



InSight Environmental Compliance

Andrew Wertkin

PTC acquires Synapsis – announced December 10th, 2008

Synapsis Technology is a leader in product environmental compliance software

- Company history
 - Founded in 1999, based in Philadelphia
 - Product (EMARS) originated out of work with Motorola
- Industry Leadership
 - Customers include: Motorola, Microsoft, Sony Ericsson, Visteon, Delphi, IBM, GE, Beckman Coulter, Teradyne and Cisco
 - Industries include: high tech & electronics, medical devices, automotive, aerospace, and industrial.

New product name and branding

EMARS is now...

InSight™ Environmental Compliance™

Synapsis Technology is now...



Recent headlines illustrate an escalating trend

- **“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
- **“Scandinavian RoHS sweep nets violators”**
 - EE Times
- **“Greenpeace confirms hazardous materials in game consoles”**
 - TGDaily
- **“Business urged to begin phase out of SIN chemicals”**
 - BusinessGreen
- **“Greenpeace gives Sony Ericsson the thumbs up”**
 - PCWorld

The list of environmental regulations geared toward reducing the use of hazardous substances in products is growing.



The task of getting and staying compliant is increasingly complex.

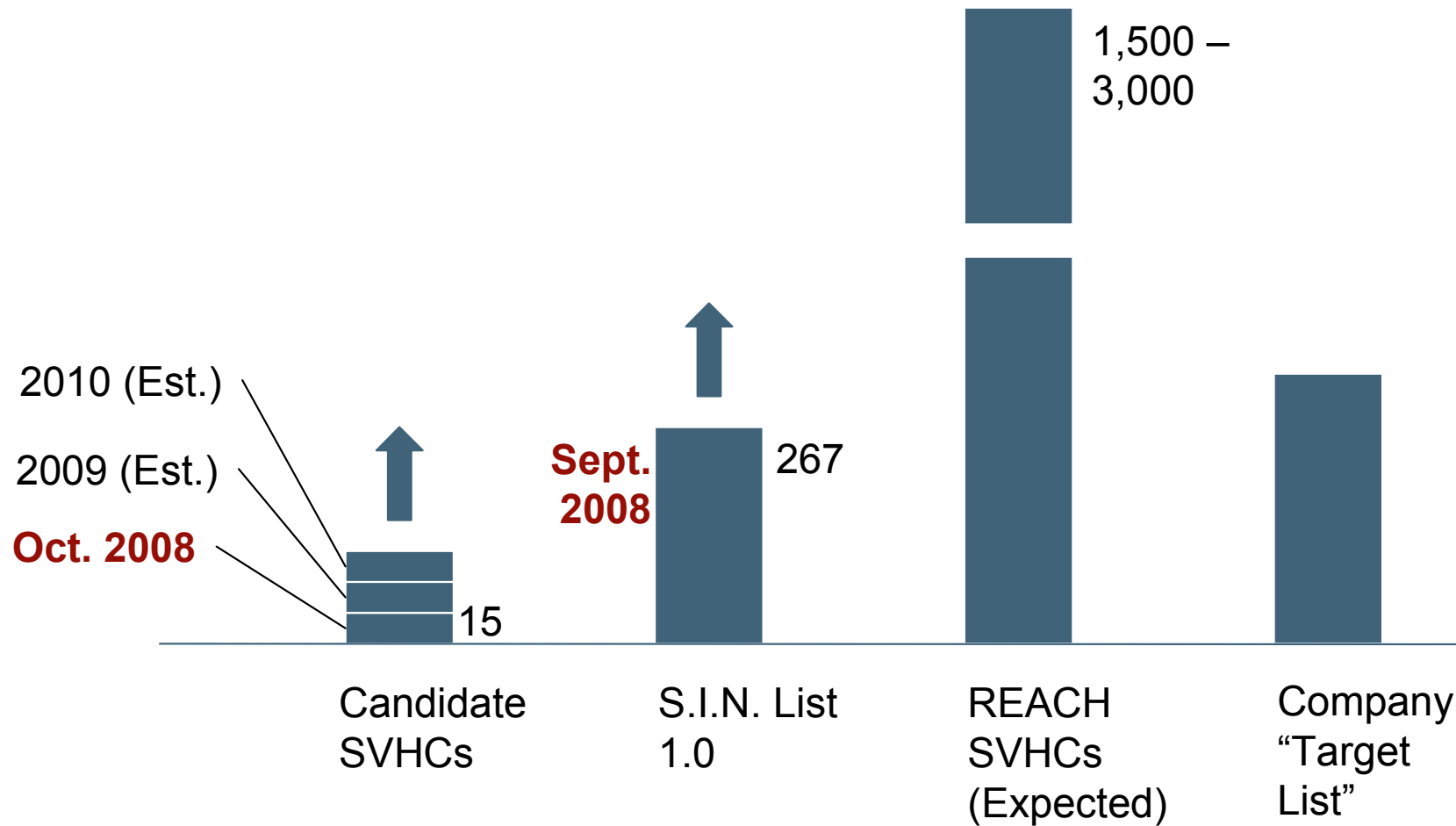


Compliance is becoming more costly and labor-intensive.

