

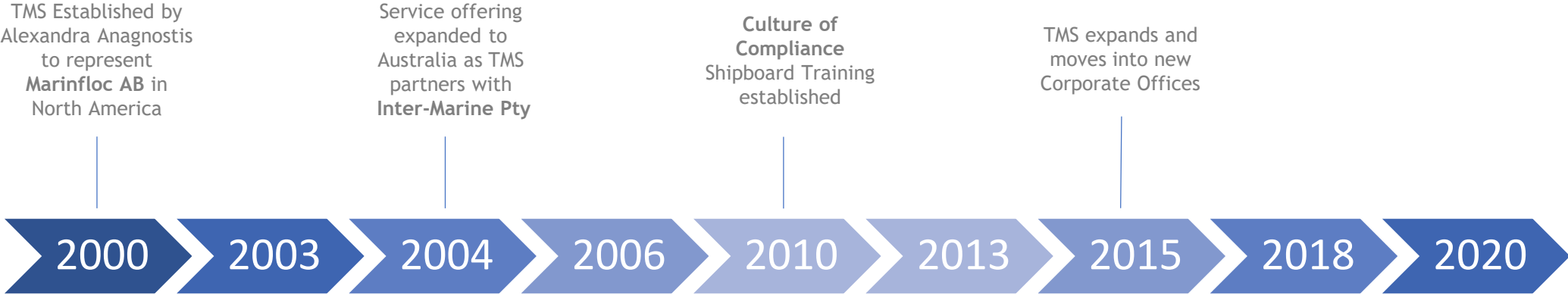
Tools for Environmental Security

ORCA and Ocean Guardian



TOTAL MARINE
SOLUTIONS

Brief background on Total Marine Solutions



TMS Established by Alexandra Anagnostis to represent **Marinfloc AB** in North America

Service offering expanded to Australia as TMS partners with **Inter-Marine Pty**

Culture of Compliance Shipboard Training established

TMS expands and moves into new Corporate Offices

2000

2003

2004

2006

2010

2013

2015

2018

2020

Calibration (OCM) Center established

Oil Filtration Systems (Texas, USA)
JETS Vacuum (Norway) added to our portfolio

Strategic partnership developed with **Brenock Technology**

TMS selected as Exclusive Distributor for **ORCA Food Digesters**

TMS launches Ocean Guardian



Strategic Partnership with Marine Press NAVTOR
additional APIs pending



Total Marine Solutions

Razor sharp focus on customer service and consistent, reliable support

Legacy Business:



Ocean Guardian:



- Rules portal
- Client/Server install shipboard
- Integration with passage planning
- Integration with client EMS

