



Smart Cities

8 July 2022

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NATION WASTE AND
NATION SAFETY NET
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Expertise in Smart Cities and Waste Management

Fortune's 10 Most Powerful Women Entrepreneurs

Gold Medal National Congressional Entrepreneur of the Year

United States National Women's Business Council

GW Bush Business Advisory Businesswoman of the Year

Goldman Sach's 10,000 Small Business First Honoree



Waste to Energy in a Circular Economy





Job Creation

The Nation Waste Circular Economy creates thousands of quality jobs for the people of Guatemala though investment in technology



Net Zero Carbon Contributions



Deploying an electric garbage truck fleet

Garbage transfer stations significantly reduce miles driven by trucks

Using the internet of things to reduce unnecessary collection cycles

Adopting solar powered technology to compact garbage and gather data

Replacing fossil fuel pollution with clean biofuels for energy

Creating a neutral CO2 cycle without contribution to greenhouse gases

Lower sulfur emissions, particle discharge, and fire risk



Waste Collection Efficiencies & IoT

Trash is collected only when full eliminating unnecessary pick ups saving gas, lowering emissions and saving

Garbage is compacted to under 5x it's initial volume reducing collection frequency

Collection times and miles driven are significantly reduced through transfer station hubs

Dumpsters are dropped off and picked up when full when sensors notify collection station

