

A world map where the landmasses are filled with a dense pattern of small, glowing yellow and white dots, representing city lights or population density. The background is a dark, deep blue color.

**ROGP**

By Development Inc.

## Global Challenges of Postconsumer Plastic

- Huge quantities of postconsumer plastic are being generated every year.
  - 24 M tons/yr in Europe.
  - 30 M tons/yr in the US.
  - 246 K tons/yr in Lebanon.
- Yet, the disposal and treatment remain challenging.



## Existing Solutions

### ➤ Landfilling

- 30% in Europe
- 75% in the US
- 48% in Lebanon

➤ Combustion to Energy, which is still facing major logistic and operational constraints.

➤ Some uneconomical post consumer plastic treatments are available.



What is ROGP?

- ROGP is a revolutionary patented invention that presents a solid and effective solution for this global problem.
- The ROGP technology is a composite generated from the rejects of glass and plastic.
- ROGP will be a significant turning point in the worlds of building materials, mechanics, and others.



## Positive Environmental Impact

- Re-use of non-recyclable plastic waste.
- Minimization of the non-recyclable plastic waste landfilling.
- Minimization of the depletion of natural resources, used in the production of plastic.
- A reliable and durable recycled material.



# Current Technologies

- Molding Technology
- Extruder Technology
- 3D printing Technology (in process)



# Product Specifications

- Flexural strength: 13.9 Mpa, ref (ASTM D 790M-93)
- Compressive strength: 11.67 Mpa, ref (ASTM D 695M-91)
- Outstanding Abrasive Resistance: loss of 0.21mm after 1000 revolutions, equipment utilized (Tinius Olsen Wearometer C.D.R)
- Absorption Capacity: 0.05% by weight, ref (ASTM D 792-9L)
- Density: 1.022 g/cm<sup>3</sup> expressed in Dry Unit Weight, ref (ASTMASTM D-570-95)
- Wet-Dry Test: 0.0176% loss, ref (ASTM D5313)
- Sodium Sulfate/Magnesium Sulfate Soundness Test: zero loss, ref (ASTM D5240)





## Target Market - Industries

- Construction & Building Material industry
- Military & Security Companies
- Agricultural Developers
- International Organizations and companies seeking to develop a proactive CSR programs.



# Target Market - Geography

- Our ROGP is a solution for the global environmental challenge.
- We started in Lebanon.
- Our plans are to expand within the next 5 years in:
  - Africa (Egypt, Morocco)
  - GCC
  - Latin America (Peru, Brazil)
  - Asia (Indonesia, Malaysia, Thailand)
  - Europe (Spain)
  - North America
  - Australia



# Our Strategy



➤ ROGP composite products do not intend to enter the market as a competitor, but more of filling an urgent need for a solution for the global plastic waste problem, while producing a durable and cheap applications for the construction, municipal and agricultural industries.

➤ Our main applications for now are the below:

- Tiles
- Boards
- Bins
- Irrigation channels/water ducts
- Building Facades
- Parking stops and road bumps.
- Public benches
- Product design



# Achievements & Progress

- Nomination to Queen Elizabeth award for engineering
- Azadea in 2016
- Diageo in 2017 and 2018
- Fatal in 2017 and 2018
- Gabriel Bocti in 2017
- Lebanon glass recovery project 2017
- Municipality of Beirut in 2018
- Aec in 2018
- MEDS "Cubatto"

