

27 SEPTEMBER 2023



# OPERATION CLEAN SWEEP

INTRODUCTION & GETTING STARTED

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**2–5 mm**  
in a diameter



## Plastics pellet in the environment

Plastic pellets are small granules (often called nurdles) that are used in the plastics manufacturing process. The release of plastic resin and pellets into the environment can occur through the runoff of plastic pellets via discharge water, spillage and improper handling practices.



**230,000**  
tons are lost  
every year

**Plastic  
industry**  
one of the sources of  
plastic pollution





OCS is an international product stewardship programme from the plastics industry to reduce plastic pellet, flake and powder loss into the environment. The programme was initiated by the American Chemistry Council (ACC) and the Plastics Industry Association (PLASTICS).



## Goals:

Work towards achieving zero pellet, flake, and powder loss

Minimize environmental footprint associated with plastic industry

Help to establish a good housekeeping and containment practices



## What is OCS?



## About OCS programme

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# OCS International Partner

Operates in more than 60 countries internationally, Malaysian Plastics Manufacturers Association (MPMA) is the international program partner or licensees for OCS in Malaysia.

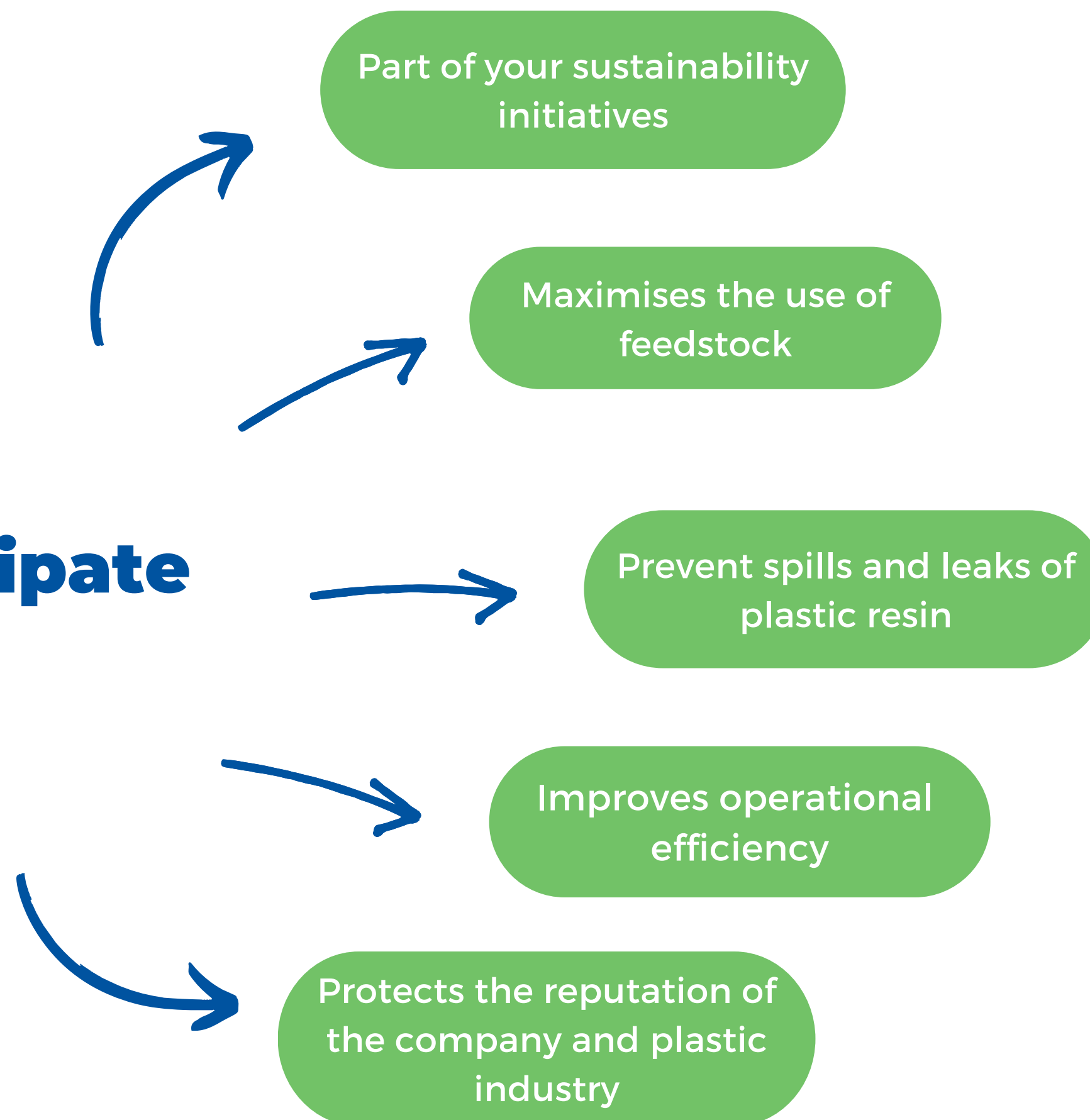
Launched on 8 December 2022 by the MPMA, to promote the adoption of the programme by the plastics industry in Malaysia.