GPS tracking for trucks, portable restrooms, containers and equipment

Solar powered batteries and data collection technology

IoT powered security and safety for workers



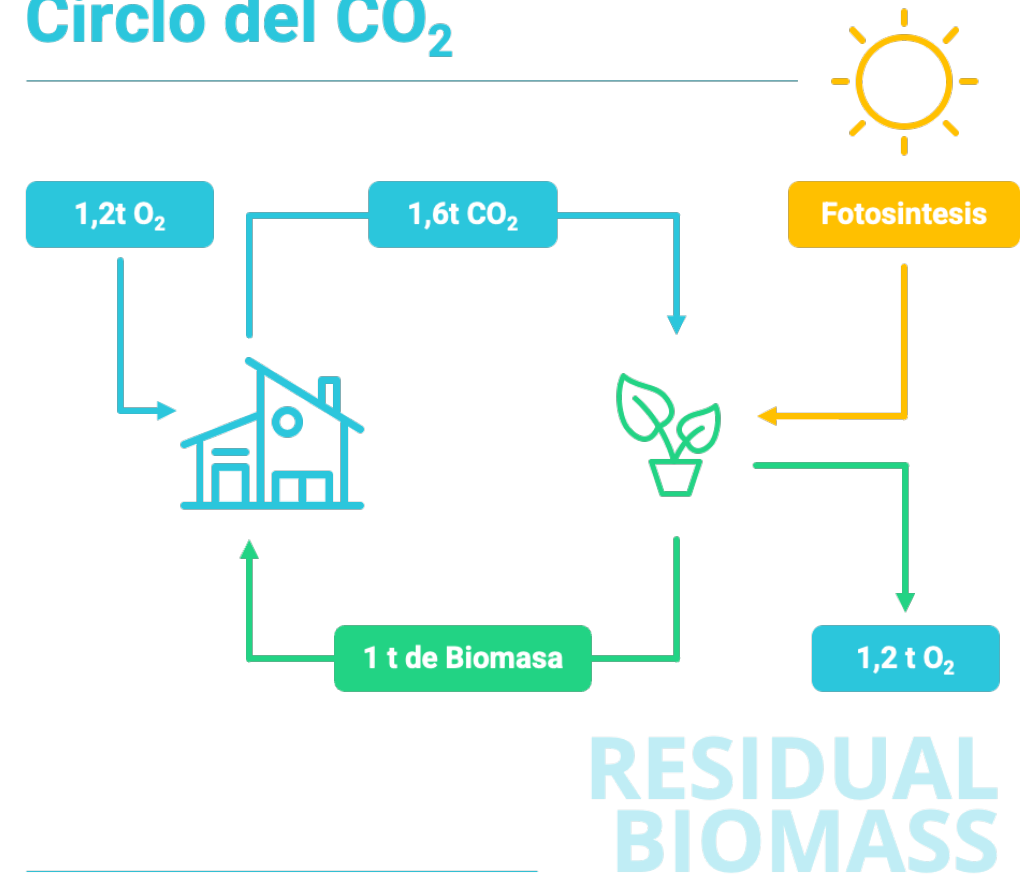
Biomass to Energy

The energy that contains the residual biomass, is solar energy stored through photosynthesis, process by which some living organisms, like plants, use solar energy to convert the inorganic compounds that they assimilate (like CO₂) into organic compounds.

The combustion of biomass does not contribute to the increase of the greenhouse effect because the carbon that is released is part of the current atmosphere (it is the one that plants absorb and release continuously during their growth) and not of the subsoil, captured in remote times, precisely as the gas or oil.

THROUGH A SINGLE OWNER SYSTEM with high productive and ecological efficiency, we produce a green fuel, "BIOMASA RESIDUAL", for the generation of 100% sustainable thermal and electric energy.

Ciclo del CO₂



Recycling Uses

Certain plastics are removed and processed into pellets to supply the plastics industry

Metals are removed and processed to supply the electronics industry

The remaining substances are sent to the biomass plant for processing

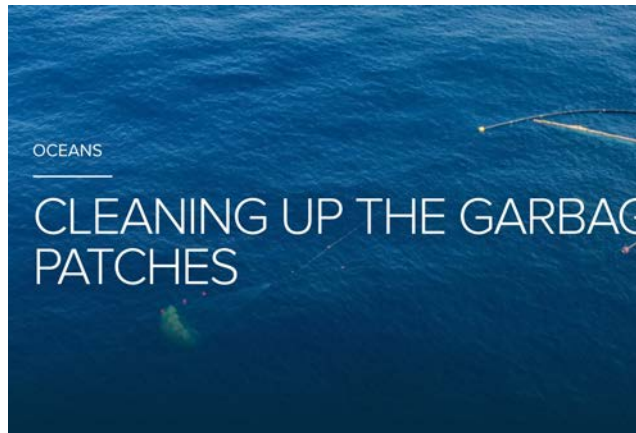




Ocean, Lake, & River Clean up

Trash Collection from Oceans, Lakes, and Rivers Fuel Energy

Extracts 35% of shoreline garbage within 3 months



Our floating systems are designed to capture plastics ranging from small pieces just millimeters in size, up to large debris, including massive discarded fishing nets (ghost nets), which can be tens of meters wide.

The challenge of cleaning up the gyres is that plastic pollution is spread across millions of square kilometers and travels in all directions. Our cleanup technology has been designed to do the hard job of concentrating the plastic first, before it can be effectively removed from the ocean.





Smart Water Purification



Processing Facilities



Clean Drinking Water

Water Purification



Smart Infrastructure

- Trash is compacted to 35x the capacity of a regular container while reducing labor pick up frequency
- Smart lighting and trash compactors can be solar powered eliminating power connections
- Smart lighting and buildings reduces electricity used and costs by over 36%

