



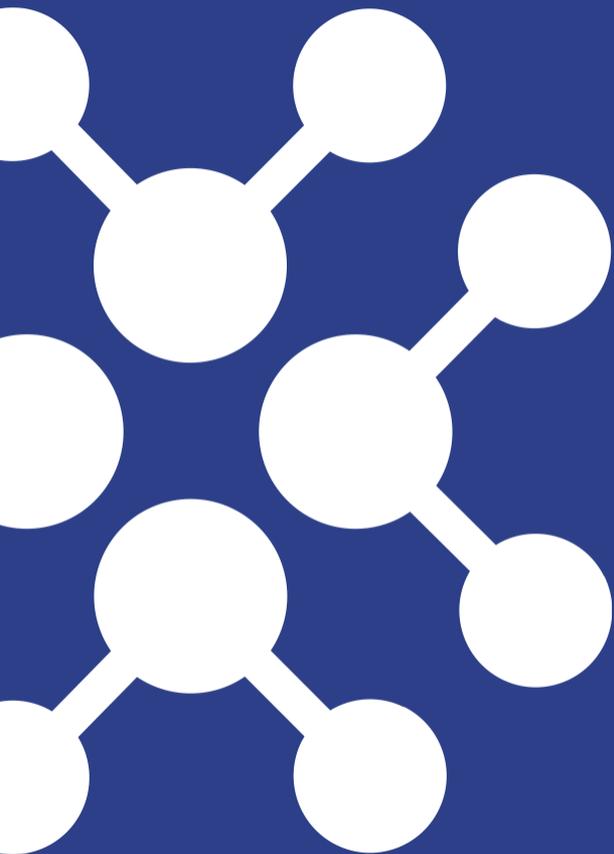
## **Global REACH Compliance: A Manufacturer's View**

**Steve Hollins, Senior Product Steward**

# Outline

- About Tronox
- Tronox and Global Regulatory Landscape
- **Challenges and Solutions**





# About Tronox

# Diversified, Vertically Integrated Titanium Dioxide Industry Leader

**TROX**

NYSE

**\$3.5B**

2022 Revenue

**\$875M**

2022 Adj. EBITDA

**85%**

Feedstock Integration

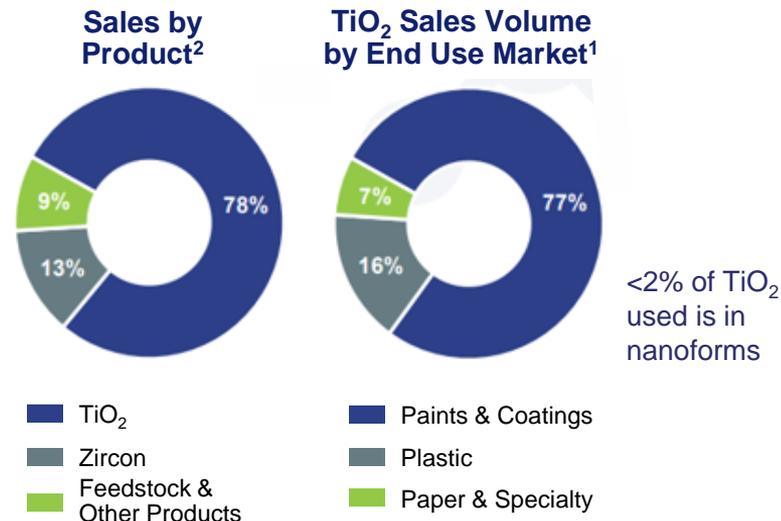
**~6,500**

Global Employees

**~1,200**

Customers

- Vertically integrated mining and inorganic chemical company ~1.1 million tonnes/year
- Diverse, well-balanced global footprint aligned with our customer base
- Nine TiO<sub>2</sub> pigment manufacturing plants and six mineral sands facilities across six continents
- Stallingborough, near Grimsby, UK (since 1953)
- Product Stewardship (four employees)
- Local SHEQ teams



1) At 100% capacity. 2) Sales split for FY2022.

