

# **REACH for Electronics Manufacturers**

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## **EXECUTIVE SUMMARY**

REACH presents a new set of direct and indirect risks for article manufacturers, including electronics manufacturers. Direct risks arise from obligations explicitly outlined in the REACH regulation itself – article 7 and article 13. Indirect risks arise from upstream and downstream supply chain ripple effects caused by REACH. These ripple effects will impact article manufacturers, including those who do not import directly into the European Union. Article manufacturers – particularly those with complex products and supply chains – are adopting data-driven risk management approaches to help ensure the future viability and profitability of their products. This presentation presents a framework for electronics manufacturers to identify and mitigate their REACH risks, both direct and indirect. A fact based and systematic approach is outlined, describing what product and supply chain data are needed and how to make decisions based on this data. This paper is based in part on the REACH initiatives underway at several large multinational manufacturers.

# REACH for Electronics Manufacturers

A Systematic Approach to Managing Product and Supply Chain Risks

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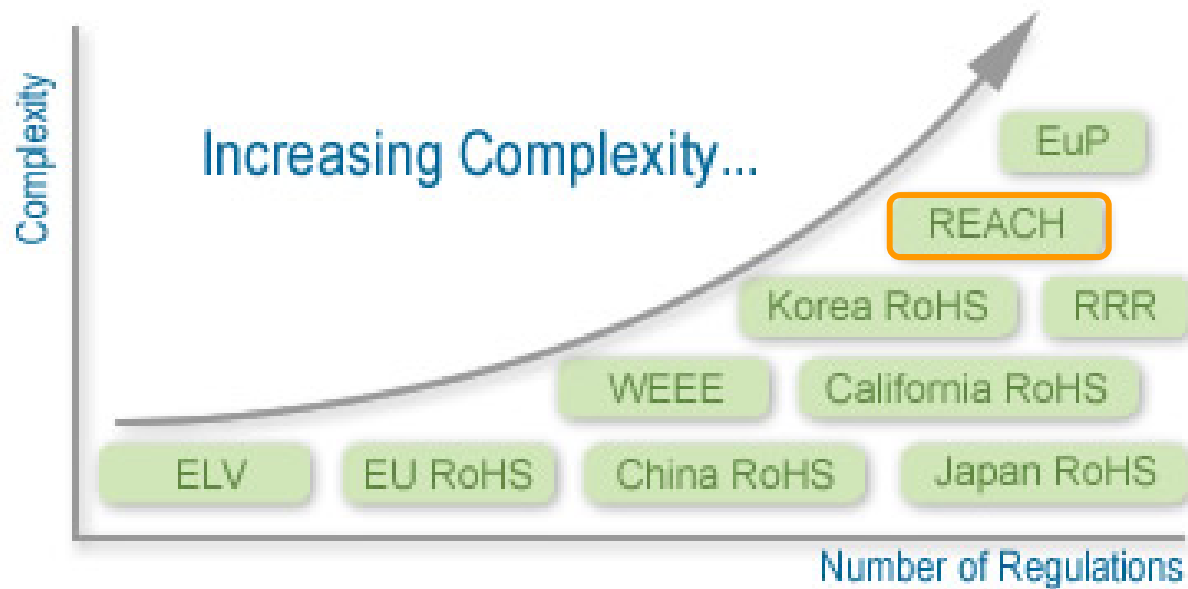
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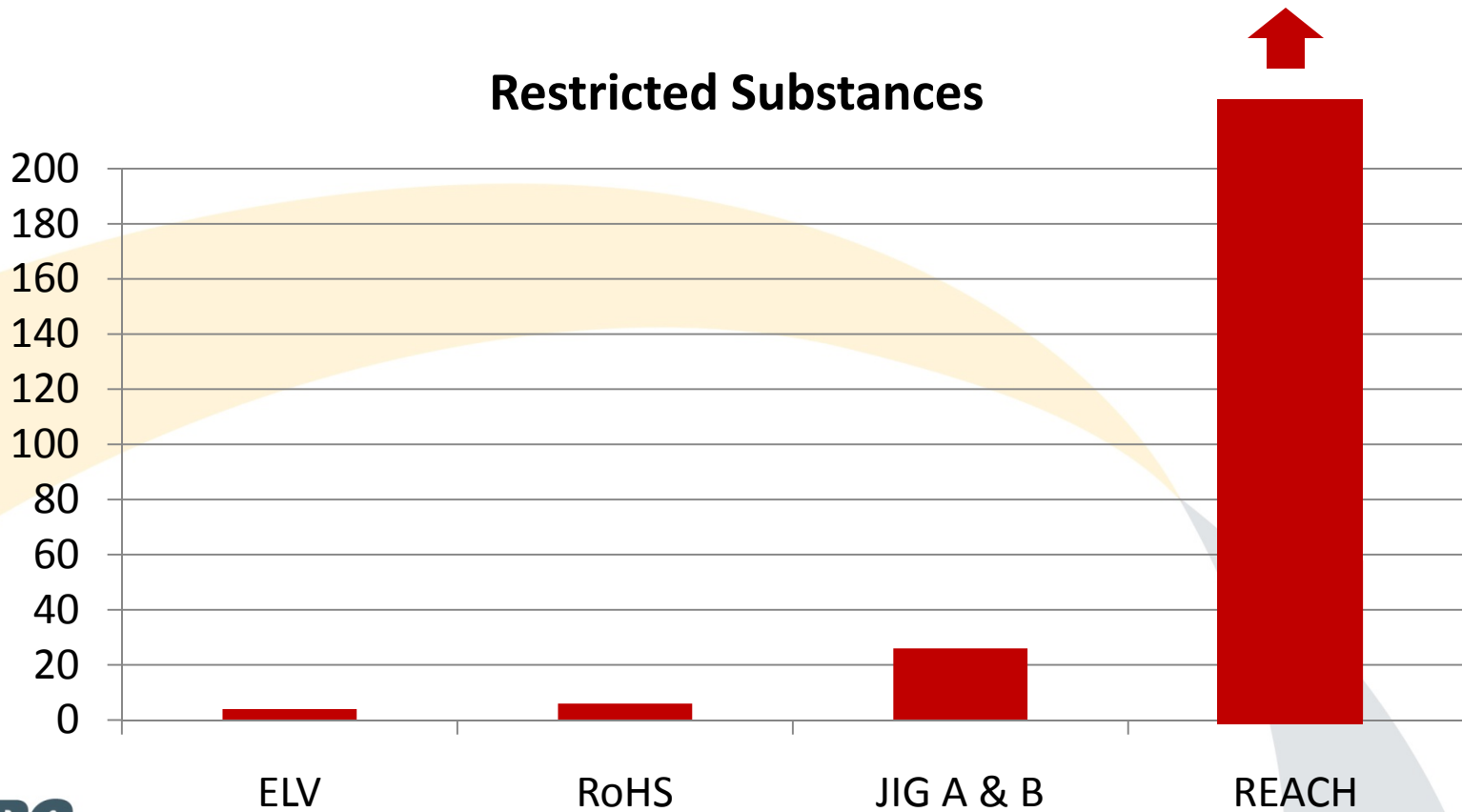
# Recent Headlines