## About OCS programme

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## Why Participate OCS?



## Types of Members

To sign up for OCS in Malaysia, organisations have to register for an OCS pledge which is divided into **TWO** categories; **Partner Pledge** and **Supporter Pledge**.

### Partner Pledge

For companies which manufacture and handle resins (pellet, flake, powder)

- raw material suppliers,
- transporters, shippers,
- manufacturers, recyclers, etc.

### Supporter Pledge

For organisations (for-profit or non-profit companies, incorporated trade associations, and unincorporated coalitions) that do not qualify for Company Pledge but support the efforts of OCS.

## How to register?

- **Partner pledge**

- Register for the Partner Pledge in the provided form in our website.
- Encourage your employees to pledge their commitment too with Employee Pledge
- Each Pledge is valid for **THREE YEARS** and is to be renewed when expired.





## How to register?

- **Supporter pledge**

- Register for the Supporter Pledge in the provided form in our website.
- Each Pledge is valid for **ONE YEAR** and is to be renewed when expired.

**Conduct at least one of the following activities:**

**1**

or

Perform outreach to at least two other potential OCS Partners or Supporters to request participation

**2**

or

Publish or present education information on OCS to the Supporter's value chain (customers or suppliers) or member companies through the Supporter's media properties, which may include social media and web properties

**3**

Publish educational information on OCS through third party media outlets or scientific/ technical/ trade journals





# Getting Started with OCS

Once you have signed up, you will receive pledge certificate recognising that you have registered to Operation Clean Sweep® and manual to help with the setting up of Operation Clean Sweep® at your site.



**Manual**

**Pledge  
Certificate**

# Implementation of OCS practices

## 1. Commit to making zero pellet loss a priority

- Sign up with OCS

## 2. Assess your company's need and situation

- Conduct site audit, identify problems area

## 3. Make necessary upgrades in facilities and equipment

- Develop solutions/ procedures to address them

## 4. Raise employee awareness and create accountability

- Establish written procedures, assign employees responsibility

## 5. Follow up and enforce procedures

- Conduct routine inspections for improvement

## Getting Started with OCS





## Getting Started with OCS

### Performing a Site Audit/ Gap Analysis

One of the most effective ways to improve your facility's containment of plastic resin is to identify the areas where spills and losses are most likely to or have occurred and fix them.