Smart Airports

Cargo / Warehouses



Airport Services

Security



Collision Avoidance



Eliminate Hanger Rash



Intelligent Work Zones



Smart Transportation

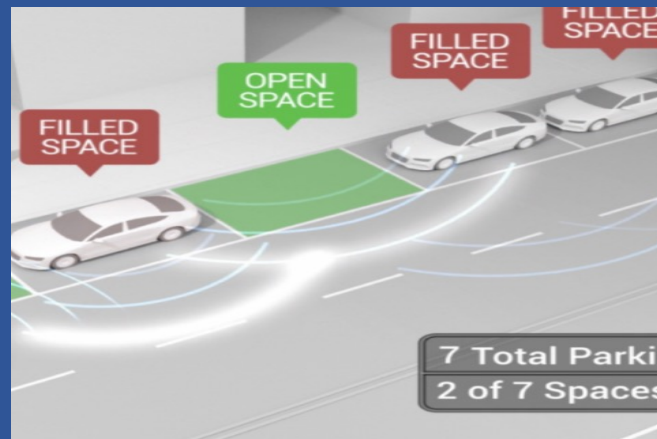
Autonomous Transportation



Intelligent Traffic Flow



Smart Parking











Safe Bike Lanes



Smart Security

License Plate Recognition

	Camera	Plate	Plate Image	
40	None	537P26		Full Image
64	ALM-RBS-LPR	428P26		Full Image
62	ALM-CDS-LPR	238P26		Full Image
64	ALM-CDS-LPR	624P2		Full Image
27	ALM-CDS-LPR	953P2		Full Image
67	ALM-ES-LPR	1429P26		Full Image
40	ALM-RBS-LPR	238P26		Full Image
40	ALM-ES-LPR	118P26		Full Image

License Plate Search

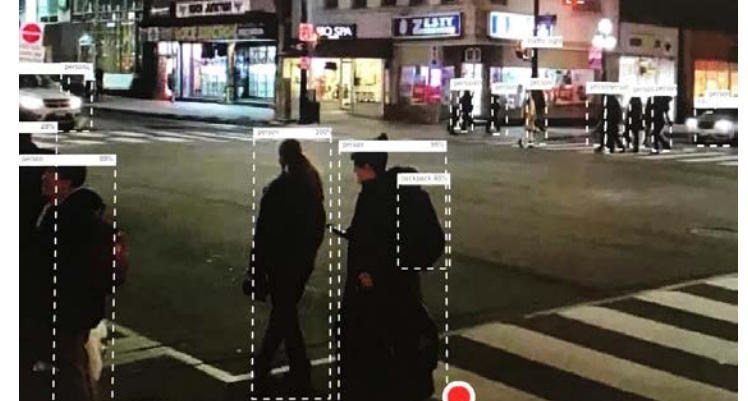
Filter by Camera:

Plate Contents:

Start Date:

[Submit](#)