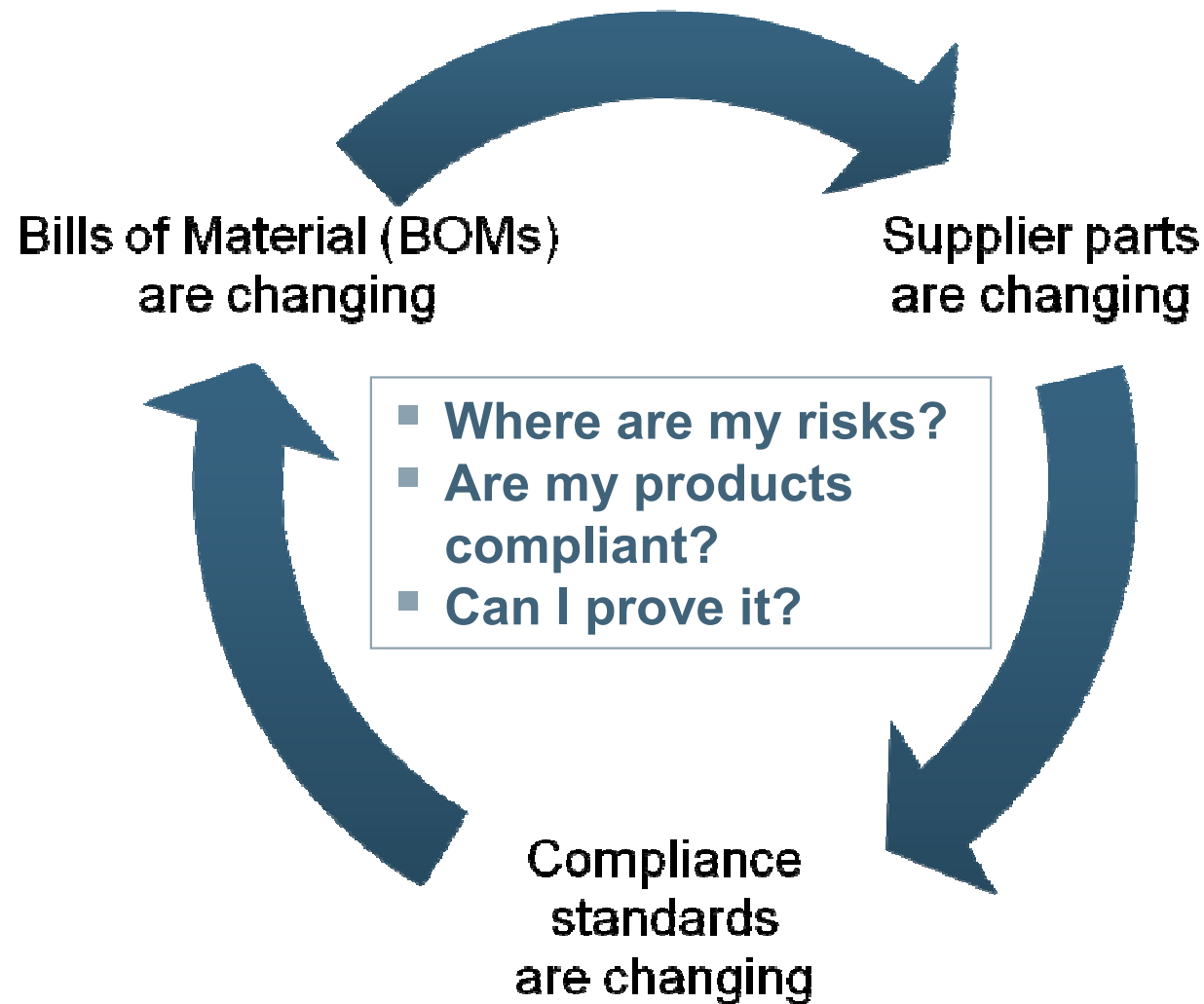


It's becoming more difficult to manage compliance accurately – Greater risk of failures.