- Use the side audit checklist to audit every transfer point
- Identify the major spill areas
- Determine the cause of spills in each area
- Research ways to solve each problem
- Implement the simplest effective solution
- Follow up to measure success



# Audit Checklist



## Site Audit Management Checklist

Company: \_\_\_\_\_

Department: \_\_\_\_\_

### ☐ Bulk Hopper Car/Truck Unloading Area

Spill Problem: ☐ Yes ☐ No

Cause of Spill: \_\_\_\_\_

Solution: \_\_\_\_\_

Implementation Date: \_\_\_\_\_

### ☐ Receiving Dock—Bags and Boxes

Spill Problem: ☐ Yes ☐ No

Cause of Spill: \_\_\_\_\_

Solution: \_\_\_\_\_

Implementation Date: \_\_\_\_\_

### ☐ Silo Area

Spill Problem: ☐ Yes ☐ No

Cause of Spill: \_\_\_\_\_

Solution: \_\_\_\_\_

Implementation Date: \_\_\_\_\_

### ☐ Transfer Equipment—Blower

Spill Problem: ☐ Yes ☐ No

Cause of Spill: \_\_\_\_\_

Solution: \_\_\_\_\_

Implementation Date: \_\_\_\_\_



## Site Audit Management Checklist

### ☐ Transfer Equipment—Bag House

Spill Problem: ☐ Yes ☐ No

Cause of Spill: \_\_\_\_\_

Solution: \_\_\_\_\_

Implementation Date: \_\_\_\_\_

### ☐ Transfer Equipment—Line Connectors

Spill Problem: ☐ Yes ☐ No

Cause of Spill: \_\_\_\_\_

Solution: \_\_\_\_\_

Implementation Date: \_\_\_\_\_

### ☐ Box/Bag Handling

Spill Problem: ☐ Yes ☐ No

Cause of Spill: \_\_\_\_\_

Solution: \_\_\_\_\_