People / Facial Recognition

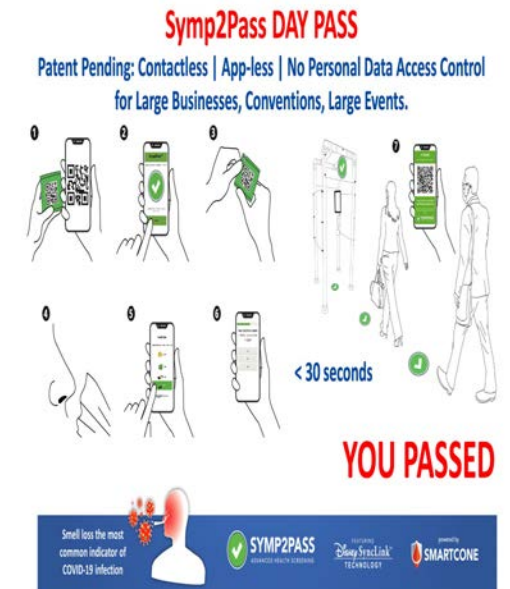


Intelligent Cameras

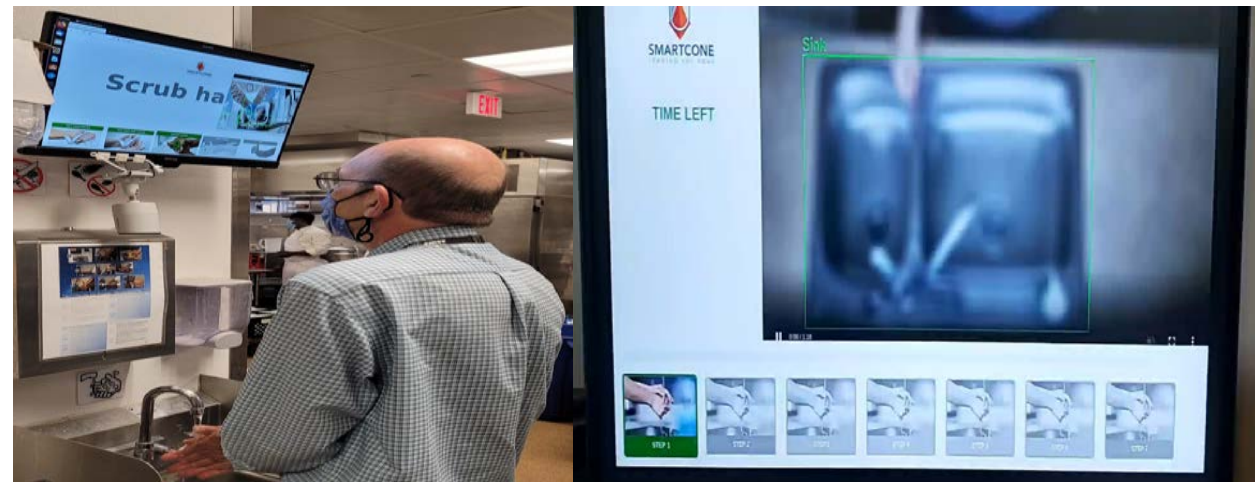


Smart COVID Protection

COVID Screening



Intelligent Preventive Hand Washing



Vea el video aquí

Smart Mining

- Hazard identification and injury prevention
- Air quality and gas detection
- Intelligent safety zones
- Required equipment identification
- Job site check-in
- Sabotage prevention
- Video analytics
- Remote asset management
- Unauthorized persons identification



Smart Utilities

Voltage Safety Warning



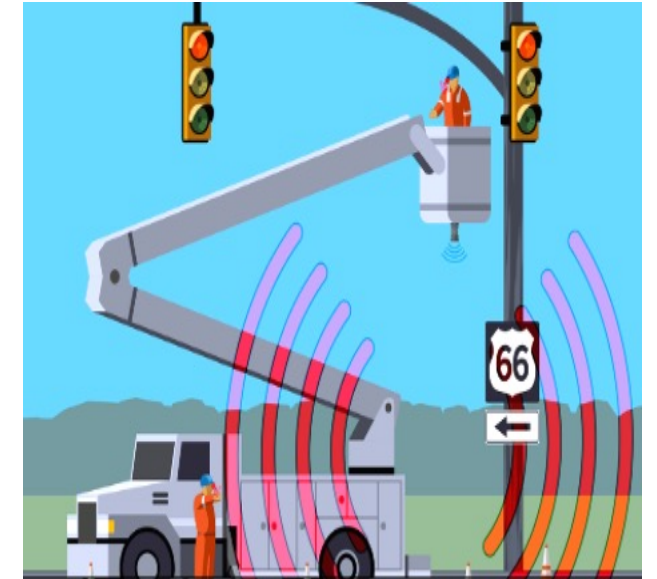
- 110 Garbage Trucks Emitting 60% Less Carbon Emissions

Green IoT Enabled Garbage Trucks



- Immediate Notification of Broken Lines and High Voltage Dangers

Falling Tools Safety Zone



- Immediate Notification of Falling Objects and Equipment Theft

Smart High Speed WIFI



Fast Reliable Connectivity

- Security
- Telecom
- Smart Cities
- Transportation
- Tourism
- Education
- Agriculture
- Healthcare
- Rural Agriculture
- Manufacturing
- Homes / Buildings
- Recycling & Energy