# Globally Positioned to Meet Our Customers' Needs



**Sell our products in most countries of the world to industrial customers**

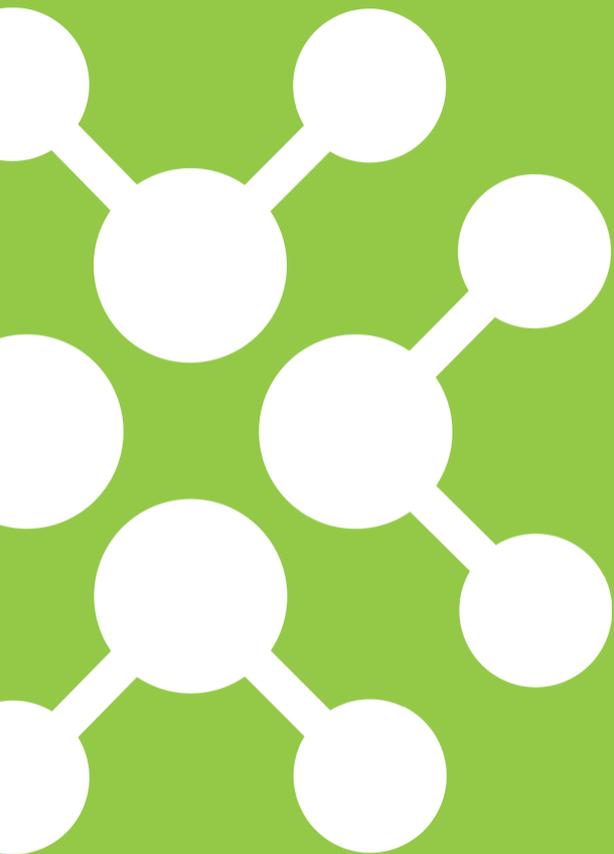
- 6** Sites
- 6** Continents
- 6** Mineral Sand Mines
- 9** TiO<sub>2</sub> Pigment Plants
- 5** Upgrading Facilities

