

MEC ClearWaste™

Restoring Nature



Awarded The Environmental
Solution 2020



Certified Green Unit



ISO 14001: 2015



THE MALAYSIAN TRADE AND INDUSTRY ORGANISATION
"YOUR GATEWAY TO PROMOTE YOUR BUSINESS DOMESTICALLY AND INTERNATIONALLY"

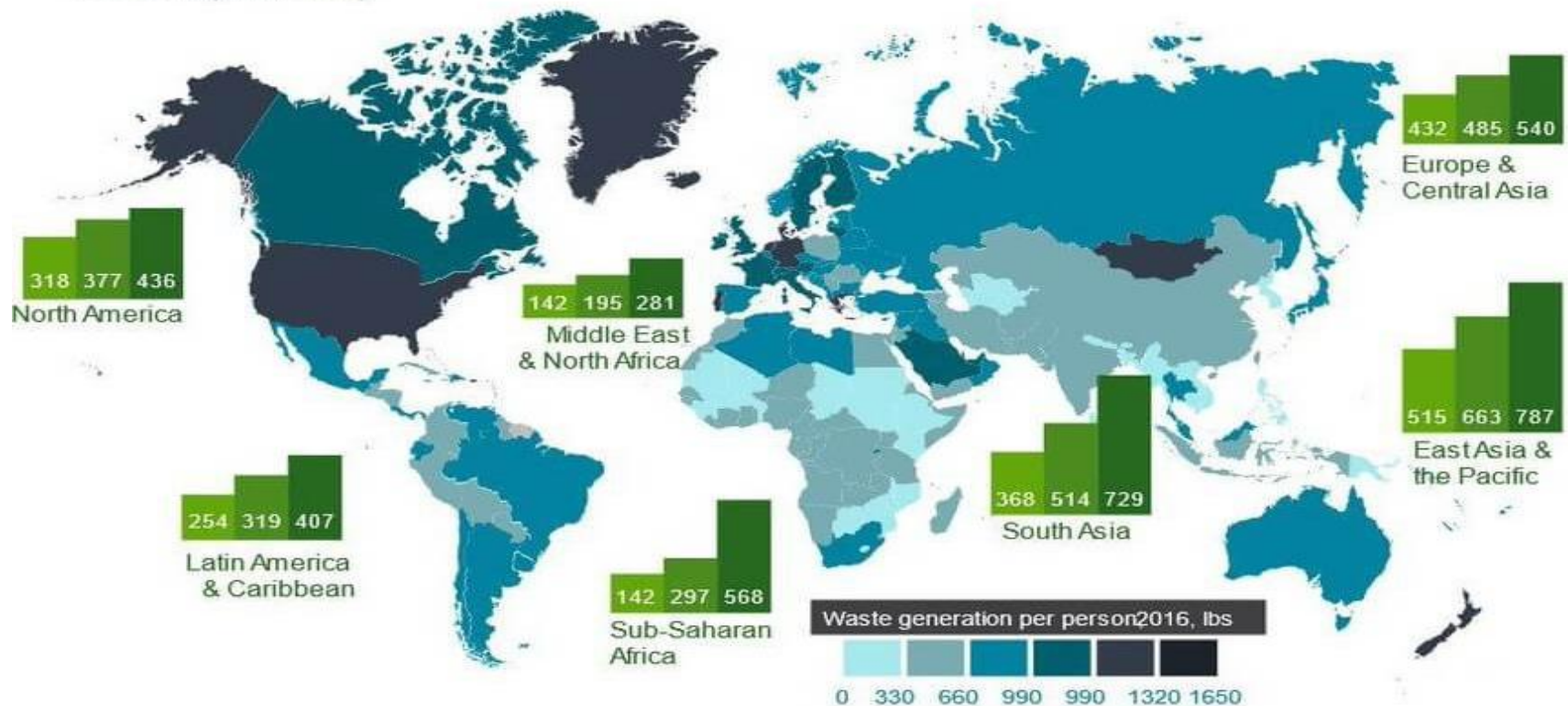
Awarded The Malaysia International
Trade and Industry Award 2020

INTRODUCTION

A THROWAWAY WORLD

Regional waste generation
US ton (millions)