Food Waste

5

lbs/person/day



10

tons/day



3650

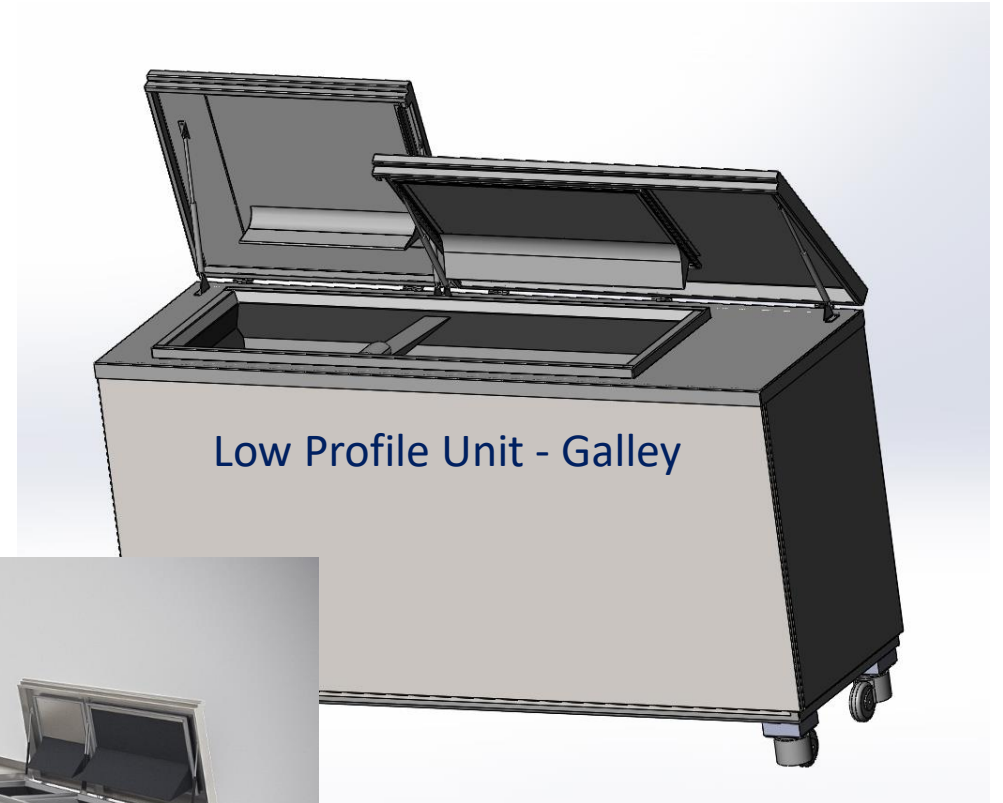
tons/year



Technology & Innovation – Food Waste



Standard Unit



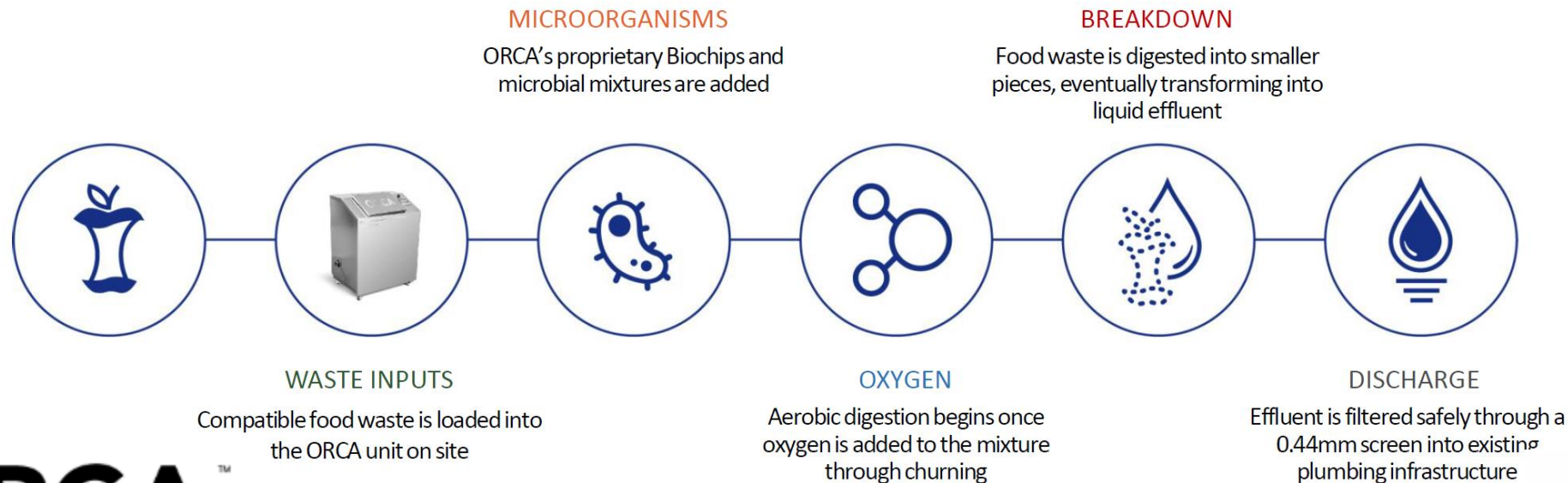
ORCA™

ORCA Process – Organic Refuse Conversion Alternative

The **ORCA** uses an aerobic composting process to convert food waste into earth friendly water that safely discharges into the sanitary sewer system.