# Our Products – Essential for Our Daily Lives

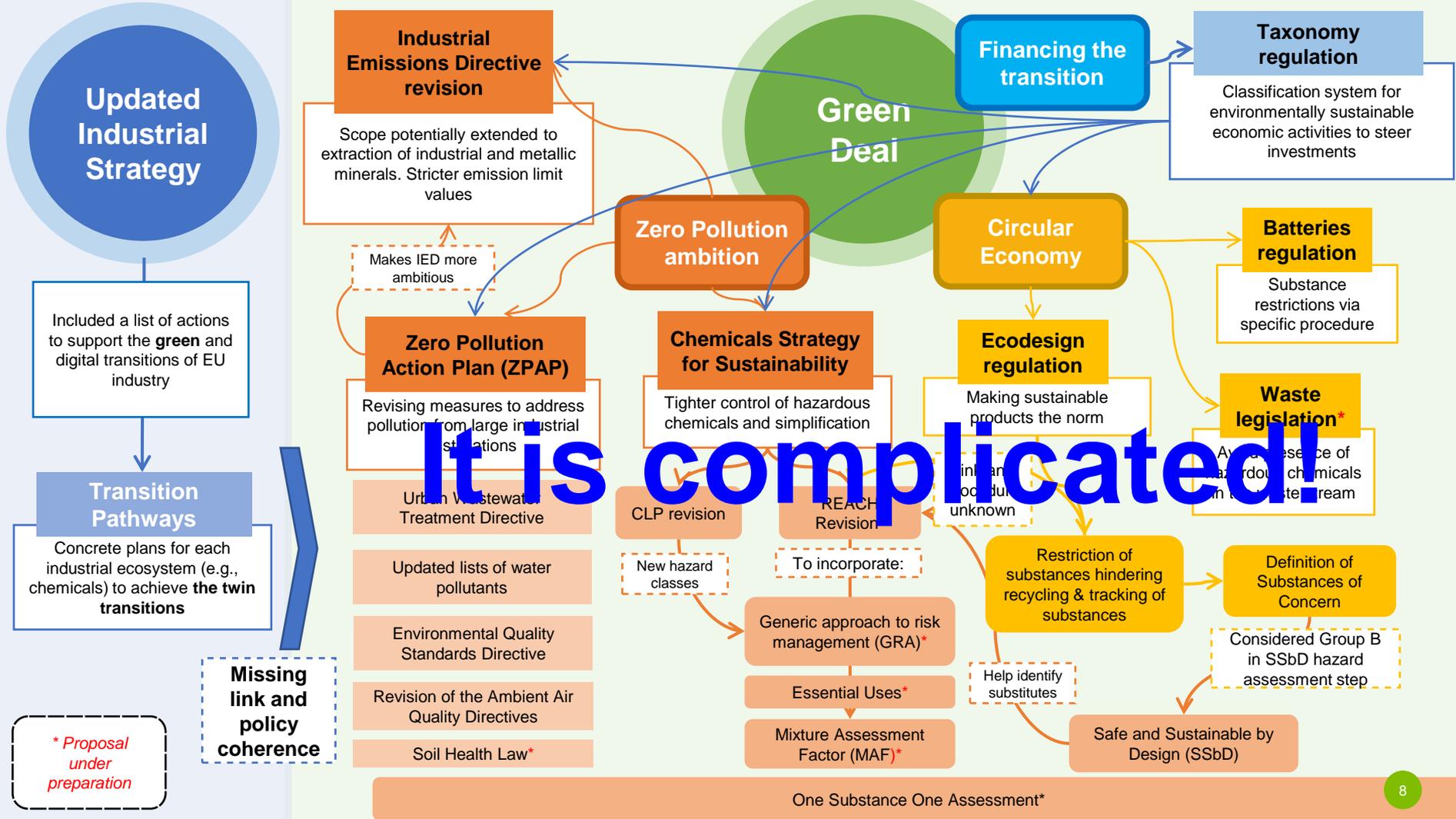
- $\text{TiO}_2$  Pigments have unique properties to make ultra bright and durable coatings, paints, plastics, paper and laminates
- Speciality chemicals in lithium batteries, carbon capture technology, DeNOx catalysts
- $\text{TiO}_2$  essential role in achieving sustainability goals



<https://www.tronox.com/>



# Tronox and Global Regulations



# Updated Industrial Strategy

Included a list of actions to support the **green** and digital transitions of EU industry

## Transition Pathways

Concrete plans for each industrial ecosystem (e.g., chemicals) to achieve **the twin transitions**

**Missing link and policy coherence**

*\* Proposal under preparation*

### Industrial Emissions Directive revision

Scope potentially extended to extraction of industrial and metallic minerals. Stricter emission limit values

Makes IED more ambitious

### Zero Pollution Action Plan (ZPAP)

Revising measures to address pollution from large industrial situations

- Urban Wastewater Treatment Directive
- Updated lists of water pollutants
- Environmental Quality Standards Directive
- Revision of the Ambient Air Quality Directives
- Soil Health Law\*

### Zero Pollution ambition

### Chemicals Strategy for Sustainability

Tighter control of hazardous chemicals and simplification

CLP revision

REACH Revision

To incorporate:

- Generic approach to risk management (GRA)\*
- Essential Uses\*
- Mixture Assessment Factor (MAF)\*

New hazard classes

### Financing the transition

### Taxonomy regulation

Classification system for environmentally sustainable economic activities to steer investments

### Circular Economy

### Ecodesign regulation

Making sustainable products the norm

in an...  
product...  
unknown

Restriction of substances hindering recycling & tracking of substances

Help identify substitutes

Safe and Sustainable by Design (SSbD)