- **“Vendor admits to RoHS misconduct”**
  - EE Times
- **“Lead Paint Prompts Mattel to Recall 967,000 Toys”**
  - New York Times
- **“Jobs Announces a ‘Greener Apple’”**
  - Wired Magazine
- **“Reebok paying record \$1M fine for recalled lead bracelets”**
  - USA Today
- **“Greenpeace confirms hazardous materials in game consoles”**
  - TGDaily
- **“Wal-mart Raises Bar on Toy-Safety Standards”**
  - Wall Street Journal

# More regulations = More complexity



# Trend: More substances in scope



# What's in your product?



# REACH Awareness

Businesses in Quadrant II tend to underestimate or be unaware of REACH Risks

Article  
Manufacturers

I

II

Non-article  
(e.g. chemical)  
Manufacturers

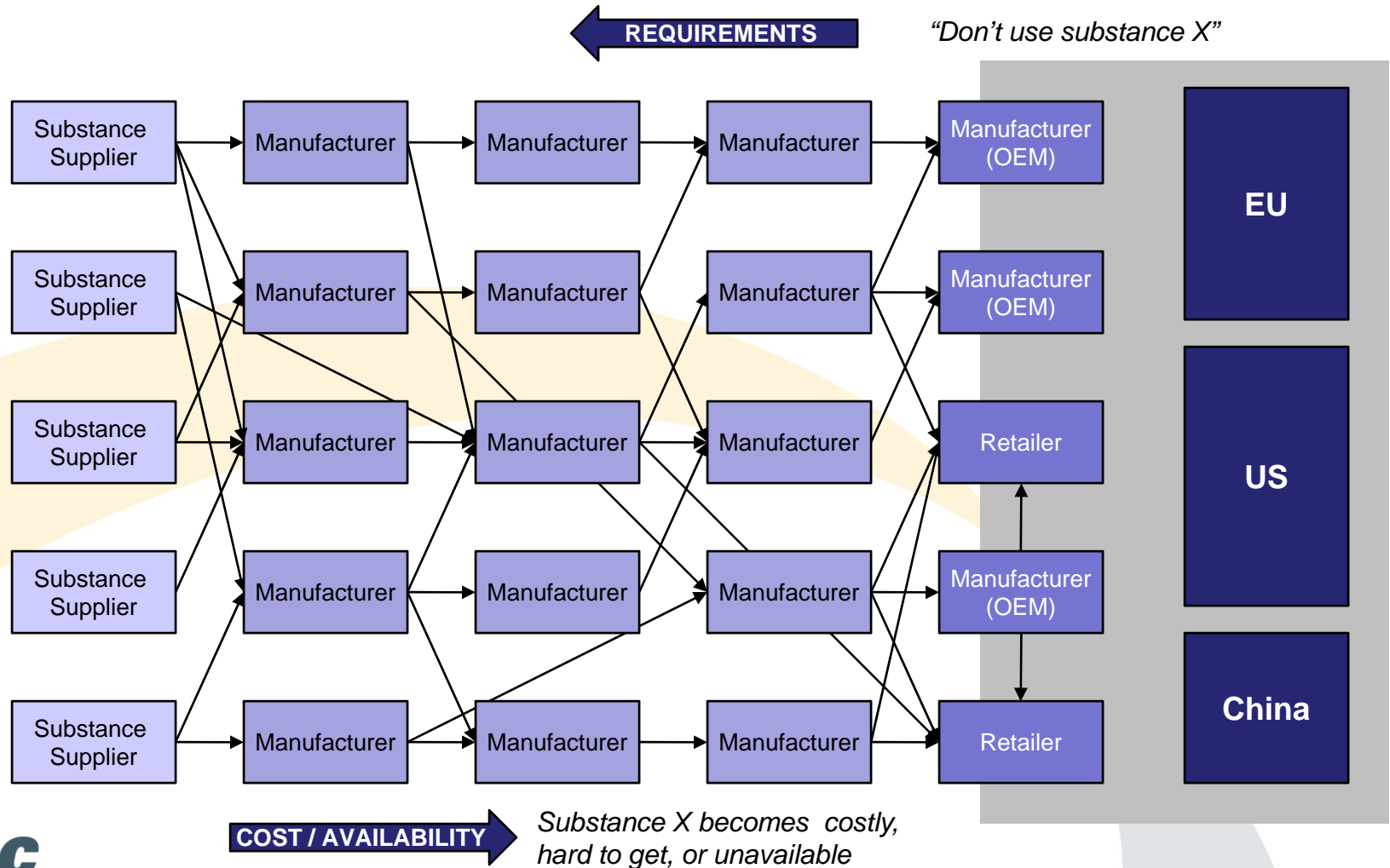
III

IV

Manufacturing  
facilities within the  
EU

Manufacturing facilities  
outside of the EU

# Supply chain ripple effects



# Caught in the middle

## Indirect Impacts

- Supply chain ripple effects

## Direct Impacts

- Customer requirements
- Regulatory requirements



# REACH impacts article manufacturers in 4 ways

Direct Impacts  
(products on the  
EU market)

Impact #1  
If your product  
releases a substance  
(Article 7)

Impact #2  
If your product  
contains an SVHC  
(Article 33)

Indirect “ripple  
effects”  
(any product)