Implementation Date: \_\_\_\_\_

### ☐ Blending Equipment

Spill Problem: ☐ Yes ☐ No

Cause of Spill: \_\_\_\_\_

Solution: \_\_\_\_\_

Implementation Date: \_\_\_\_\_

### ☐ Processing Line—Extrusion Feed Hoppers

Spill Problem: ☐ Yes ☐ No

Cause of Spill: \_\_\_\_\_

Solution: \_\_\_\_\_

Implementation Date: \_\_\_\_\_

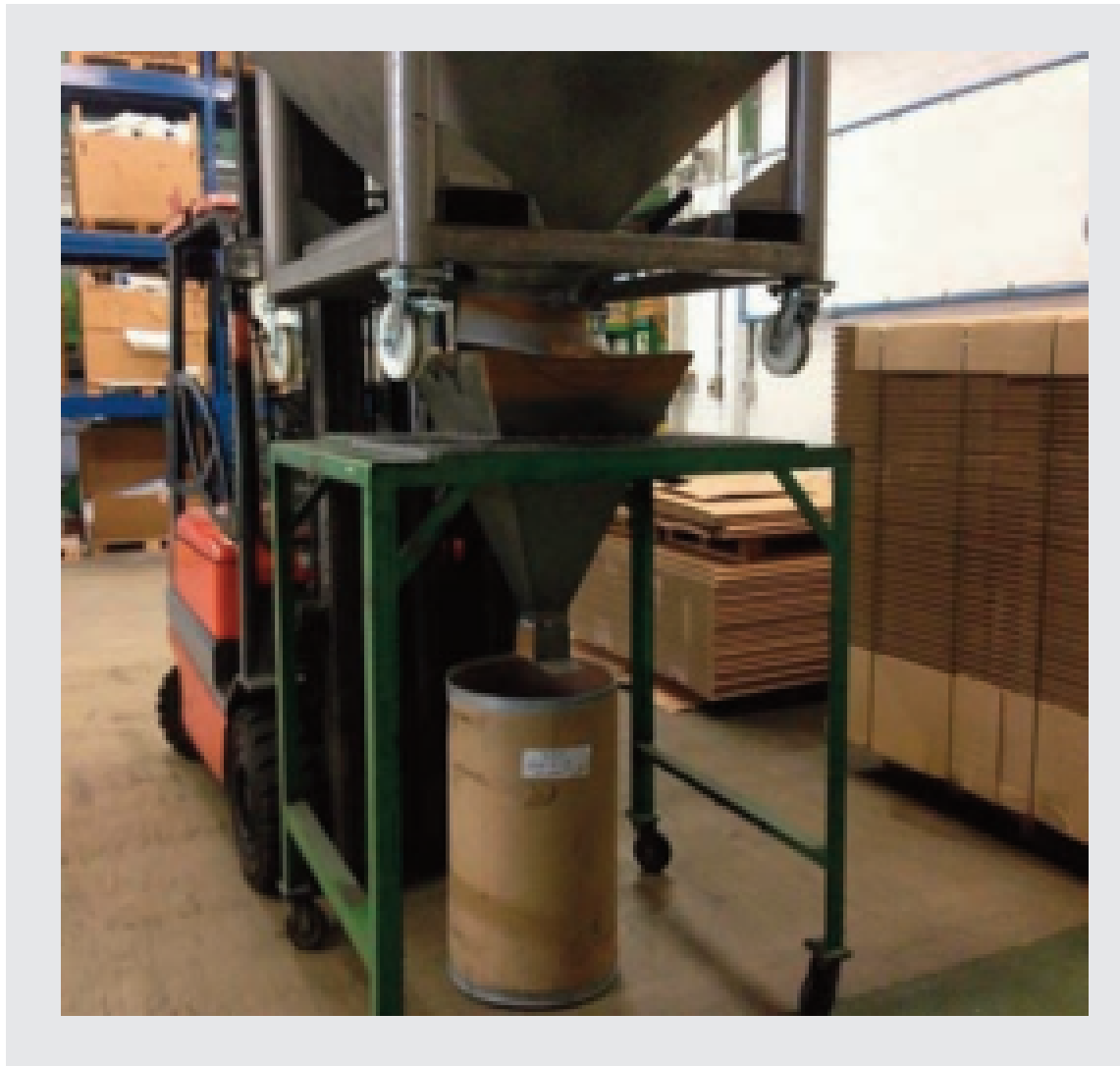


# Zero Pellet Loss Implementation



# Workplace setup

These include facilities used, catch trays, vacuum systems, routine inspections



**Additional funnels ensure that pellets can't fall out at the sides**



**Soft tips on fork lift trucks prevent tearing of bags**



**Closed loading system to avoid spill during loading**

# Prevention, containment and clean up systems

Drain screens in containment ditches, clean up procedures



**Installation of settling tanks with strainers**



**Drainage sieve to avoid the release of plastic pellet into discharge water**



**Cleaning equipment (outdoor and indoor uses) to improve cleaning operations**

# Employee training program steps

Write procedures prior to launch a training programme, identify training is needed to help ensure procedures are being followed, defining the role play of each section and individual, select appropriate techniques to facilitate learning, prepare materials, implementation, evaluation