### Batteries regulation

Substance restrictions via specific procedure

### Waste legislation\*

A...  
hazardous chemicals  
in the waste stream

Definition of Substances of Concern

Considered Group B in SSbD hazard assessment step

# It is complicated!

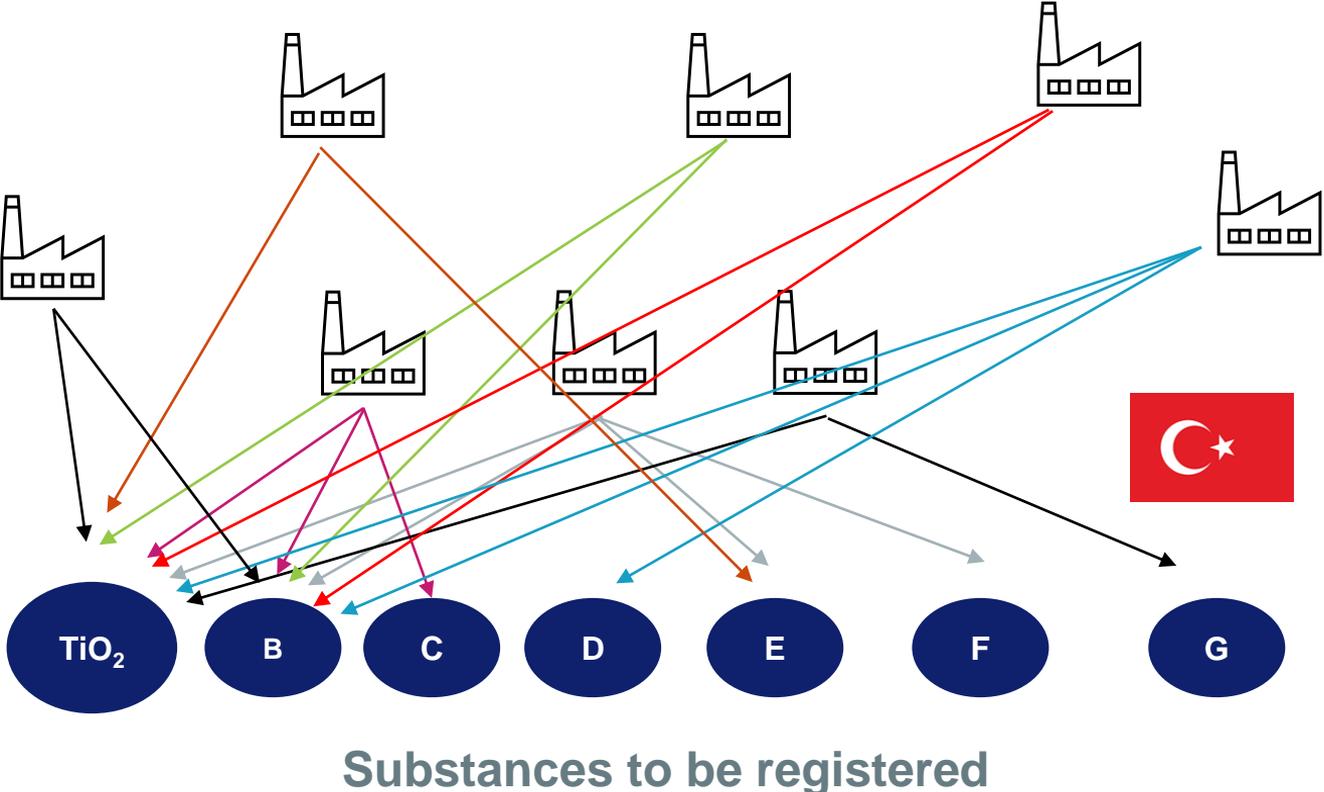
One Substance One Assessment\*

# Global REACH and Tronox

## Key Principles (EEA, CH, TR, UK, S. Korea)

- **Legal requirement** (licence to operate) and allow our products to be imported/manufactured
- **Substances** in our products need to be registered separately:
  - **Most of our pigmentary products are mixtures** – Two or more substances to be registered (organic coatings)
- **Registration is the responsibility of importers or local manufacturers** – i.e., can be our customers in KO, EU, TR, UK
- **Only local companies can register** – Tronox generally registers on behalf of our customers, either directly or via an ‘only representative’ (OR) consultancy companies
- **Each of Tronox’s nine manufacturing facilities** needs its own set of registrations for EU, TR, UK (KO per country)
- **Registration dependent upon Tonnage** – Requirements increase according to tonnage bands: 1-10t/yr; 10-100t/yr; 100-1000t/yr or >1000t/yr
- **Registration can be expensive and takes time** – depending on tonnage and substance (€10 – 250K++; 3 months – 1 year)