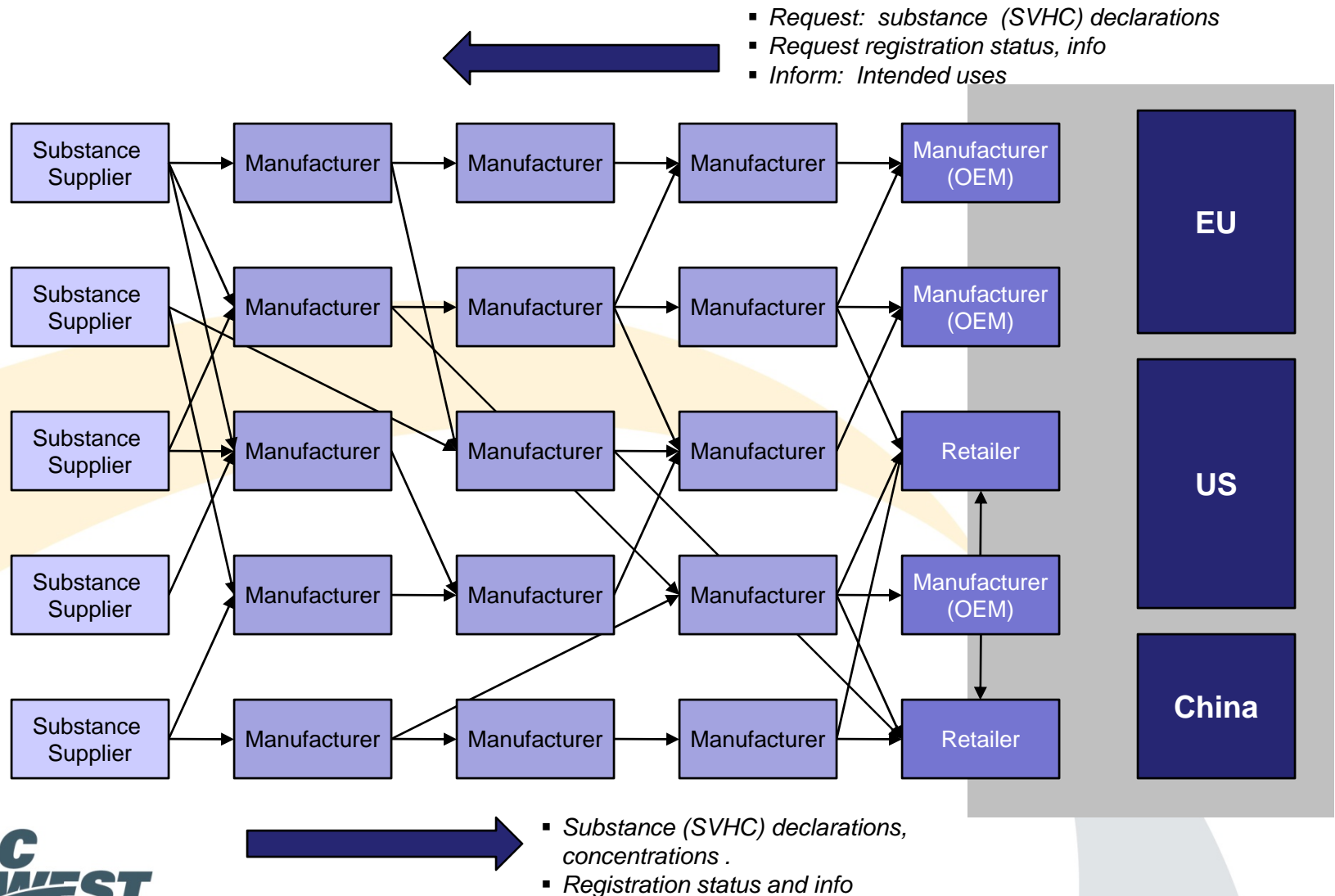
Impact #3  
If your customers  
import into the EU

Impact #4  
If your suppliers  
import into the EU

**Manage REACH incorrectly:** products banned from Europe, missed customer requirements, supply chain disruptions, higher costs of direct materials

**Manage REACH correctly:** protect revenues and profits, lower operational costs, beat competition, gain market share

# REACH supply chain information flows



# REACH data readiness

## REACH Data Readiness Assessment Form

	Key Question	Related REACH Article	Source of Data	Data Readiness Assessment		
				Scope/ Coverage	Status	Location(s)
1	What are the substances intended to be released from my products?	Article 7	Internal, Customers			
2	What is the physical amount of each of these substances per as-built product?	Article 7	Internal			
3	Which of these substances have already been registered, by whom, and for what uses?	Article 7	Suppliers, Customers, Internal			
4	What SVHCs are in my products?	Article 33	Suppliers, Internal			
5	What is the physical amount of each of these SVHCs per as-built product?	Article 33	Suppliers, Internal			
6	How are SVHCs used in my product and what are the exposure scenarios?	Article 33	Suppliers, Internal			
7	What are the SVHCs – both “candidate” and “official”?	Article 33	Authorities, Industry experts			
8	What are the SVHCs in the eyes of my customers?	Article 33	Customers			

# Key data management capabilities of best-in-class manufacturers

## Get the data

(from your suppliers)

- Avoid duplication of effort
- Use industry standard collection forms/formats
- Request data that will fulfill long term goals (i.e. full disclosure)
- Conduct systematic testing and supplier audits

## Manage the data

(analysis and action)