REACH Regulation – More comprehensive and dynamic than previous regulations



Integration with existing systems and processes

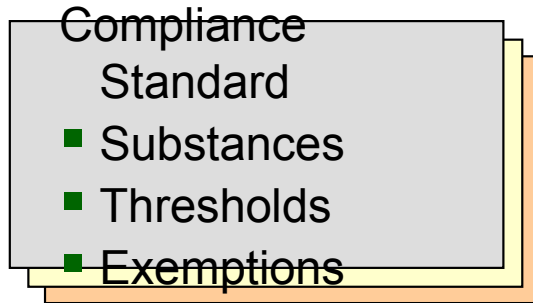


New challenges → New capabilities are required

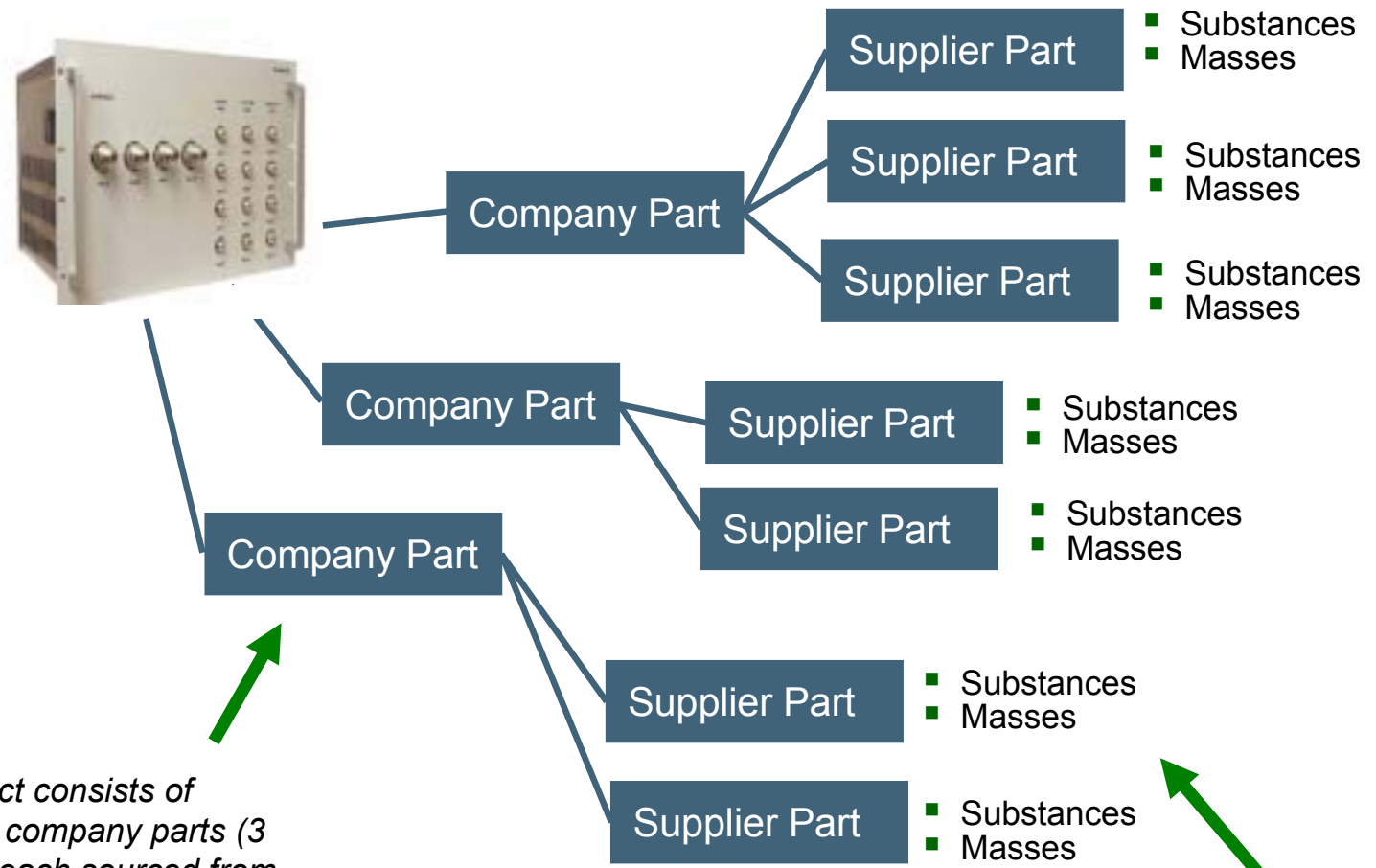
New capabilities:

- 1.Track multiple, evolving regulations**
- 2.Develop, codify and maintain a proactive corporate standard**
- 3.Capture material and chemical data – balance risk and cost**
- 4.Monitor and improve the performance of suppliers**
- 5.Perform product and program risk assessments and take corrective action**
 - Early in design process and throughout product lifecycle
- 6.Comply with government regulations and customer requirements**

The operational costs of compliance are high – it's a data management and bookkeeping nightmare



A single product may need to comply with multiple environmental standards.