# Imports of Tronox Products into Turkey ('Spider Diagram')

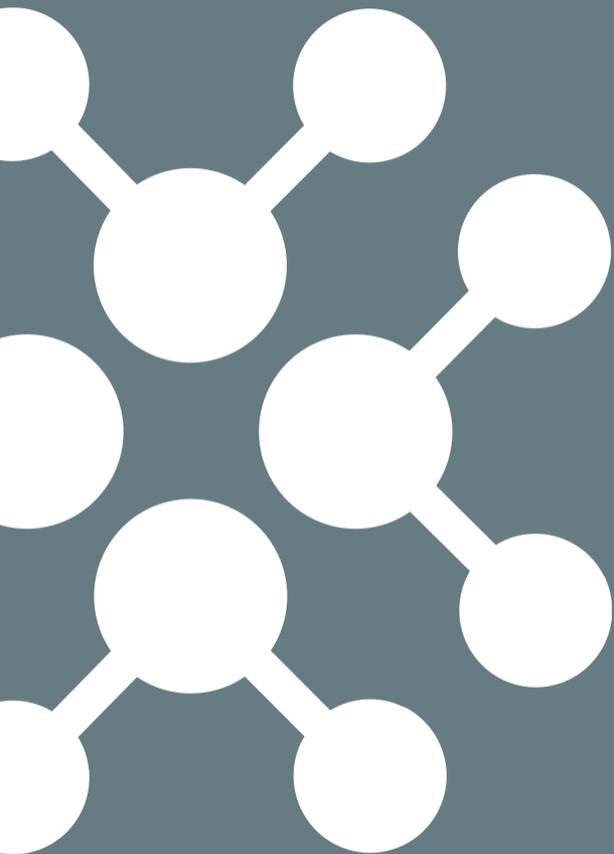


Substances to be registered

# Coatings and REACH Registrations

- **Raw material coatings stay on our finished products:**
  - Key Question: Who will register – Tronox or raw material suppliers?
- **Discussions with suppliers** – mixed results; time-consuming and potentially without positive results
- **Pros and Cons of Supplier Registrations:**
  - Possibly less time consuming and potentially less cost for Tronox
  - We are locked into using this supplier(s) or may need to seek registrations from each supplier
  - May not be possible for Tronox to do a registration (e.g., confidentiality)





# Challenges

# Challenges of Global REACH

- Multiple manufacturing facilities (LEs), complex supply chains (spider diagram);
- Costs and complexities of evolving regulations increasing e.g., SDSs in various languages and for differing geographical locations has become a full-time job
- Local legislation can add extra requirements e.g., Letter of Confirmation (LoC) Korea 1<sup>st</sup> import
- Customer requirements for their product compliance – composition information, NDAs
- Internal resistance to change



CONFIDENTIAL

To whom it may concern:

Letter of Confirmation

Product Name: XX

Relying on the Certificate of Composition of the above-identified products, I/we hereby confirm that the product contains the following regulated chemical substance(s) as its component(s).

► Confidential business information can be marked with 'CBF'.			
Regulated chemicals	CAS No	Chemical Name	Content(%)*
Phase-in substance(s)	XXXXX	XXXX	100
Non phase-in substance(s)		None	
► Mandatory to submit all information on regulated 'Hazardous Chemical Substance'.			
Regulated chemicals	CAS No	Chemical Name	Content(%)
Toxic substance(s)		None	
Substance(s) subject to authorization		None	
Restricted Substance(s)		None	
Prohibited Substance(s)		None	
Substance(s) requiring preparation for		None	