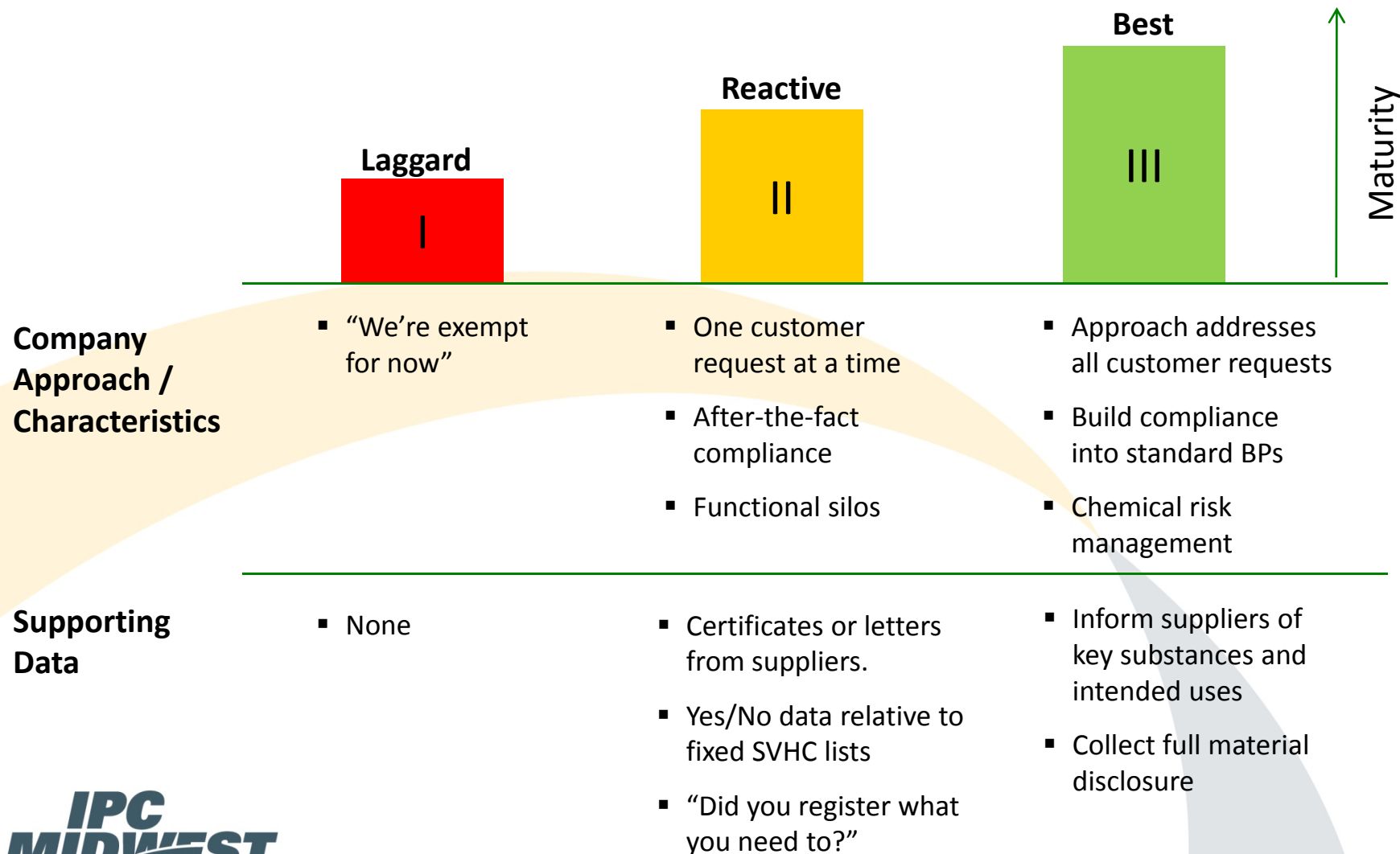
- Store and master data centrally
- Relate data to products (e.g. amount used, concentrations)