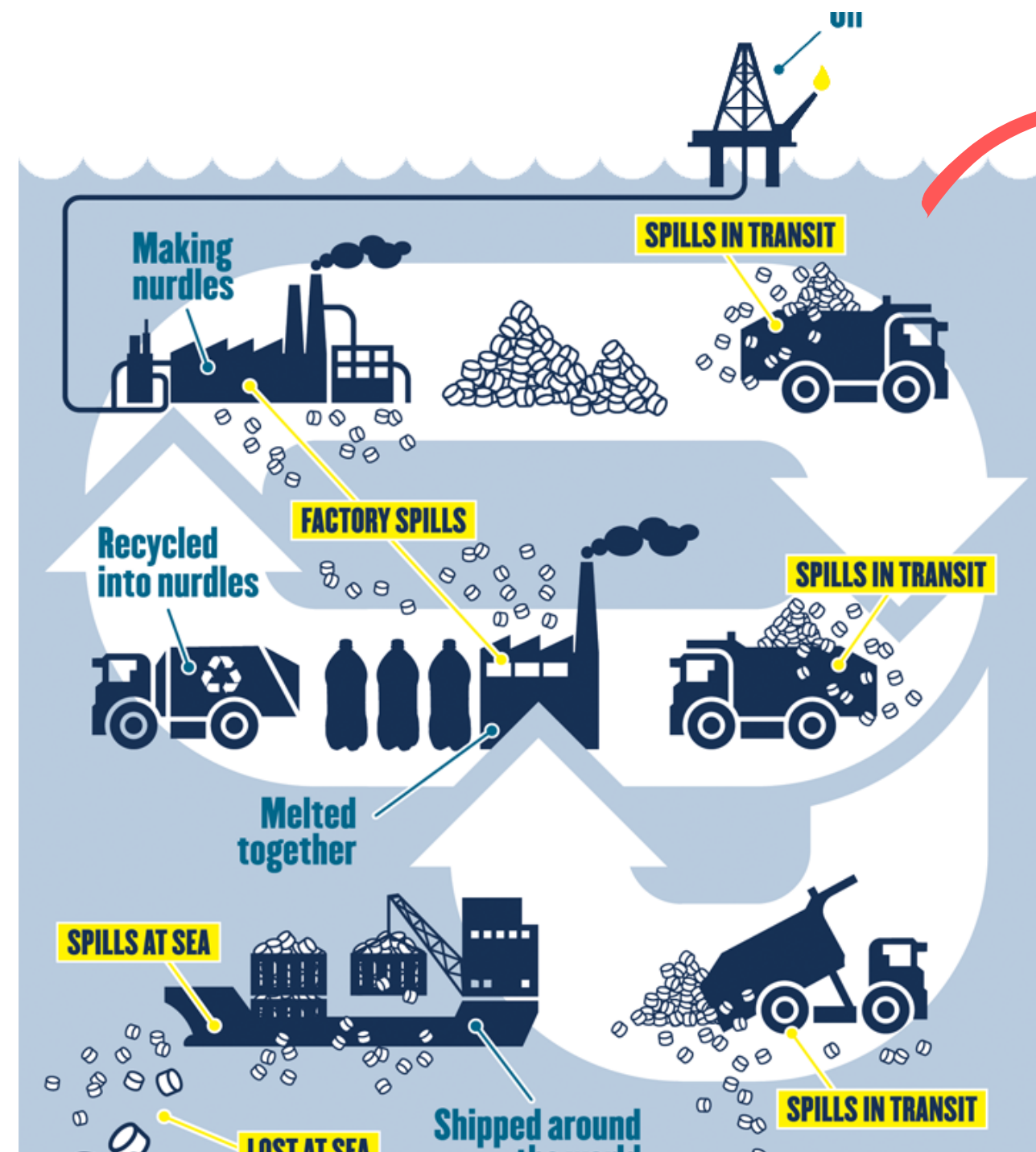
**Site training and incident management system**