The **ORCA** significantly accelerates the breakdown of food waste by adding our proprietary Micro-Organism Solution and Bio Chips to the process creating the ideal environment for rapid decomposition.

The entire digestion process usually occurs within 24-hours.



ORCA™



TOTAL MARINE
SOLUTIONS

Food Waste

3650
tons/year



Strategic Vision for Ports

- Increased service offering
- Reduced truck traffic in port
- Lower carbon footprint
- Reduced stress on infrastructure
- Lower waste processing locally
- Reduction in vermin

Sustainability Impact



*Based on the OG100 model.



ORCA™

TOTAL MARINE
SOLUTIONS

Immediate Opportunity



INDUSTRIES SERVED



FOOD SERVICE

Convention Centers
Education
Healthcare Clinics
Hospitals
Office Buildings



LODGING

Casinos
Hotels
Resorts



RESTAURANTS

Casual Dining
Fine Dining
Quick Serve



GROCERY STORES

Food Co-Ops
Supermarkets



RECREATION

Airports
Amusement Parks
Entertainment Venues
Shopping Malls



MARINE

Cruise Ships

ORCA™



TOTAL MARINE
SOLUTIONS


Ocean Guardian

Immediate, accurate information at your fingertips

OCEAN GUARDIAN Administration Portal

[Rules](#) [Ports](#) [Fleet Ops](#) [Vetting](#) [Updates](#) [Administration](#) [TMS Website](#) [Help](#)

Hello TMSvcAdmin (TMS Admin)

 MANAGE RULES	 ADVANCED SEARCH	 PORT INFORMATION	 FLEET OPERATIONS
 ATTACHMENTS	 TO VET 0	 TO REVIEW 7	 RULE PROPOSAL
 ARCHIVE	 CSA2020	 FEATURE INDEX	