- Analyze dynamically (as products, parts and SVHC lists change)

## Share the data

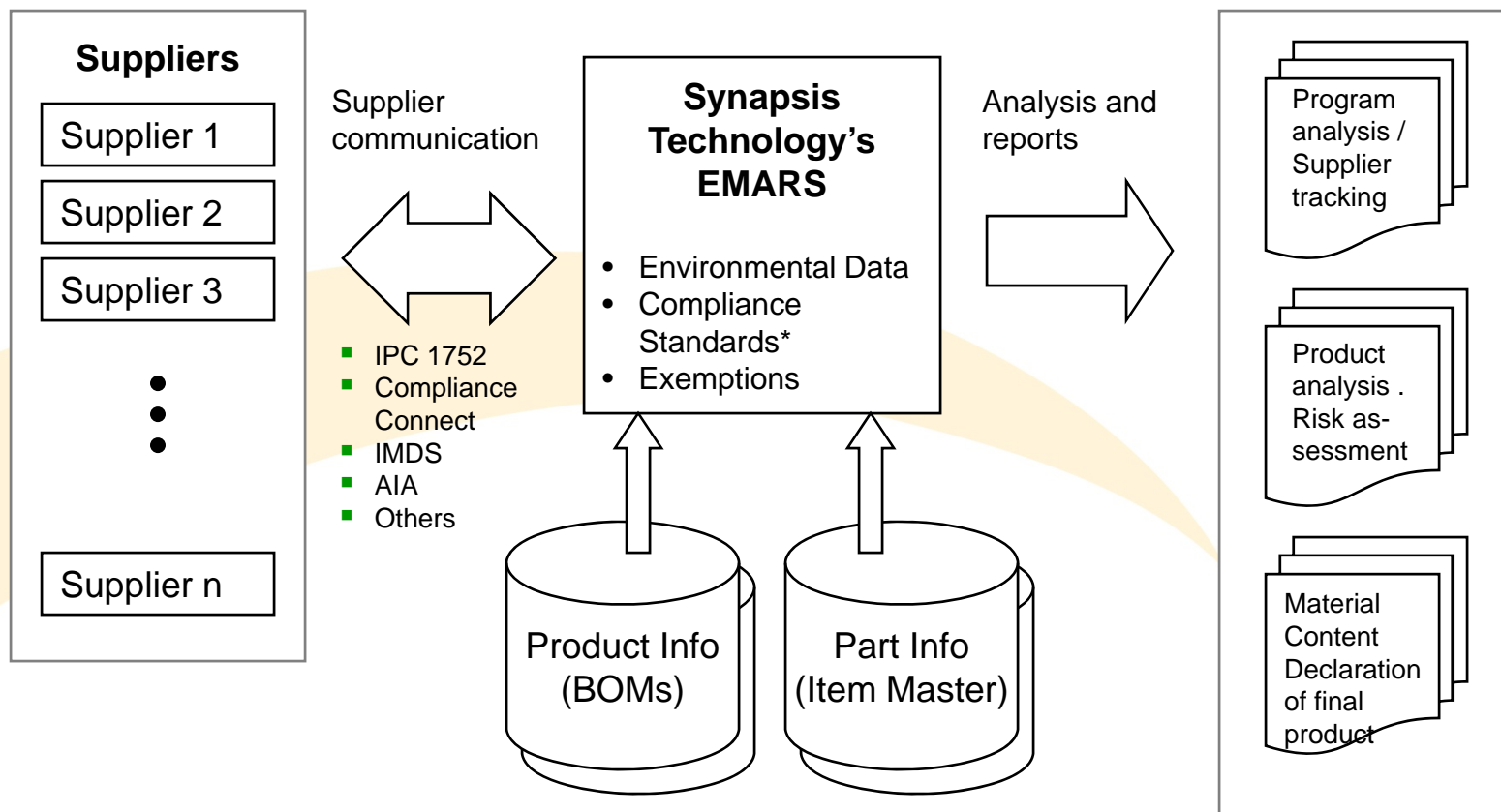
(internally & externally)