## Others are in process:

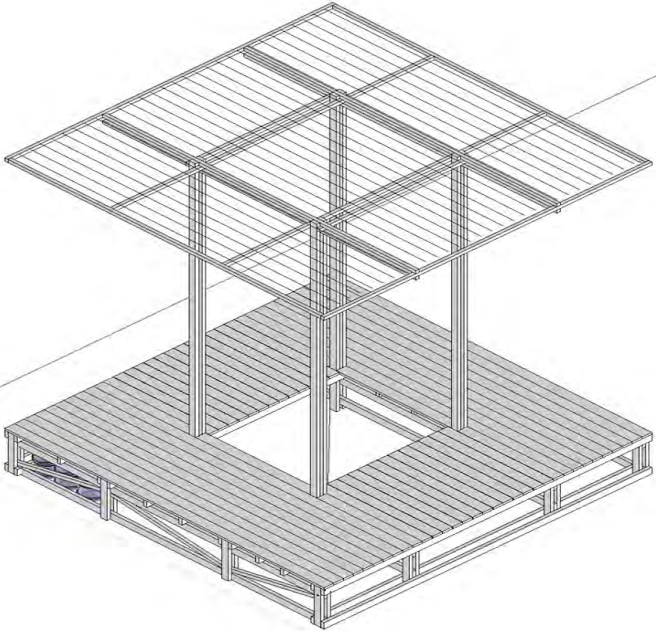
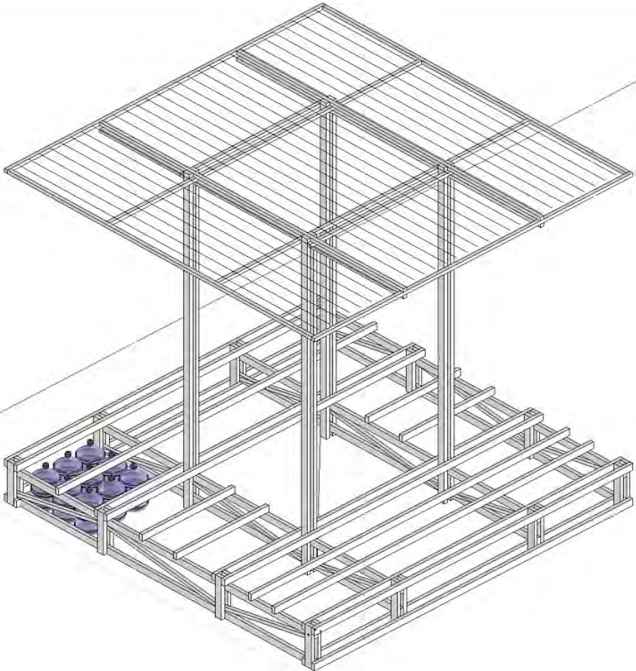
- USEK in 2018
- Byblos in 2018
- Ramco in 2018



# Competitive Edge

- Our cost is less by approximately:
  - 70% for tiles
  - 40% for bins
  - 70% for irrigation channels/water ducts
  - 35%-50% for Building Facades
- Significantly competitive product price,
- Auspicious product qualifications.

# CUBATTO® Project











# Bins



# Tiles



# Building Facades



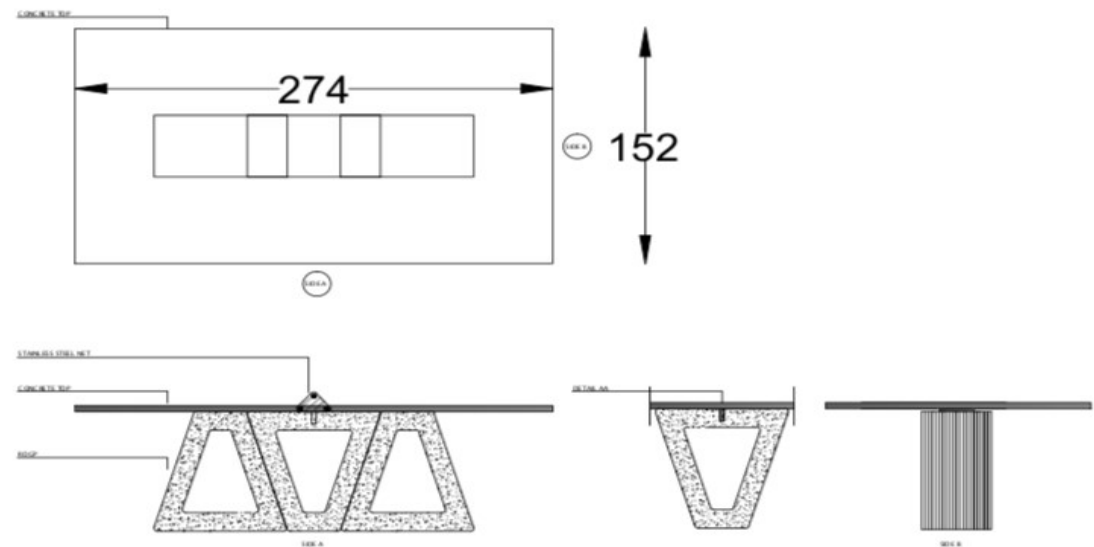
# Public benches



# Irrigation channels



# AUB Designer Ping-Pong Table





Thank you!

Q&A