2016 2030 forecast 2050 forecast



“

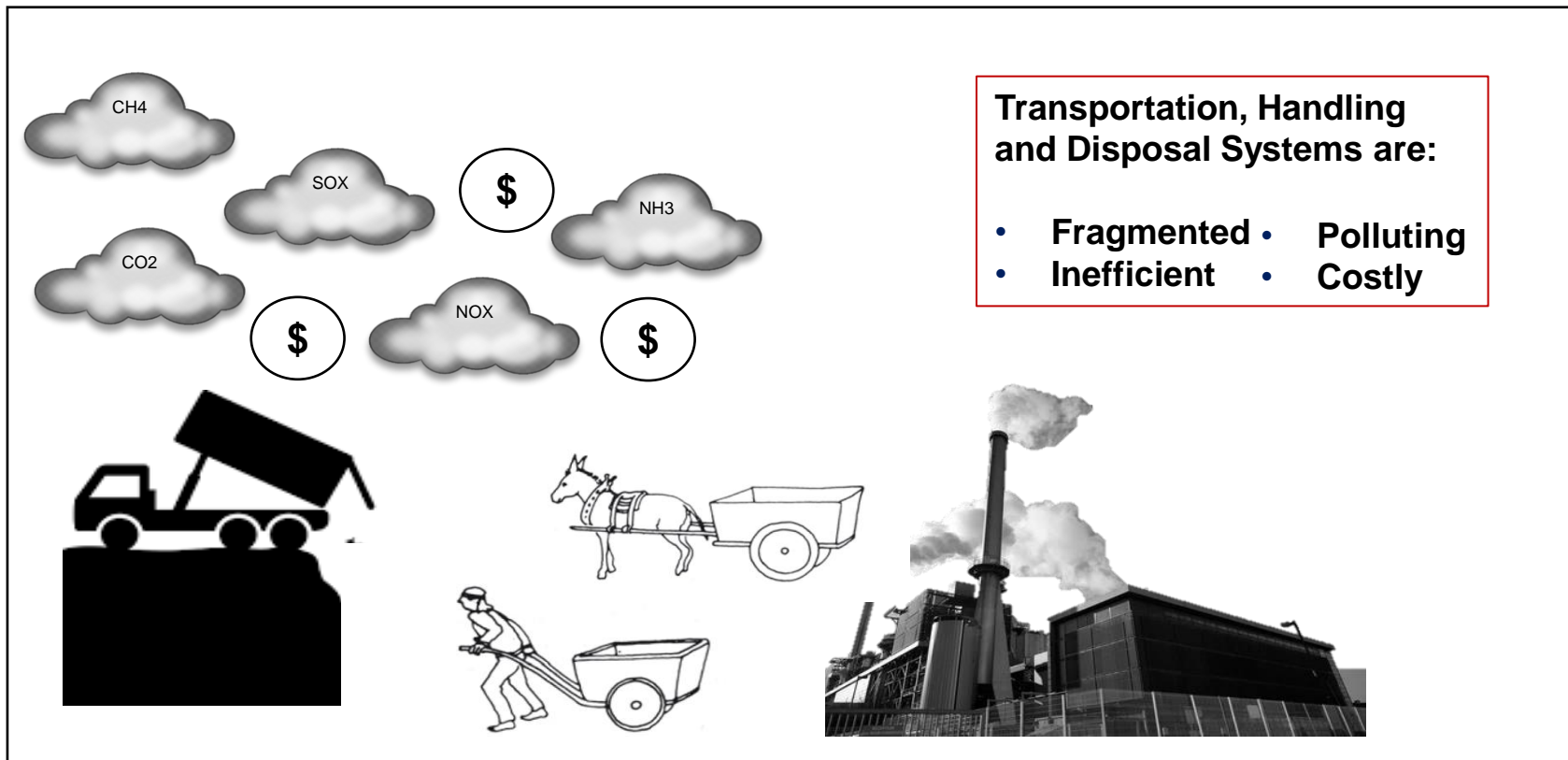
There is no such thing as 'away.' When we throw anything away, it must go somewhere