- Internal - share data across functional departments
- External - produce source data to fulfill all reporting requirements
- External - support various discloser levels

# Maturity Model



# Best-of-breed tools: leverage existing product data



\*Supported compliance standards include EU RoHS, China RoHS, WEEE, ELV, REACH and more

# Key Capability 1: A scalable approach to data

Product/Sub-assembly:

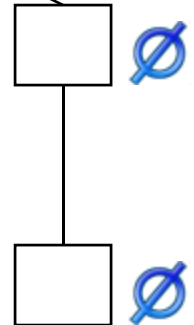
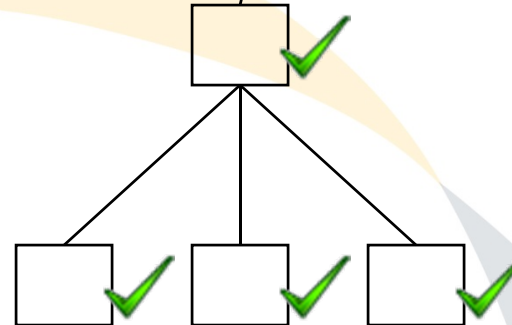
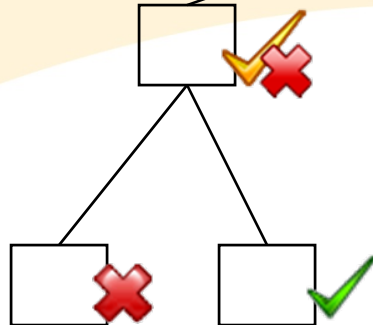


Company Parts:

Capacitor

Resistor

IC



Supplier Parts:

Environmental  
(Substance) Data:



?

# Key Capability 1 (Continued): A scalable approach to data

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### Supplier Part Information [Back to Search Results](#)

**Supplier Part Number - 78-5656-01**

Supplier Part Number: 78-5656-01  
Description: ASY ELMECH MAG  
Supplier: SUPA  
Version: 1  
Official: true  
Reported: 04/03/2008 14:45:26

### Compliance Status - OFFICIAL

Compliance Status: [View Details](#)

Specification:	ROHS (CONSUMER)	ROHS (INFRASTRUCTURE)	ROHS (SERVER)	JIG (A)	REACH (SVHC)
Revision:	C	C	C	101	A
Disclosure Level:					
Exemption Earliest Expiry Date:					
Qualification Owner:	bgreen	bgreen	bgreen	bgreen	bgreen

**Material Content** | [Company Parts](#) | [Compliance](#) | [Material Declaration](#) | [Requests](#) | [Lead Free](#) | [RoHS Roadmap](#) | [Document](#) | [Comments](#)