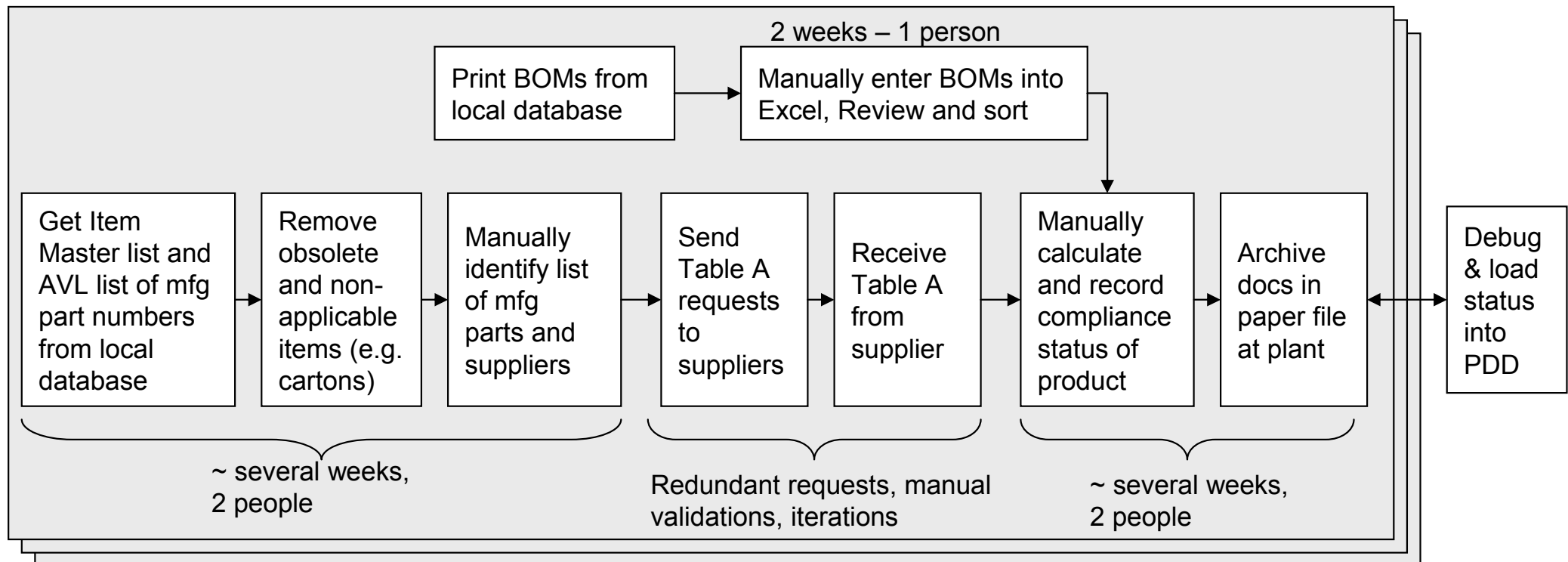


A product consists of multiple company parts (3 shown) each sourced from one or more suppliers.

Each supplier part may have a different chemical makeup, which will impact compliance

How do many manufacturers attempt to comply with environmental regulations? Typically with manual processes and homegrown tools

ILLUSTRATIVE



- These ad hoc solutions are generally **inefficient** and **ineffective**
- They tend to focus on **one regulation** and **one region** (e.g. EU RoHS)
- They tend to create a **static** and **hard-to-access** information silo

Unique Benefits of InSight Environmental Compliance

1. Robust data management – reduce cost, improve quality

- Reduce cost – Automation, industry standards data capture and quality checks
- Support multiple levels of disclosure, Industry standards
- Build an exhaustive audit trail

2. Highly scalable – many, evolving “shades of green”

- Track regulations like RoHS and REACH
- Manage corporate standard
- Proactive risk management

3. Easily Integrated with existing systems and processes

- Monitor risks, manage performance throughout product lifecycle
- Share key information throughout enterprise

4. Low total cost of ownership

Our patented analytical engine provides a comprehensive view of the product

Product/Sub-assembly:



Company Parts:

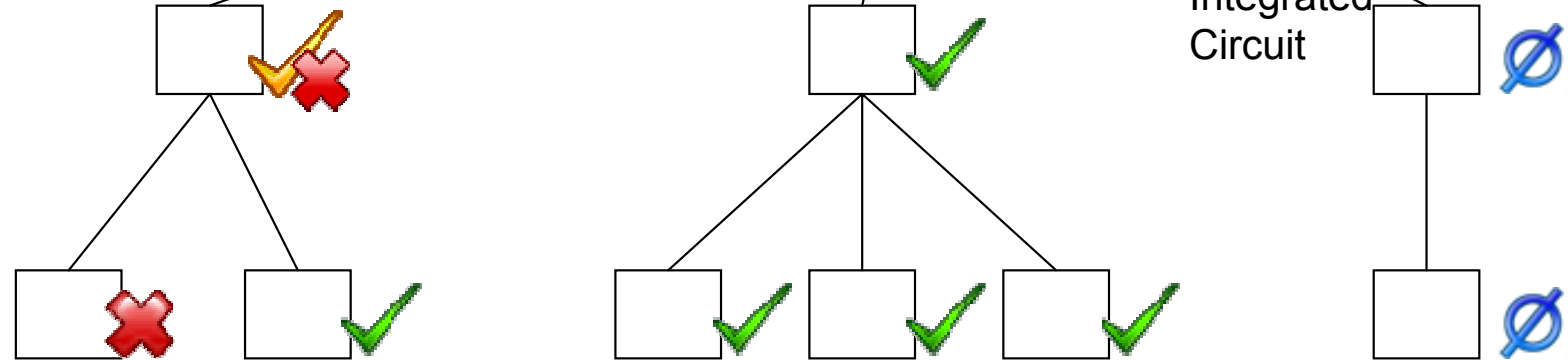
Connector

Fastener

Integrated Circuit

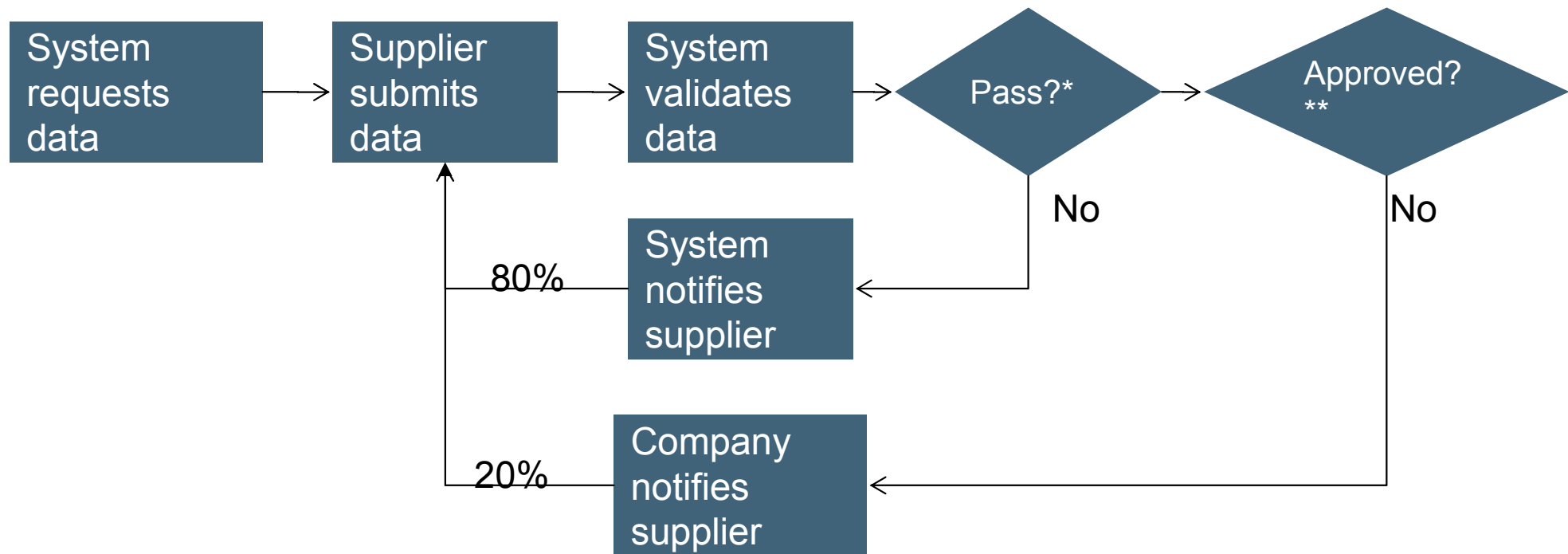
Supplier Parts:

Environmental (Substance) Data:



Substances: CAS Numbers, Masses

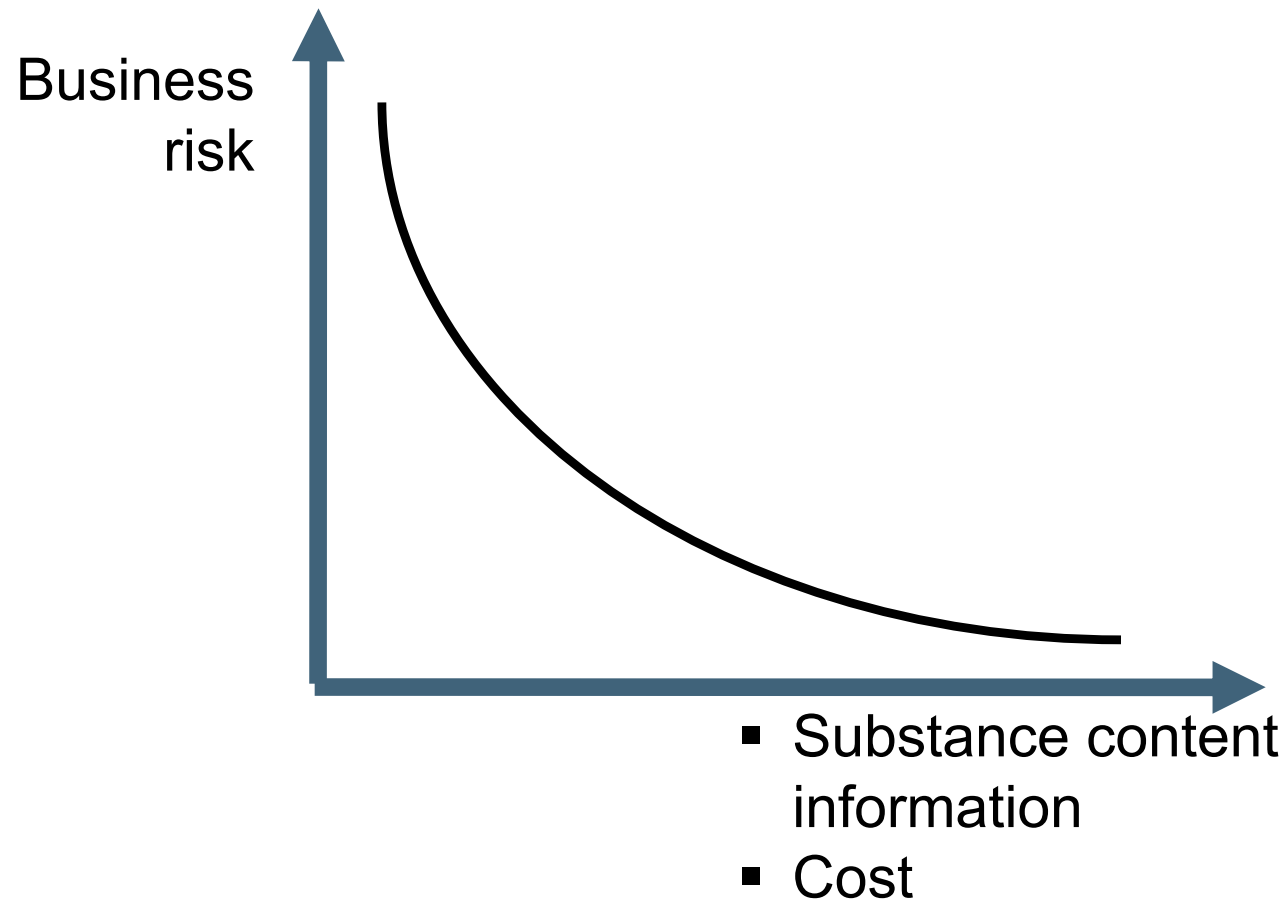
InSight Environmental Compliance automates the data collection process – focus experts on resolving issues, not collecting data



