

hello, we are **TRIA.**



TRIA



SINGAPORE PACKAGING
STAR AWARDS
2019



TRIA is an award-winning, sustainable and innovative foodware company.



TRIA

Who are we?

TRIA is an **innovative and sustainable** foodware company. We believe we should take responsibility for our own lifestyle and our own waste.



Our Conversations on Single-use Plastics



SINGAPORE BUDGET 2019
ON A ZERO-WASTE NATION



LIANHE ZAOBAO &
938NOW FM INTERVIEWS
APRIL 2019



BEST INNOVATION WINNER
EMERGING ENTERPRISE
AWARD 2019



Singapore Environmental
Achievement Awards 2018
held in conjunction with
SEC Conference May 2018

FINALIST, SINGAPORE
ENVIRONMENTAL
ACHIEVEMENT AWARDS



SPEAKER AND
PANELIST AT FIA
FOOD FUTURE 2018



PLASTICITY
MALAYSIA 2018



PANELLIST, 2017
ECO-FILM FESTIVAL



WORLD RESTORATIVE
INNOVATION FORUM, 2018



INTRODUCTION OF BIO24
BROWN WASTE STREAM
@LAUNCH OF SS FOOD
WASTE STANDARD 2019



EXHIBITOR AND PANELIST
FIA FOOD FUTURE 2019



FINALIST, LIVEABILITY
CHALLENGE, 2018



TOP 8 SG FOODTECH,
TECHINNOVATION
2017 & 2018





The ocean has become an enormous dump for our plastics...



Microplastics is coming into our food through ocean-plastics



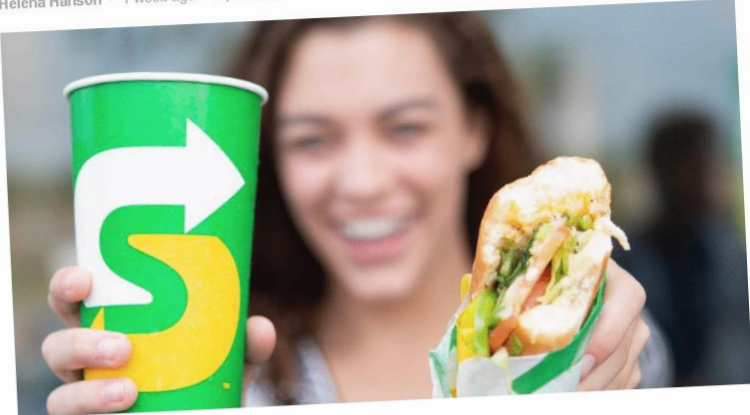
GLOBAL PLASTIC CRISIS

In the past months, major cities declared war on single-use plastic one after another, subjecting the industry to a major coping challenge with these regulations changes. F&B brands such as McDonald's, Starbucks and KFC are anxious for a solution...

Subway Canada Now Has Paper Straws But Customers Are Hating It

Their attempt to reduce plastic waste hasn't gone down as expected.

Helena Hanson · 1 week ago · Updated on August 09 @ 04:27 AM · 424



subway | Instagram

Does the switch to paper straw solve the problem?

Customers don't enjoy it and there are still plastics in your food packaging?





we can help you
**go zero waste
with Bio24.**

Bio24 is an elegant way to recycle
single-use foodware & food waste.



TRIA Bio24

~~plastics~~

plant-based

~~unsustainable
plastic waste~~

ZERO
waste

ZERO WASTE WITH BIO24

TRIA has an **end-game solution** for the problems of **single-use foodware**. Through Bio24, we can offer a **zero-waste** solution to F&B brands and food service providers, leaping well ahead of the market which is still grasping with the choice of materials and partial solutions.



How Bio24 works?