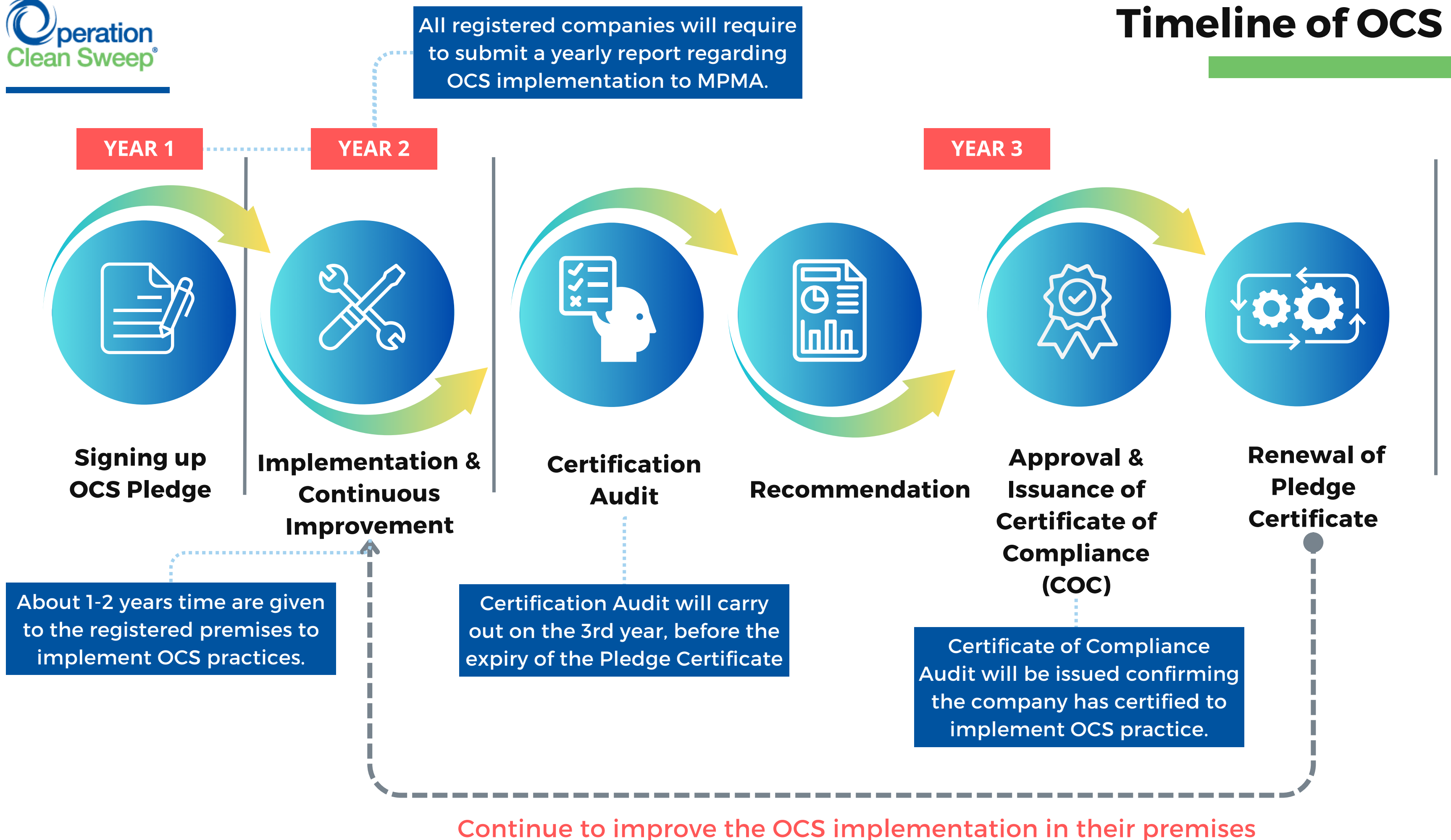


**Display OCS posters in the workplace to increase employee awareness**



**Best practice pellet management** at every operation or process (production, transport, storage, processing, recycling).





## Conclusions

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- Understand the OCS Principles and Commitments
- Commit to making zero pellet, flake and powder loss a priority
- Identify an OCS Leadership Team Champion
- Become familiar with OCS Manual and available supporting resources
- Communicate the Company's Commitment to OCS throughout the organization
- Conduct a gap analysis (audit) of relevant Corporate processes and sites
- Encourage OCS participation with your value chain partners
- Resource prioritized improvement in procedures, organization and equipment
- Incorporate OCS related activities into the Company's management systems

*Signed*  
**Companies &  
Organisations**



**THONG GUAN**  
INDUSTRIES BERHAD



**PETRONAS**



**MahSing**  
P L A S T I C S

**SIDNEY™**  
Your Trusted Packaging Specialist



**BPPLAS**



**PLASTIK V SDN. BHD.**



立泰物流  
**LEEP THYE**  
LOGISTICS





Our goal is to keep plastic in check.



**TAKE THE  
PLEDGE**