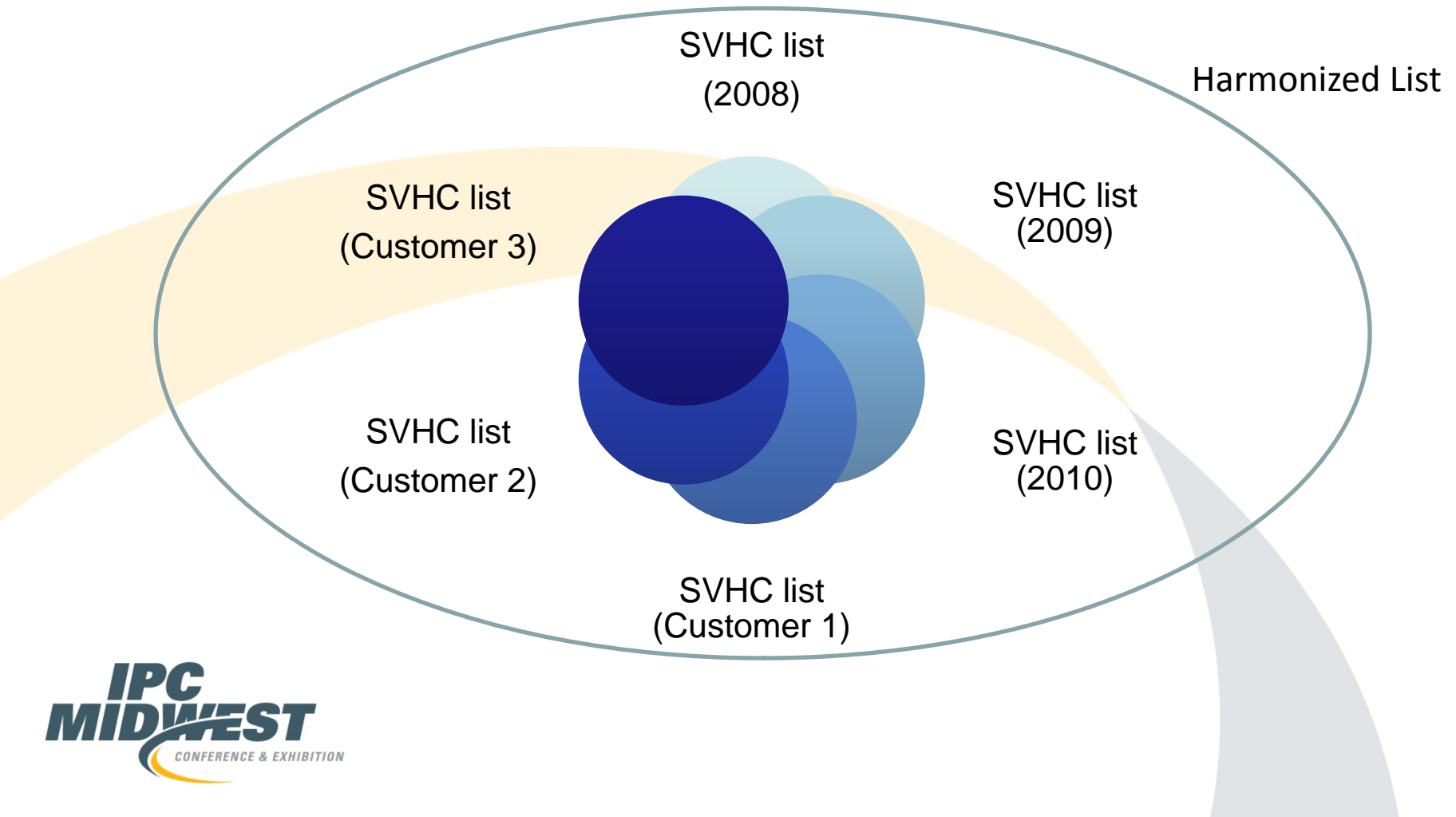
[View Part Tree Structure](#)

Part Number	Part Mass	UOM	Pre-Consumer Recycled (%)	Post-Consumer Recycled (%)	Tolerance	
78-5656-01	0.5	G	2	3.8	0	
<b>Subpart Name</b>	<b>Material</b>	<b>Supplier</b>	<b>Substance</b>	<b>Class/Category</b>	<b>CAS Number</b>	<b>Mass %</b>
N/A	CERAMIC	SUPPLIER9	7.2 CERAMICS / GLASS			
			CALCINED CLAY	OTHER	66402-68-4	0.15 30
	GOLD	SUPPLIER17	4.2 OTHERS			
			AU	OTHER	7440-57-5	0.02 99.45
			MISC., NOT TO DECLARE	OTHER	SYSTEM	0 0.55
	MOLDING COMPOUND	SUPPLIER14	5.4 DUROMERS			
			ALUMINIUM SILICATE DIHYDRATE	OTHER	1332-58-7	0.069 30
			AZACYCLOTRIDECAN-2-ONE, HOMOPOLYMER	OTHER	25038-74-8	0.069 30
			FIBROUS-GLASS-WOOL	OTHER	65997-17-3	0.023 10
			MISC., NOT TO DECLARE	OTHER	SYSTEM	0.069 30
	NICKEL ALLOY	SUPPLIER16	3.4 NICKEL ALLOYS			
			MISC., NOT TO DECLARE	OTHER	SYSTEM	0.002 2
			NICKEL OXIDE (Ni2O3)	NICKEL (IN PROLONGED SKIN CONTACT)	1314-06-3	0.098 98