~ Annie Leonard



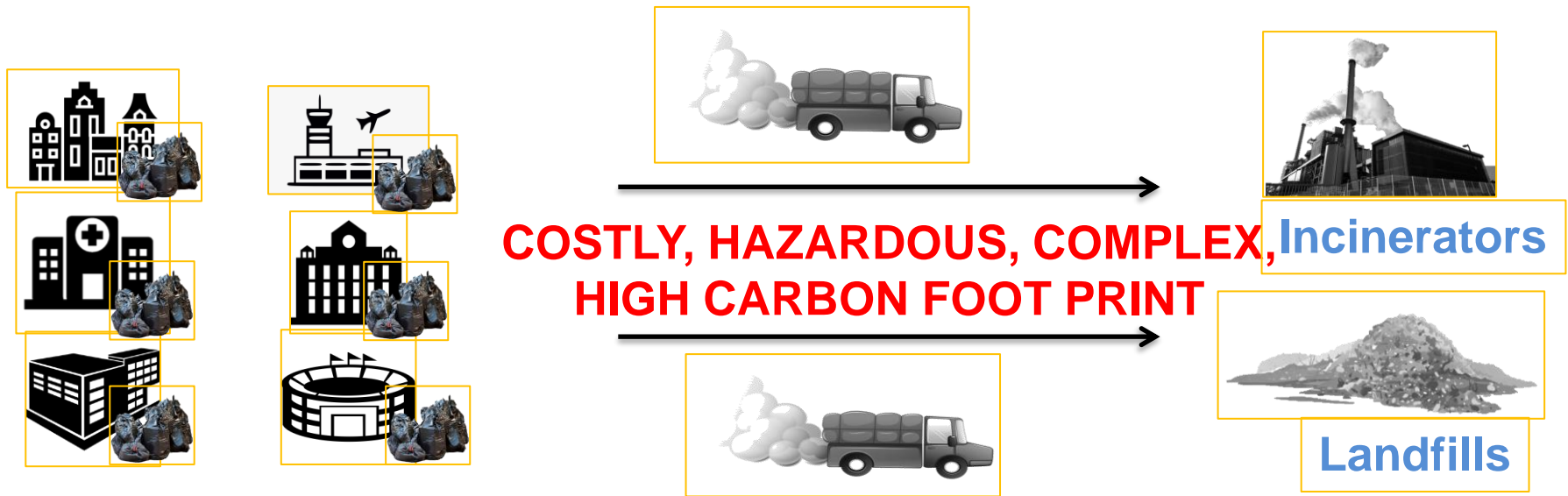
PRESENT

While waste is a problem, a bigger problem is **the way it is managed.**



THE PRESENT

WASTE MANAGEMENT SYSTEMS ARE INEFFICIENT



- x Toxic Leachate
- x Acid Rain & Methane
- x Pandemic & Diseases
- x GLOBAL Warming & Climate Change

- x Pollution & Odour
- x Groundwater Contamination
- x Land Degradation
- x Wildlife Extinction

“

I only feel angry when I see waste. When I see people throwing away things we could use.

~ Mother Teresa



THE DISRUPTION



HEALING THE PLANET

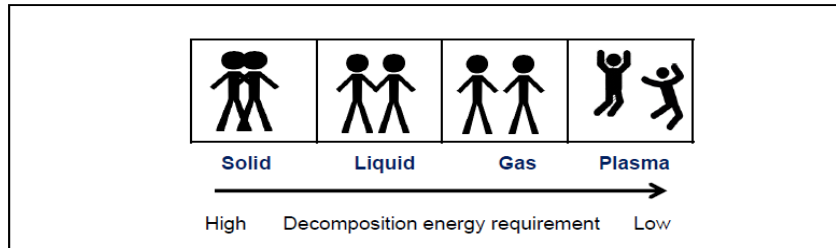
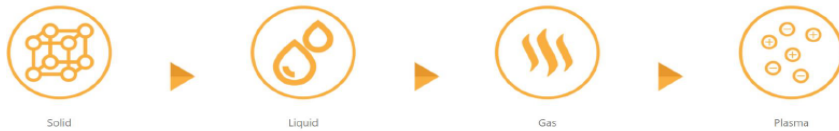


NO LANDFILLING. NO INCINERATION

THE TECH

Plasma: The Fourth State of Matter

Plasma is superheated matter – its matter has heightened heat that causes the electrons to be detached from the atoms and as a result, forms ionized gas. It comprises over 99% of the visible universe.