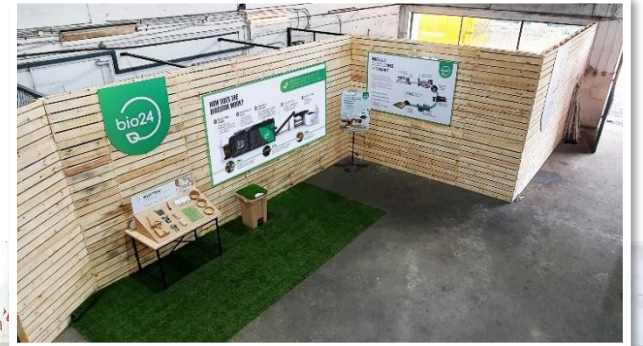
Click to play

and process it in our

PROPRIETARY
THERMOPHILIC
DIGESTOR

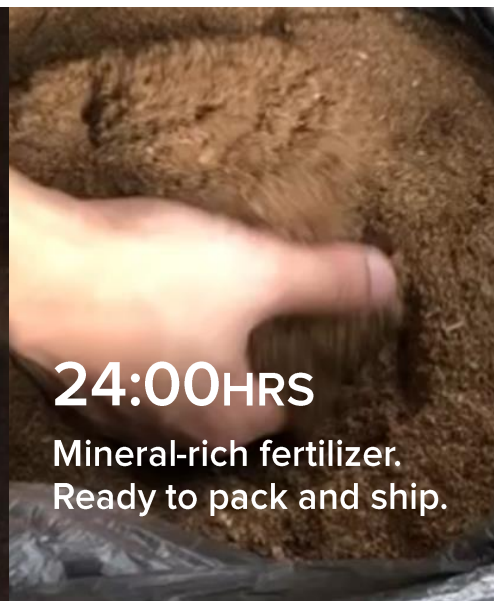
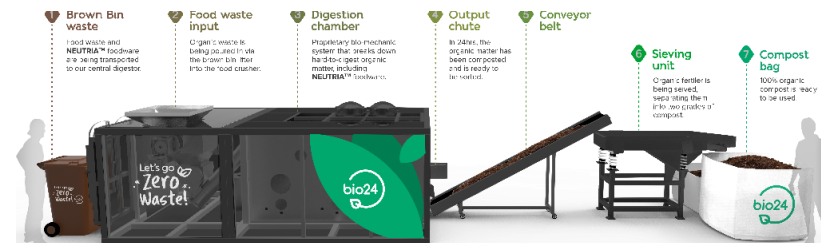
Bio24 digestion technology

Comprise of a **catalytic degradation process** which significantly reduces the composting time of the NEUTRIA® material – chemical free. Coupled with natural enzyme action, the NEUTRIA® material is reduced to compost in just 24hrs.



NEUTRIA® digests in 24hrs

TRIA's plant-based NEUTRIA® foodware, alongside with food waste (no separation needed) can be turned into fertilizer in 24hrs through our patented catalytic digestion process.