Smart Bitcoin Services

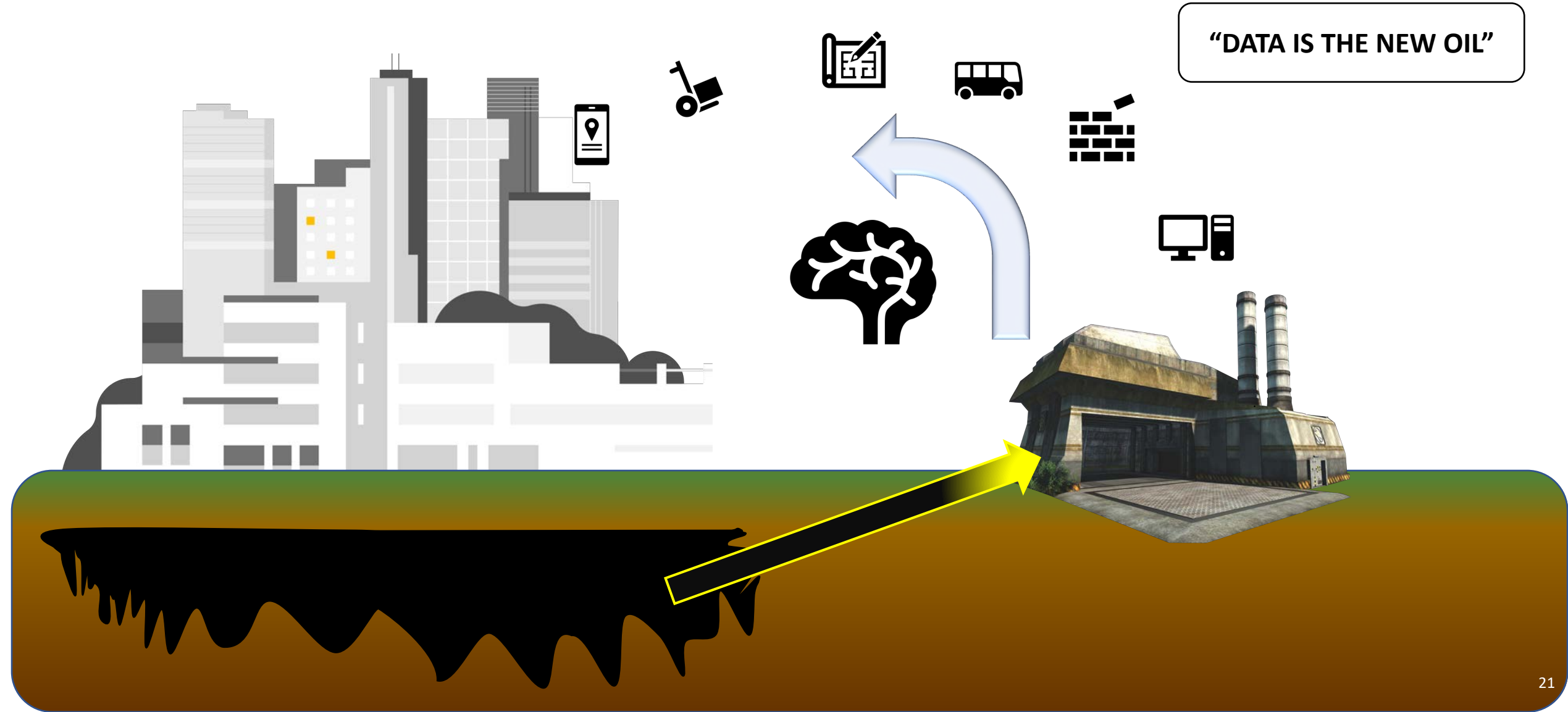
- Recycling Compactors Issue Credit Bitcoins
- Bitcoin Mining Facilities Powered by Waste to Energy
- Blockchain Software as a Service



Data Monetization Drives Government Revenue

Guatemala can sell the data it collects to private business and outside government entities.

"DATA IS THE NEW OIL"



Next Steps

1

Identify Solutions

2

Prioritize Projects

3

Proposal Approval

4

Get Started



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