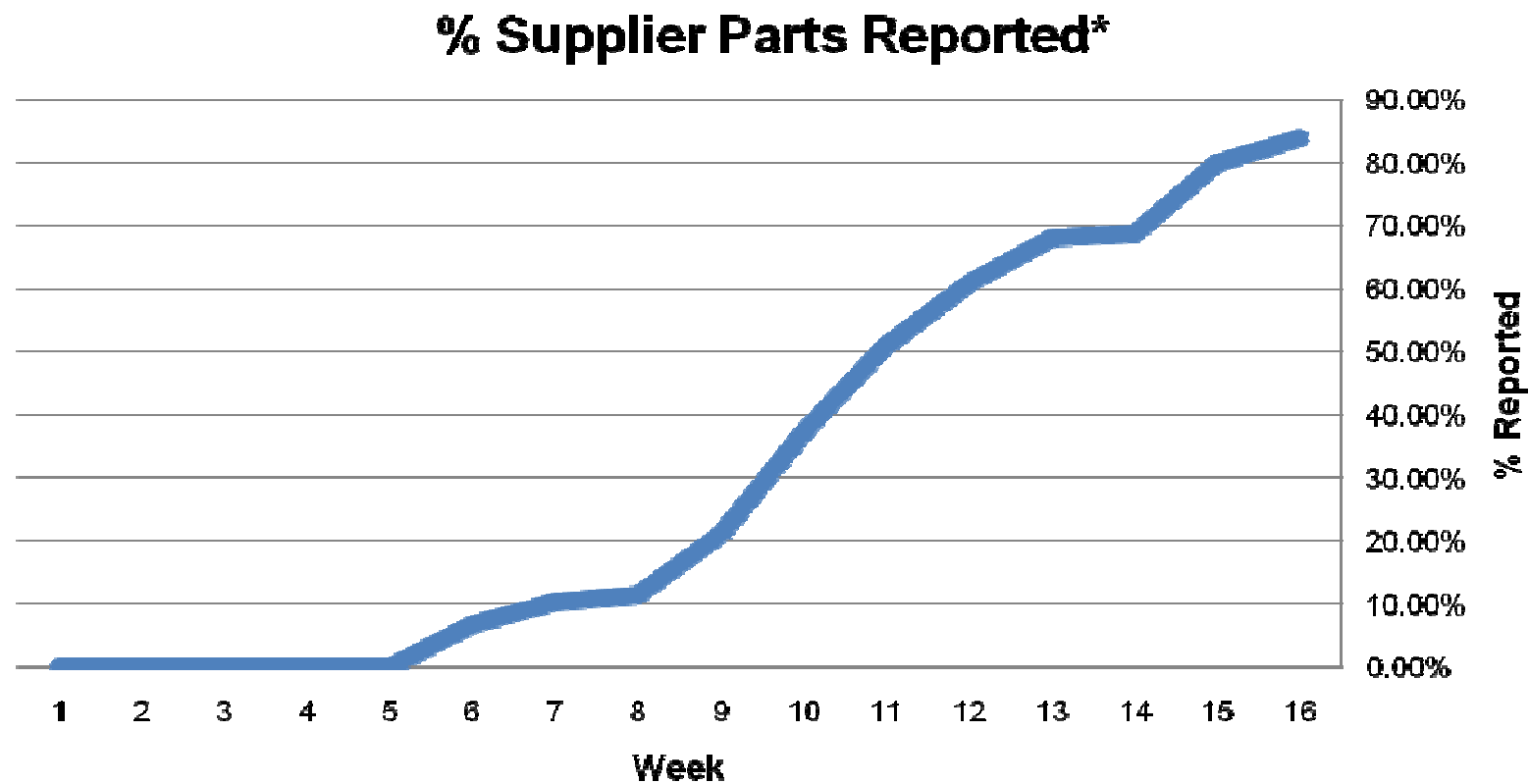
*Required fields, fields add correctly, etc.