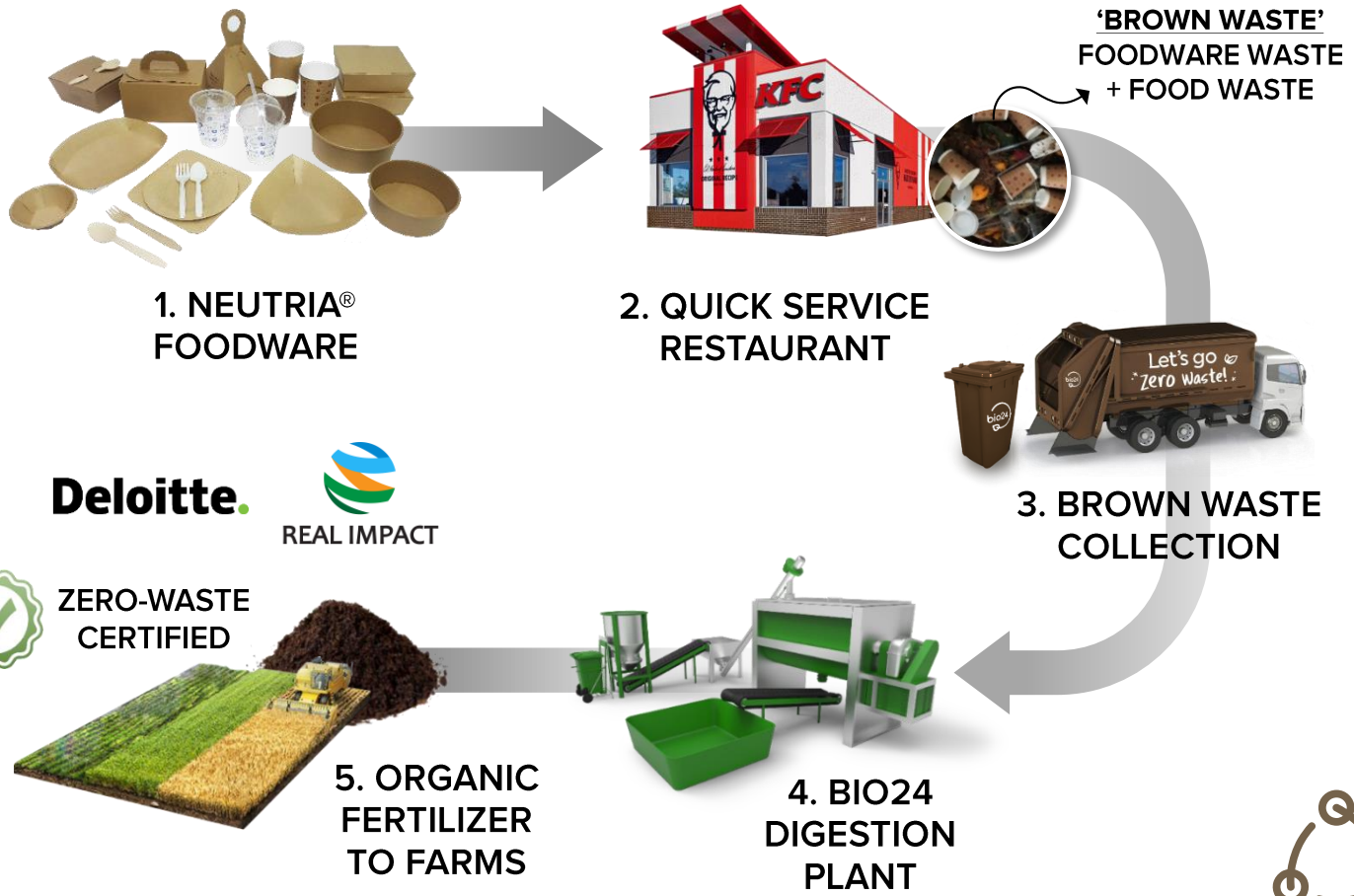


How Bio24 works?

Bio24 Programme

Bio24 is the end-game solution to help the QSR sector close the loop and go zero-waste. It is an industry partnered programme that ensures the waste gets renewed, from table-to-farm.

- ✓ Certified ZERO-waste
- ✓ No change to operations
- ✓ No renovations (no CAPEX)
- ✓ 2 wastes in 1 (Foodware + Food waste)



Deloitte. REAL IMPACT



Get zero-waste certified

Keen to partner with us and take your business zero-waste in the long run?

We are working with certification bodies to ensure F&Bs who implement Bio24 foodware and brown bins can be **certified as zero-waste**.

- ✓ Utilising the power of technology for real-time data
- ✓ Measurable, accurate and live zero waste insights
- ✓ Data is publicly available to encourage long-term sustainable behaviour



Deloitte.



Bio24 Brown Waste Stream

GENERAL WASTE (Incineration)

General waste
(not efficient w/ wet waste)

\$72/tonne
(Gate fee)

Turned into ash and landfilled. Concerns on environment pollution such as dioxins and leachate.

BLUE WASTE (Recycling)

Clean plastics feedstock (PET, PP), paper & aluminium

\$81/tonne
(segregation)

Recycled materials. Maximum 6-8 times recycling.

Many grades of plastics such as PS, PVC has low recycled value.

BROWN WASTE (Bio24)

Foodservice mixed wet waste (single-use foodware & food waste)

\$66/tonne
(Gate fee)

Farm-ready organic compost

Zero waste, lower carbon emission, closed-loop.



Liquid-based food waste



Vegetables, fruits, meat, etc



Solid-based food waste



Bones, crustacean shells, garden pruning waste, etc



Disposable Foodware Waste



Clear Paper-based, transparent compostable

ZERO-waste + Carbon Emission reduction

Global Warming Potential (GWP) (kg CO ₂ eq/tonne)						
Material	Production	Transportation	Offsets from waste-to-energy Incineration	Offsets from composting and crop growth	Total carbon emission	
LDPE	3054	234	-2042	-	1246	
HDPE	2943		-1967	-	1209	
PP	2554		-2314	-	473	
PET	3136		-2314	-	511	
Paper	941		-1078	-	97	
NEUTRIA® coated paper	1200		-	-2141	-737	With TRIA
NEUTRIA®	1320		-	-2141	-587	With TRIA

- The 8th International Conference on Applied Energy – ICAE2016 “Carbon footprint of copying paper: Considering temporary carbon storage based on life cycle analysis”
- Fisher international Analysis – “Carbon and its Impact on the Global Pulp and Paper Industry”
- Environmental Paper Network – “The state of the global paper industry 2018”
- Natureworks – “Life Cycle Inventory and Impact Assessment Data for 2014 Ingeo Polylactide Production”
- Global Alliance for Incinerator Alternatives: Facts about “Waste-to-Energy” Incinerators (January 2018)
- Waste Management & Research 2009: 27: 825–836 Landfilling of waste: accounting of greenhouse gases and global warming contributions
- Emission from Waste Incineration; a background paper for Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories



We are looking for partners who believe in taking responsibility for their own waste

- Fast food restaurants, Chain café
- Caterers, Food service providers
- Corporate Canteen & Institutions
- Theme Parks, Stadiums
- Inflight Catering

Contact: hello@triabio24.com