Future-Proof Emissions

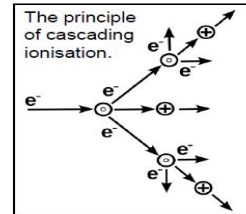
Process gases require particle removal and gas cleaning prior to emission.

The system treats both contaminants in a one-step process unlike the complex multi-equipment filtration processes employed today.

Gases treated:

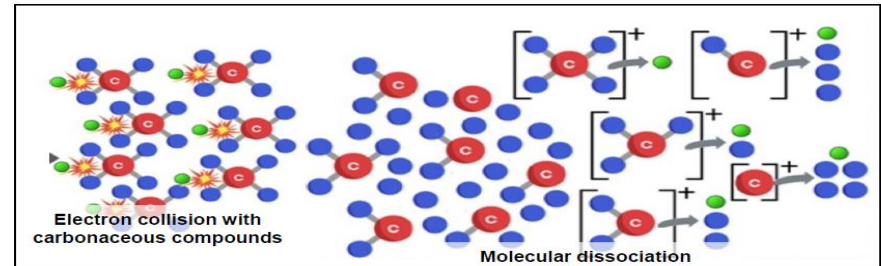
- Acid gases (HCl, HF, H₂SO₄, HNO₃)
- Sulfur dioxide (SO₂)
- Ammonia (NH₃)
- Hydrogen sulfide (H₂S)
- Chlorine gas (Cl₂)
- Carbonyl sulfide (COS)
- Silicon dioxide (SiO₂)
- Metal oxides
- Heavy metals (mercury and chromium)
- Many other types of particulates and gas.

Inside the ClearWaste Plasma Reactor



Inside our ClearWaste Plasma Reactor

Billions of free-flowing electrons generated via cascading ionisation create a state of highly energised and infinitely electromagnetically conductive plasma. These energy-rich electrons collide at high speed with the carbonaceous input, molecularly dissociating and thermally disintegrating the compounds into elemental fragments that are reconstituted into stable and inert gas and slag residue.