** Show old vs. new. Manual review or automate

Data acquisition: Insight Environmental Compliance enables cost-effective risk management



Accurate and efficient data collection



*Results achieved by an InSight Environmental Compliance customer collecting full disclosure data

A proactive “early warning system”

Row	Company Part Number ↕	Description	REACH SVHC	REACH SUSPECT SVHC
1	135-8248-01	BATT COVER		
2	15-7683-01	IC,TPS62000,DC-DC CONV,0.9-5.0V,600MA,MSOP10		
3	235-7549-01	SEC IC UNIT A3EE7		
4	246-4567-01	ANT COVER ABB		
5	301-0141-01	PKG BAG BUBB-10MM PE 3SS		
6	357-6785-02	CAP CE .027UF 10V 5%SM 0603PASSIVE		
7	357-6786-01	RES 120 OHM 3%		
8	357-7555-01	ALM CAS COV TOP		
9	357-7556-03	CHIP COMP AC77B		
10	357-7557-01	ALM CAS COV BOT		



15
SVHC

Meet current
obligations



1000+
SVHC

“Early warning
system”

Intuitive dashboards

Supplier	Supplier ID	Part Owner	Request Status	Reported	Disclosure	ROHS(C)	ROHS(I)	JIG A	REACH SVHC	REACH SUSPECT SVHC
AVX	10194	bgreen	Open							
AVX	10194	bgreen	Completed	06/12/2006 00:00:00						
AVX	10194	bgreen	Completed	06/12/2006 00:00:00						
AVX	10194	bgreen	Completed	06/12/2006 00:00:00						
T R FASTENINGS LTD	PTRFAS02	bgreen	Completed	02/11/2009 00:00:00						
A	A	bgreen	Not Requested	06/25/2004 08:40:50						
A	A	bgreen	Not Requested	06/25/2004						
A	A	bgreen	Not Requested							
A	A	bgreen	Not Requested							
A	A	bgreen	Not Requested							
SUPA	SID101	bgreen	Overdue							
ATMEL CORP	118235	bgreen	Completed							
ATMEL CORP	118235	bgreen	Completed							
SKYWORKS SOLUTIONS LTD	423800932	bgreen	Not Requested							

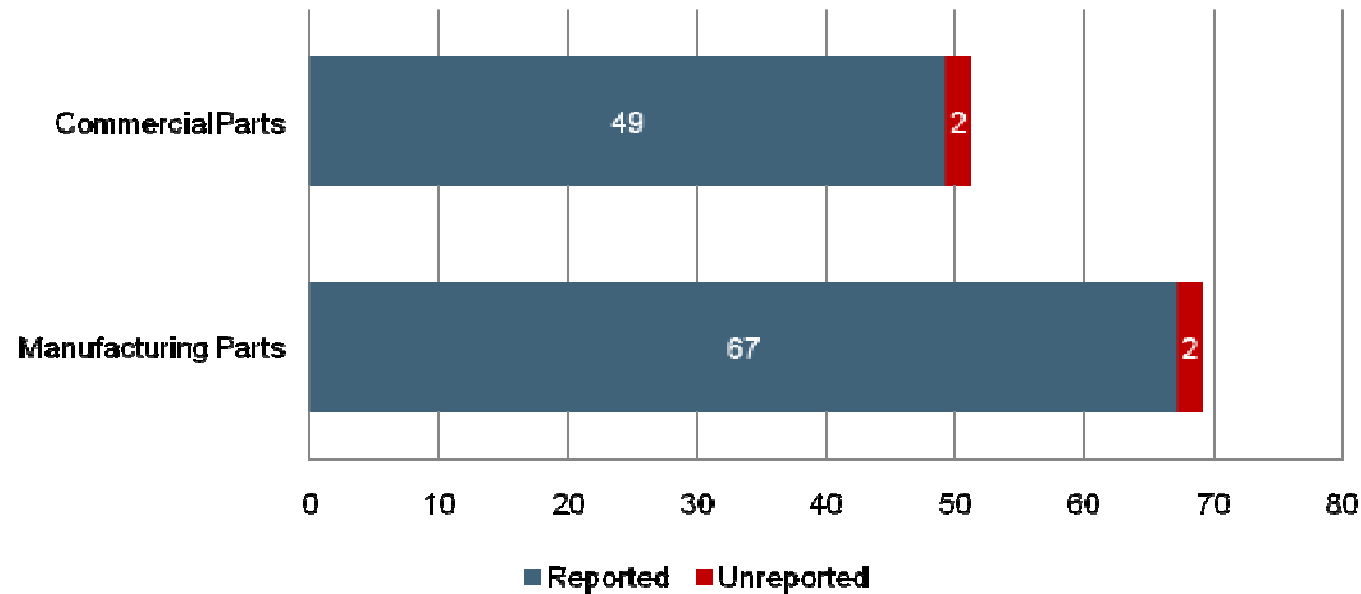
Material Content | Company Parts | Compliance | Release Declaration | Requests | Lead Free | RoHS Baseline | Documents | Comments