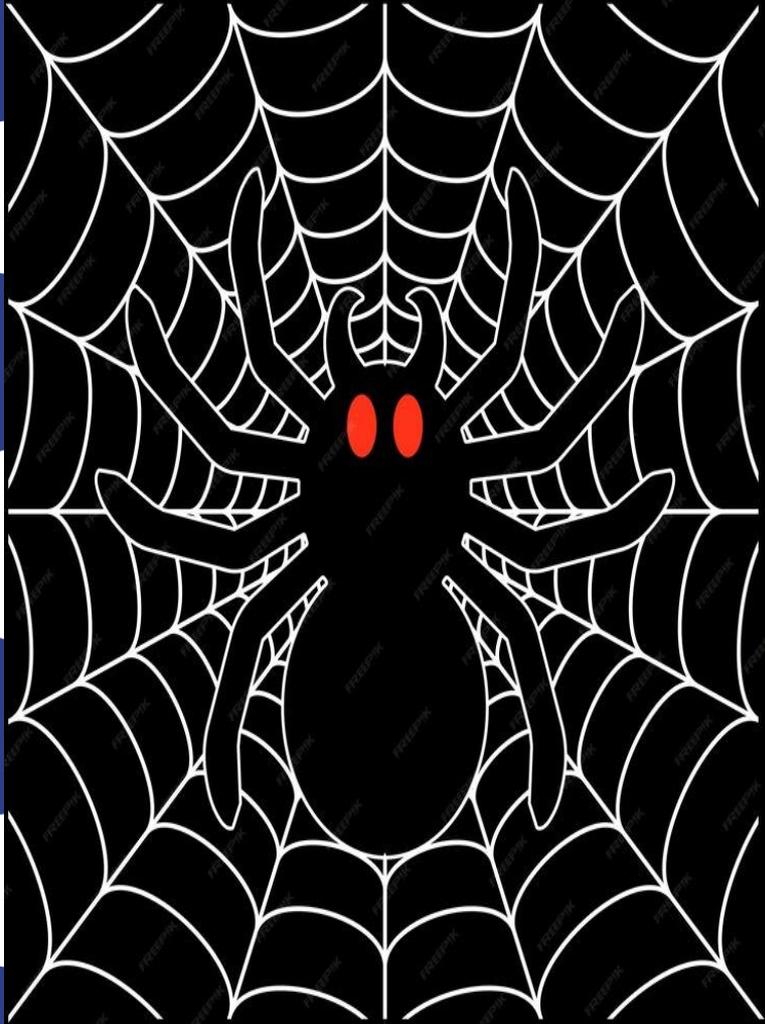
\* According to specification.

To the best of our knowledge, excluding substances listed above, Tronox does not intentionally add toxic substances, substances subject to authorization, restricted substances, prohibited substances, substances requiring preparation for accidents regulated under the Chemicals Control Law and have been listed in the Korea Existing Chemical Inventory.

Date: 8 September 2023

Name: Steve Hollins

Signature:



# Solutions



# Finding Solutions



# Within Your Company – Understand Your Products

- What substances do we sell and their substance Identity ? **(R&D, Technical Services)**
- Are my products mixtures? **(R&D, Technical Services)**
- Properties - physico-chemical, toxicological and environmental properties **(R&D, Wider industry and External Partners)**
- How many substances to REACH register? **(R&D, Marketing)**
- Is this number changing each year? **(R&D, Marketing)**
- Customer uses, end uses **(Marketing)**
- Tonnages manufactured or imported each year? **(Marketing)**
- Carbon and product environmental footprint? **(Sustainability Lead)**

# Within Your Company – Understand Your Supply Chains

## Need to Know

Tronox's position in the supply chain – manufacturer/importer/downstream user (Marketing)

Quantity of substances moved along supply chain – determines registration tonnage band

Origin and destination e.g. Australia to EEA (Marketing)

Raw material supplier and REACH registration status (Procurement)

**Before anything changes**

## Customers

Are often importers and have REACH registration or other regulatory obligations (OTD)

Will we support our direct customers and do the registration on their behalf? (Marketing)

What do our customers request e.g. REACH compliance statements? (Customer Service)