**80% cleaner
emissions
than EU and
EPA
standards.**

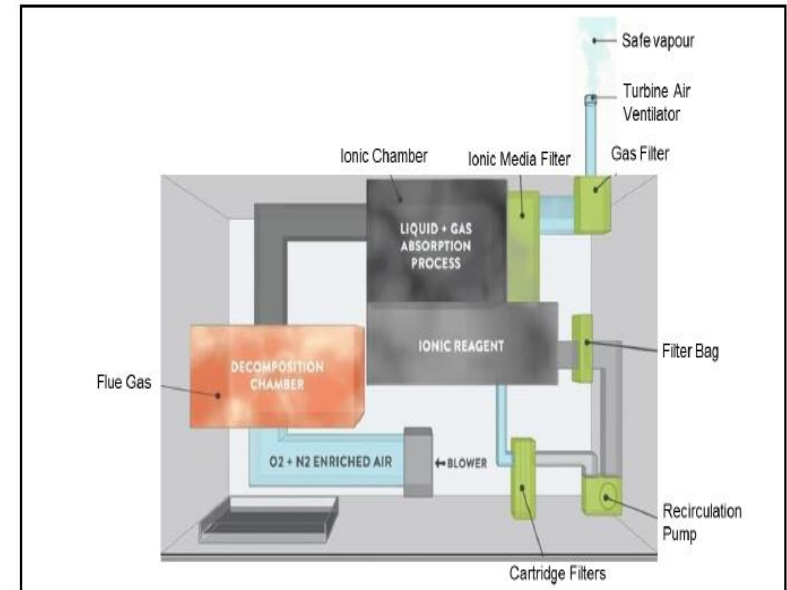
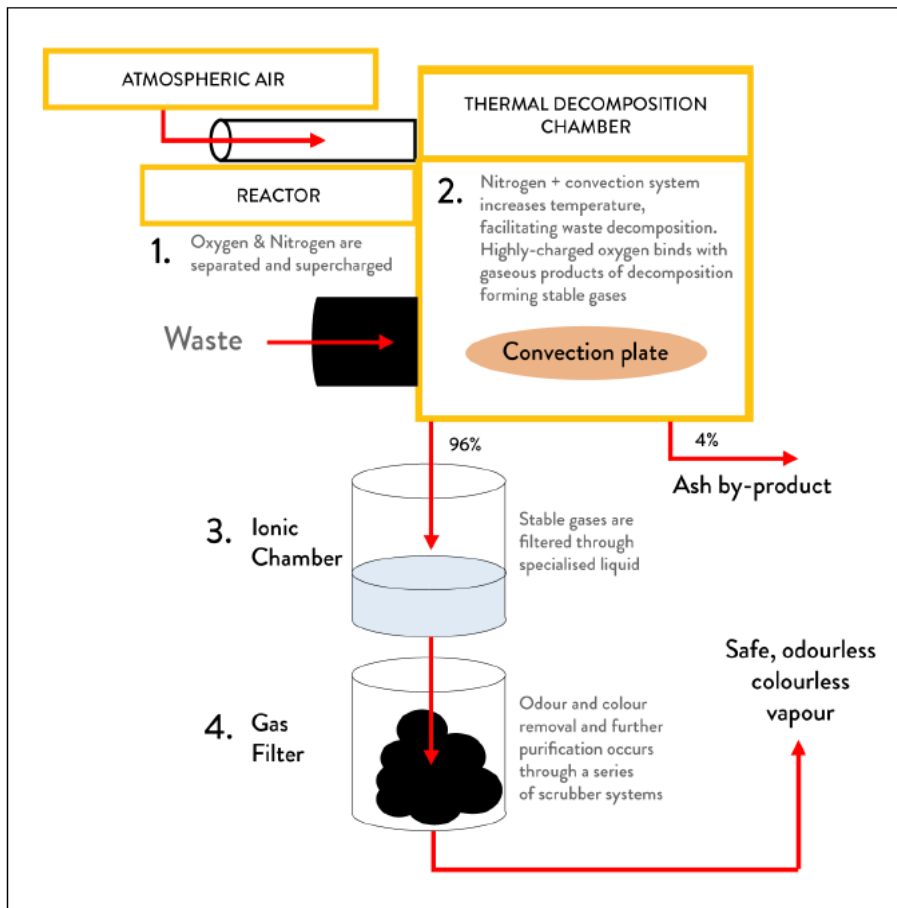
SGS

Exova

myCO₂
CORPORATE CARBON FOOTPRINT

THE PROCESS

Process Flow



- ✓ **Upto 1400 °C Temperature**
- ✓ **Clean Emissions**
- ✓ **Low Pressure-safe operation**
- ✓ **No Secondary Waste**

“









Refuse what you do not need; Refuse what you do not need; Reduce what you do need; Reuse what you consume; Recycle what you cannot refuse, reduce, or reuse; and rot (compost) the rest.

~ Bea Johnson

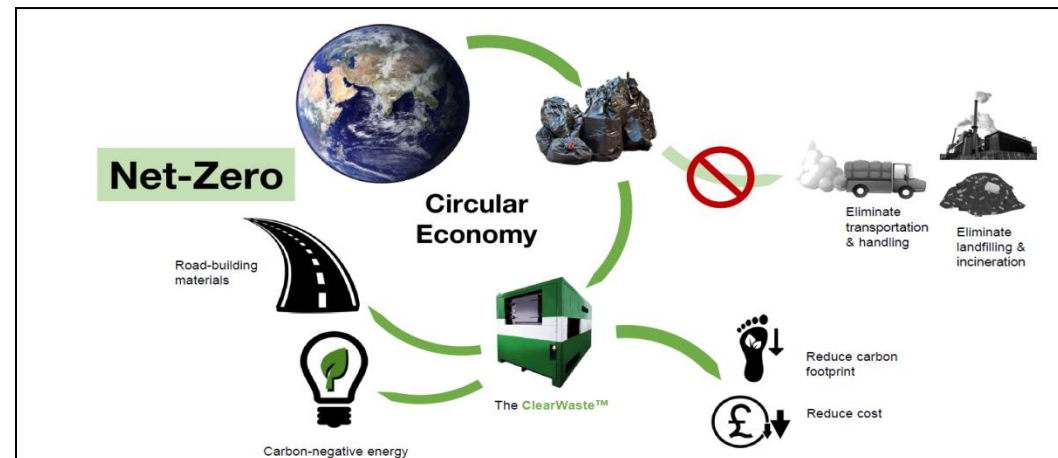


FEATURES

Key features

-  **No Fossil fuel.**
-  **No harmful emissions.**
-  **Compact & modular.**
-  **Mobile.**
-  **Plug & play.**
-  **Safe & user-friendly.**
-  **24/7 operation and Remote Monitoring.**
-  **Real-time emissions monitoring system.**

