

PRESENTED BY



# Z.E.E.M. Program

Zero-Emission to Energy and Materials

JUNE 16, 2020



**Booming urban populations coupled with space constraints, escalating costs for energy and materials, and growing environmental concerns will transform today's waste management into resource cycling. As societies evolve and seek to develop zero waste economies, excess inputs and outputs (today's waste) will be redeployed/reused.\***

*\* Vision 2050: The new agenda for business, World Business Council for Sustainable Development, 2010.*



## **Why Z.E.E.M.**

In this day and age, all governments, organizations and enterprises seek to diminish their environmental footprint by moving towards a circular economy model while promoting cleaner energy usage.

## **How Z.E.E.M. works**

While meeting Zero Emission standards, local waste are transformed into greener energy and useful materials using advanced pyrolysis techniques.

At Division Security International Inc., we strive to democratize Security in all its aspects by providing services and solutions for both individuals and environment safety.

Our Z.E.E.M. turnkey program showcases our expertise to promote, develop and deliver waste to clean energy projects using an adaptable Zero Emission approach. We use state-of-the-art Pyrolysis technology to transform waste streams into clean energies and materials. The Z.E.E.M. systems configuration are modularised and scalable depending on the quantity, types of the feedstock as well as the required output.

Our turnkey projects are engineered and developed to supply clean energy solutions needed by worldwide communities and industries. This program is a direct contributor to a Circular Economy approach enabling production of green energy through a chimneyless process.

For any government, organization and enterprise, Z.E.E.M. is financially viable with Return On Investment generally above the accepted industrial standard.





## Z.E.E.M. PROGRAM

**DSI and its partners offer an innovative alternate solution to help municipalities and enterprises dispose of their solid waste and become eco-friendly.**

**Our Z.E.E.M. turnkey program is a fully integrated process, from the reception of the raw feedstock to the production of clean reusable energies (Electricity and/or Hydrogen) and other reusable materials.**



SCALABLE TO CLIENT'S NEEDS FROM A MOBILE CONTAINER SIZE TO A LARGER FACILITY.



TRANSFORMATION PROCESS ADAPTABLE TO THE CLIENT'S FEEDSTOCK AND DESIRED OUTPUT:



MEETS ZERO EMISSION STANDARDS

## THE Z.E.E.M. PROCESS

Using Thermal Pyrolysis techniques without chimney to break down the waste particles of the feedstock into SYNGAS, greener, storable and transportable energies are created.

This waste transformation process allows any organizations or entities to significantly reduce their emissions and landfills usage while enabling resell of bi-products such as Electricity, Hydrogen, Carbon Black, Petroleum derivatives and other reusable materials.





## CONTEXT

**2020 is the year where drastic changes must be made to optimize our waste management systems by turning such waste into a much needed alternative to produce green clean energy.**

As an example, plastic, one of the most useful products, is a major issue worldwide and the hardest one to transform meeting the Zero-Emission standard. Durable and ubiquitous materials known to man, it permeates every sphere of human life. It can be found in refrigerators, cars, computers, mobile phones and syringes just to name a few. In short, we are sustaining our way of life to the extent that we struggle to imagine life without it. However, plastics are non-biodegradable and impose an ever-growing environmental burden.

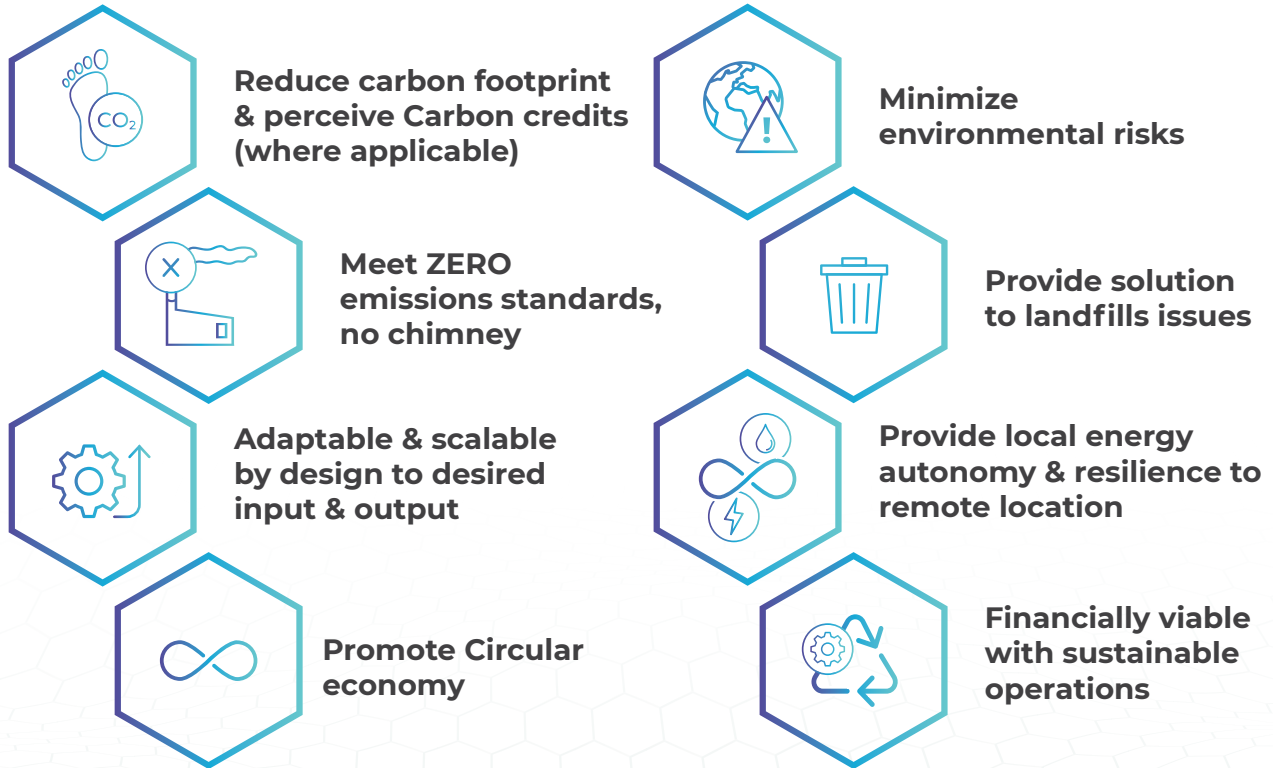
In 2018, world plastics production totaled around 359 million metric tons. Plastics are used in a wide variety of products and have displaced other materials, such as wood, metal, and glass. Due to the technical limitations or inconvenience of mechanical recycling, only a fraction of that material resurfaces in new plastic products of lower quality and strength.

It takes no imagination whatsoever to throw away plastic and doom it to the fate of a thousand years in a landfill while threatening both lands and oceans along with its ecosystem.

**As waste is an increasing economic and environmental burden, there is imminent need to transform and reuse it to diminish environmental impact.**



# 8 BENEFITS OF OUR TURNKEY SOLUTION



Contact us for more information.

INFO@DSI.GROUP  
DSI.GROUP