Need to confirm the tonnages we sell to them to our only representative (OR)

## Raw Materials Suppliers

Check raw material registration status at manufacturing locations

Multiple raw material suppliers per location – increased complexity if rely upon for REACH registration (Local and Global Procurement)

# Within Your Company – How to Achieve

## Dedicated resources

- FTEs – people time
- IT tools

## Cultural Shift

- Complex because company evolved over many years/mergers and acquisitions:
  - Different systems, people to merge together etc.
- Regulatory framework was less complex in the past
- Differing expectations in different parts of the business
- Put product stewardship on the Senior Leadership's radar

# Solutions – Working with the Wider Industry and Partners

- **Work together** on common issues for a common benefit
- **Titanium Dioxide Industry Associations:**
  - Titanium Dioxide Manufacturers' Association (TDMA) – part of Cefic – Europe focus
  - Titanium Dioxide Industry Consortium (TDIC) – EEA REACH Registration
  - Titanium Dioxide Stewardship Council (TDSC) – US
  - National chemical associations
- **Work examples** - Science programme (multi-million euros); aligning our messages, communication and education, engaging with stakeholders.
- **Partners:**
  - Customer Associations - Coatings, Paints and Plastic Industry Associations
  - Reliable and knowledgeable consultants that are effective in the sales countries/regions.

# TiO<sub>2</sub> and Sustainability (TDMA website)

The enabler for environmental improvement

<https://www.tdma.info/>



Protected by TiO<sub>2</sub> coating



White roofs keep house cool



TiO<sub>2</sub> in new generation batteries



Bright lines for road safety



As a catalyst to clean harmful contaminants from air



TiO<sub>2</sub> in new solar panels

[www.tdma.info](http://www.tdma.info)

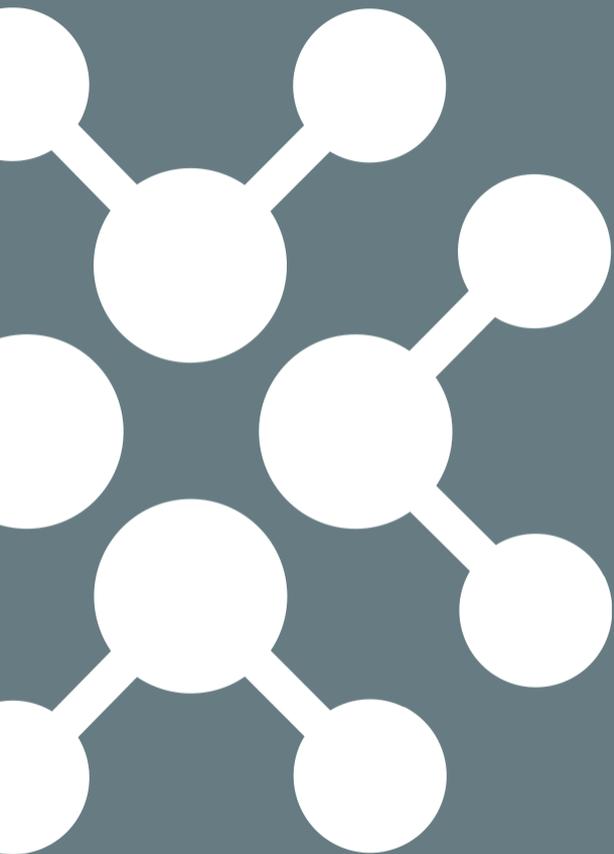
# Solutions – Working with Regulators

- **Essential to build relationships with regulators:**
  - For bridging **real** science and **regulatory** science
  - To assist regulators to better understand our products and impacts of regulatory measures
- Utilise regulatory tools available
  - Meetings and correspondence
  - Engagement in public consultations
  - Cefic Dossier Improvement Programme
  - If necessary, we will use legal tools.



# Take Home Messages

1. The regulatory frameworks are complicated and the challenges are increasing
2. Understand your products and supply chains
3. Make friends:
  - Internally
  - Within the wider industry
  - with regulators



**Thank You**