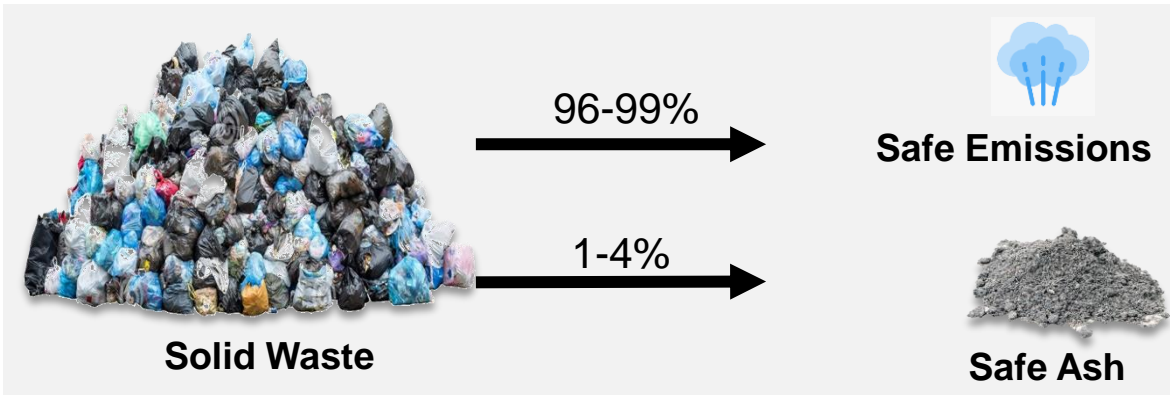
ClearWaste™ CIRCULAR ECONOMY



- ✓ **Circular Economy**
- ✓ **Clear Air**
- ✓ **Improved Life Expectancy**
- ✓ **Restoring Nature**

WHY ClearWaste™?

ClearWaste™ treats TRASH into ASH.



OUR BENEFITS

- **PATENTED** product
- **World Class QUALITY**
 - **FAST** Delivery
- **Certainty of TIME & COST**