Show Part Tree Structure

Part Number	Part Name	UOM	Pre-Consumer Recycled (%)	Post-Consumer Recycled (%)	Tolerance																																																																																				
SKY77329-18	0.138	0			0																																																																																				
<table border="1"> <thead> <tr> <th>Subpart Name</th> <th>Material</th> <th>Supplier</th> <th>Substance</th> <th>Class/Category</th> <th>CAS Number</th> <th>Mass %</th> </tr> </thead> <tbody> <tr> <td>CONDUCTIVE EPOXY</td> <td>CONDUCTIVE FILLER</td> <td>N/A</td> <td></td> <td>DUMMY MATERIAL CLASSIFICATION</td> <td></td> <td>0.001 0.772</td> </tr> <tr> <td></td> <td></td> <td></td> <td>AG</td> <td>OTHER</td> <td>7440-33-4</td> <td>0.001 100</td> </tr> <tr> <td></td> <td>EPOXY</td> <td>N/A</td> <td></td> <td>DUMMY MATERIAL CLASSIFICATION</td> <td></td> <td>0 0.103</td> </tr> <tr> <td></td> <td></td> <td></td> <td>3-BUTOXYETHYL ACETATE</td> <td>OTHER</td> <td>113-07-8</td> <td>0 21.667</td> </tr> <tr> <td></td> <td></td> <td></td> <td>DIETHYLENEDIAMINE-DIISOCYANATE</td> <td>OTHER, OTHER - REACH SVHC</td> <td>12369-57-1</td> <td>0 1.667</td> </tr> <tr> <td></td> <td></td> <td></td> <td>FORMALDEHYDE, GLYCERIC ACID, 2,2-BIS(4-CHLORO-2,3-EPOXYPROPANE) AND PHENOL</td> <td>OTHER</td> <td>9003-09-9</td> <td>0 33.333</td> </tr> <tr> <td></td> <td></td> <td></td> <td>ORISANE, (2-(1,3-DIETHYLETHYL)PHENOXY) METHYL</td> <td>OTHER</td> <td>2102-60-2</td> <td>0 21.667</td> </tr> <tr> <td></td> <td></td> <td></td> <td>PHENOL-FORMALDEHYD HARZ</td> <td>OTHER</td> <td>9003-09-9</td> <td>0 21.667</td> </tr> <tr> <td>DI_E_GAS</td> <td>GAS DIE</td> <td>N/A</td> <td></td> <td>DUMMY MATERIAL CLASSIFICATION</td> <td></td> <td>0.001 0.623</td> </tr> <tr> <td></td> <td></td> <td></td> <td>ALUMINUMFLUSSER (NICHT STABILISIERT)</td> <td>OTHER</td> <td>7429-90-5</td> <td>0 0.08</td> </tr> <tr> <td></td> <td></td> <td></td> <td>ARSENIC</td> <td>ARSENIC AND ARSENIC COMPOUNDS</td> <td>7440-39-2</td> <td>0 40.33</td> </tr> </tbody> </table>						Subpart Name	Material	Supplier	Substance	Class/Category	CAS Number	Mass %	CONDUCTIVE EPOXY	CONDUCTIVE FILLER	N/A		DUMMY MATERIAL CLASSIFICATION		0.001 0.772				AG	OTHER	7440-33-4	0.001 100		EPOXY	N/A		DUMMY MATERIAL CLASSIFICATION		0 0.103				3-BUTOXYETHYL ACETATE	OTHER	113-07-8	0 21.667				DIETHYLENEDIAMINE-DIISOCYANATE	OTHER, OTHER - REACH SVHC	12369-57-1	0 1.667				FORMALDEHYDE, GLYCERIC ACID, 2,2-BIS(4-CHLORO-2,3-EPOXYPROPANE) AND PHENOL	OTHER	9003-09-9	0 33.333				ORISANE, (2-(1,3-DIETHYLETHYL)PHENOXY) METHYL	OTHER	2102-60-2	0 21.667				PHENOL-FORMALDEHYD HARZ	OTHER	9003-09-9	0 21.667	DI_E_GAS	GAS DIE	N/A		DUMMY MATERIAL CLASSIFICATION		0.001 0.623				ALUMINUMFLUSSER (NICHT STABILISIERT)	OTHER	7429-90-5	0 0.08				ARSENIC	ARSENIC AND ARSENIC COMPOUNDS	7440-39-2	0 40.33
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InSight Environmental Compliance enables you to quickly identify laggard suppliers and take action

Program XYZ – Unreported Parts



BOM Name	Commercial Part Number	Manufacturing Part Number	Manufacturer Name	Manufacturer Code	Manufacturer ID
Product A	468850-023-00	06035A100DAT2A	AVX	10194	10194
Product B	468850-043-00	06035A101JATNA	AVX	10194	10194

The InSight Advantage

- ❑ **Integrates with your existing systems and processes**
 - Analysis of your products in all their as-designed and as-built permutations
 - Avoids information silos – key metrics available at time of design or purchase
- ❑ **Scales to address “many shades of green”**
 - REACH – changing list of SVHCs
 - Ericsson standard
- ❑ **Supports industry standards, multiple levels of disclosure – enables cost effective risk management**
- ❑ **Low total cost of ownership**
 - Automates routine, labor-intensive, and error-prone tasks
 - Works as standalone system, no additional investments required
- ❑ **Backed by an expert organization with a proven track record of success**



Thank You!