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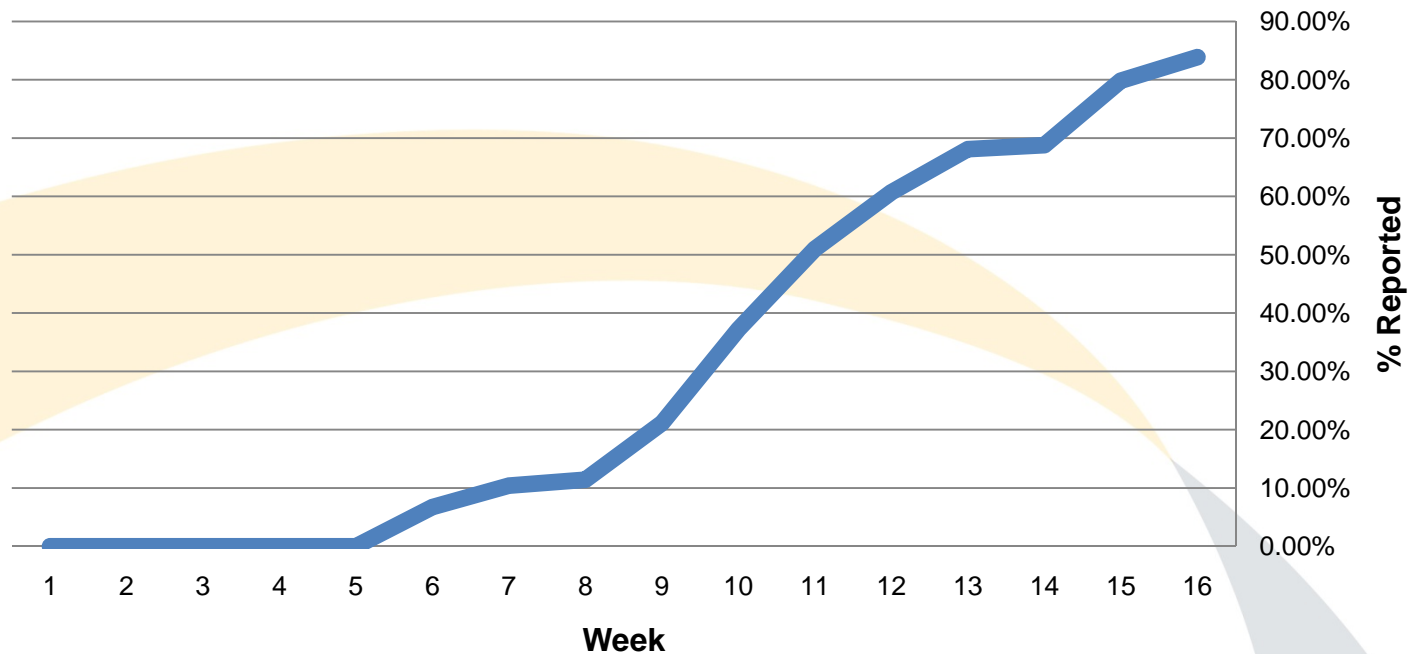
Substances:  
CAS Numbers,  
Masses

## Key Capability 2: Manage environmental specifications independently of data



# Key Capability 3: Supply chain assurance

**% Supplier Parts Reported\***



\*Results achieved by an EMARS electronics customer collecting full chemical content using IPC 1752 forms.

# Next Steps

## Learn more, stay informed:

- REACH Guidance:  
[reach.jrc.it/guidance\\_en.htm](http://reach.jrc.it/guidance_en.htm)
- Guidance on requirements for substances in articles:  
[reach.jrc.it/docs/guidance\\_document/articles\\_en.htm](http://reach.jrc.it/docs/guidance_document/articles_en.htm)
- 10-Step REACH Guide - “How to Get Your Products Ready for REACH”:  
[synapsistech.com/reach-guide](http://synapsistech.com/reach-guide)
- Green Design Newsletter – stay up-to-date with REACH:  
[synapsistech.com/newsletter](http://synapsistech.com/newsletter)

# Next Steps

## Take action:

- Take a chemical inventory of your products
- Complete the REACH data readiness form
- Assess your current organization, process, and systems.

Processes include:

- Data Collection
- Data Quality
- Supplier Management
- Product Development / Product Lifecycle Management