ClearWaste™ is already Trusted and Used by



BMC-Mumbai

The **LARGEST** in the world



GCC-Chennai

The **OLDEST** outside the UK



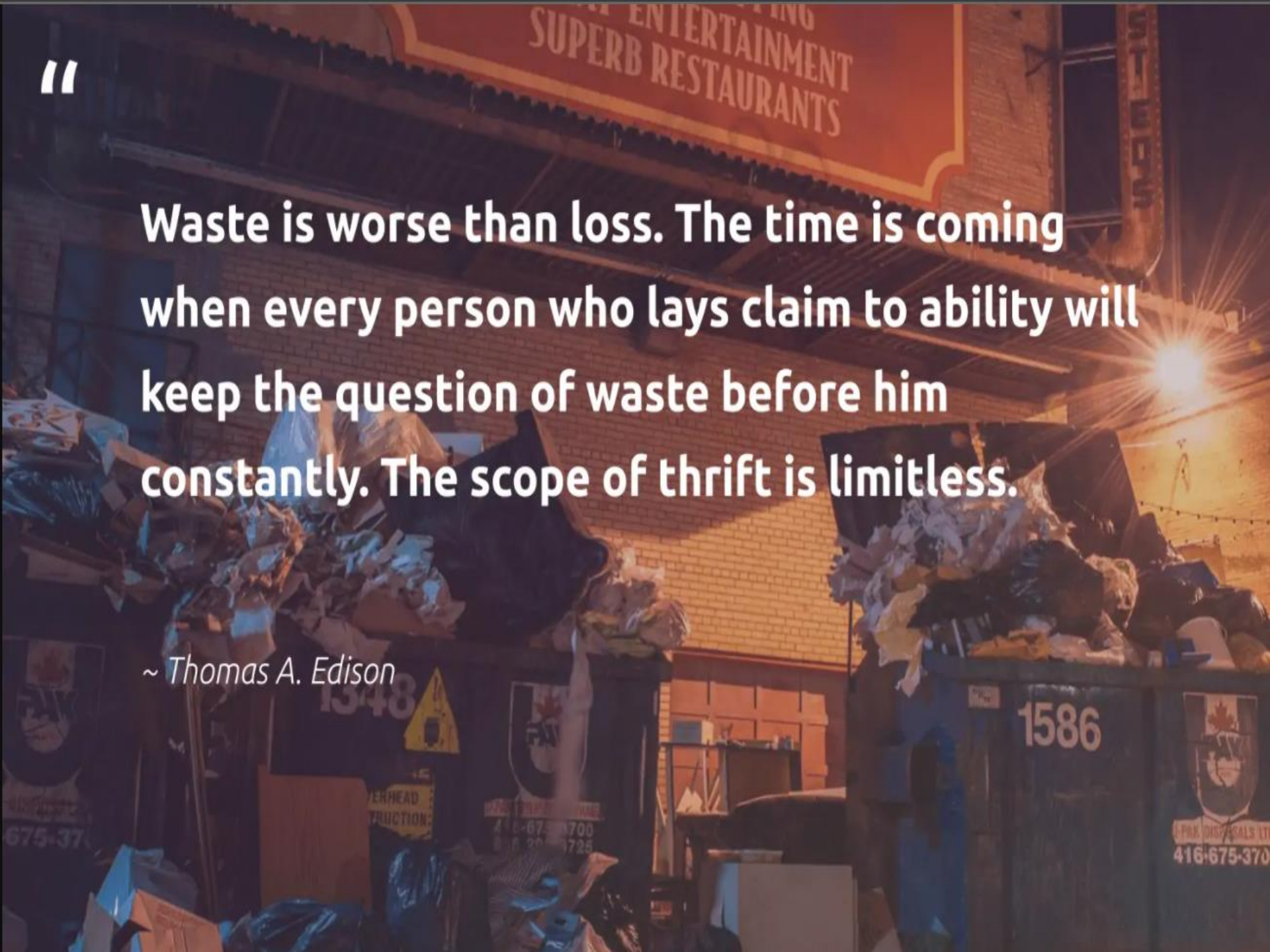
DMC-Dhaka

The **DENSEST** in the world

“

Waste is worse than loss. The time is coming when every person who lays claim to ability will keep the question of waste before him constantly. The scope of thrift is limitless.

~ Thomas A. Edison



APPLICATIONS



Municipal Waste



Industrial Waste



Agricultural Waste



Medical Waste



Electronic Waste



Tannery Waste



Textile Waste



Hazardous Waste



Livestock Waste



PPE Waste



Plastic Waste



Marine Waste



Municipalities



Hospitals & Clinics



Airports & Seaports



**Waste Transfer
Stations**



**Schools &
Universities**



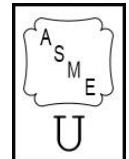
Stadiums & Arenas

ECOSYSTEM

MANUFACTURING



Millennium E&C (M) Sdn Bhd's world class fabrication facility is a ASME U-Stamp certificate facility with over 60 years of experience of high-quality fabrication.



Research & Development



Cranfield University
Energy generation solutions



Universiti Tunku Abdul Rahman
Upcycling of ash into construction materials



Pothole
repair



Carparks



Roads



Organic Rankin Cycle (ORC) Engine

- Generates electricity.
- Runs on renewable energy from the ClearWaste



Steam for
BOILER

“

"Solid wastes" are the discarded leftovers of our advanced consumer society.

~ Jimmy Carter



MUMBAI

LANDFILL DIVERSION FOR PLASTIC WASTE



CHENNAI

MOBILE WASTE MANAGEMENT



DHAKA

COMMUNITY BASED WASTE MANAGEMENT



MALAYSIA

BIO-HAZARDOUS CLINICAL WASTE TREATMENT



“
Being green means preventing waste.

~ Kevin Plank

Reach us:

www.mec-clearwaste.com

E-mail: mail@mec.my