Ocean Guardian

Immediate, accurate information at your fingertips

You are in zone(s)	Approaching zo...	Distance	ETA	Categories	Global	Company																																																																		
GUATEMALA	GUATEMALA	25 - 50 NM	12 - 25 NM	6.82	14:09																																																																			
Ship: Coral Princess Last Reported: 09-13-2019, 2:48:12 PM (Eastern Daylight Time) Lat: 13° 50' 18" N Lon: 92° 12' 18" W Course: 113° Speed: 19kn																																																																								
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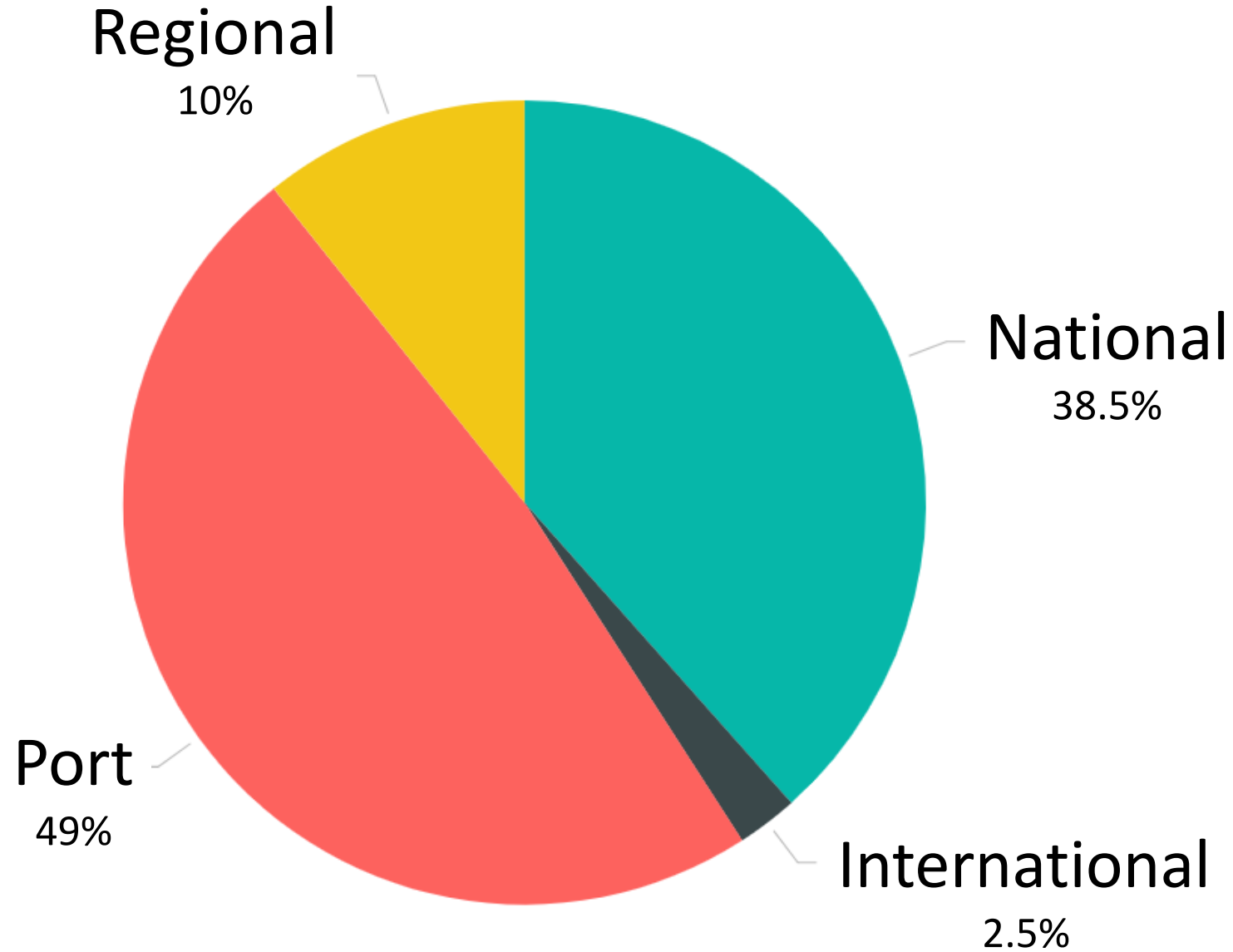
Ocean Guardian

Immediate, accurate information at your fingertips

The screenshot displays the Ocean Guardian software interface. At the top, a header bar shows navigation options like 'Approaching 25-50 NM', 'Distance', 'ETA', 'Categories', 'Status', and 'Company'. Below this, a table lists various rules with columns for distance (e.g., '25 - 50 NM'), location ('GUATEMALA'), range ('12 - 25 NM'), distance ('6.82'), and time ('14:19'). A 'Rule Details' window is open, showing information for Rule ID 5054, which is 'International' and concerns 'Garbage: Comminuted Food Waste'. The rule title is 'MARPOL: Food Waste (Comminuted or Ground): Outside Special Areas and Arctic Waters'. The text describes MARPOL Annex V Consolidated 2017 Regulation 4.1.1 and provides effective and vetted dates. A 'Submit Feedback' button is visible. To the right, a 'Documentation' window lists three PDF files with their filenames, titles, and page numbers. The main interface on the right shows a list of rules with status indicators (green checkmarks, yellow warning triangles, and red 'X' marks) and a 'Warning Level' column. A map is visible on the left side of the interface.



Global Regulations



Supporting Environmental Security

ORCA – Technology to help guard against environmental degradation and protect natural resources

Ocean Guardian - Making the guidance for environmental compliance available



TOTAL MARINE
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OCEAN GUARDIAN



ORCA™



TOTAL MARINE
SOLUTIONS

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