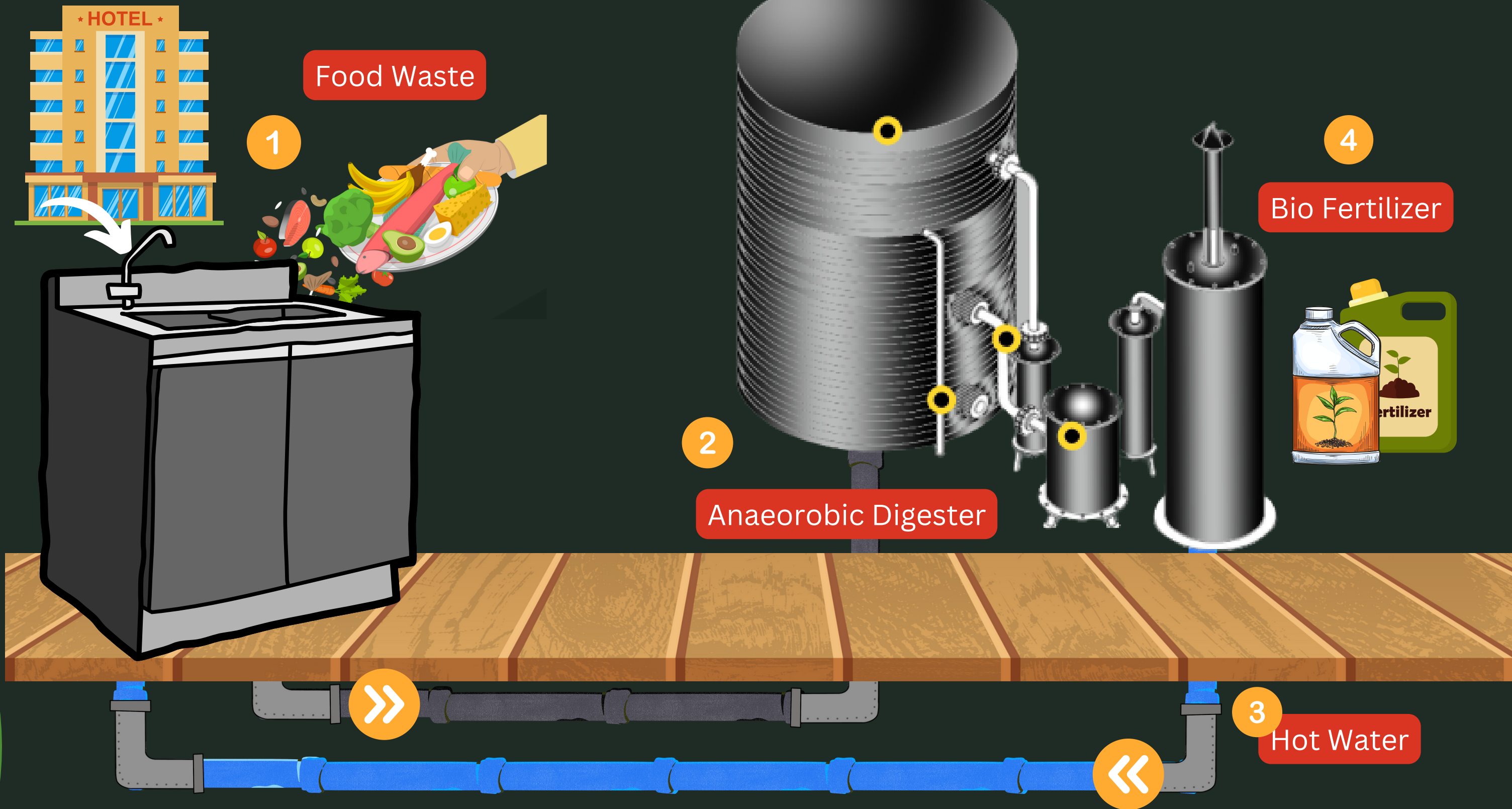


Prototype 1





Prototype 2






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Implementation

PROCESSES





Who is involved? + what is needed

- Multiple **stakeholders**
- **Training** for **executive chef** and **kitchen employees**



HomeBioGas



Kitchen Staff



Executive Chef



Project
Proposal

Start of
Installation

All food
waste used
for digester

At least 5 hotels
in Indonesia with
system



Now

End of
September
2023

January
2024

2025



Timeline

Communication Campaign

Guests and Socials

- **Live cooking** station with **infographic** about where the gas comes from, and **QR code** that can be scanned for more information
- **Posts on social media** about the HomeBioGas system to **catch attention**
- Mentioned on **website** of hotels that have it





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Scaling

PROCESSES





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Growth Ambitions

Indonesia

- **Implement** the system in **all** Marriott properties across **Indonesia**
- **No more food waste to landfills**
- **Help** to local **farmers**
- **Raise awareness** of the **guests**
- **Educate employees** about food waste

World

- **Implement** the system in **all Marriott** properties across the **world**
- **No more waste to landfills**
- **Help** to local **communities** and **farmers**
- **Raise awareness** of the **guests**
- Eventually **change habits** of **guests**





Goals in three years

- 01.** At least 10 hotels in Indonesia with the system
- 02.** Visible change in behaviour from employees
- 03.** Visible awareness in guests
- 04.** No more food waste to landfill in Sheraton Grand and other properties with system





What we need to get there

- Good **education** and **training** of employees
- **Enthusiastic** employees
- **Discipline** and regular "**quality checks**"
- Strong **belief** in doing **good**



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Video



LINK





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THANK YOU

FOR LISTENING, AND WE HOPE TO WORK TOGETHER IN THE CLOSE FUTURE!