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Chemical Supply Chain Hazard Reduction

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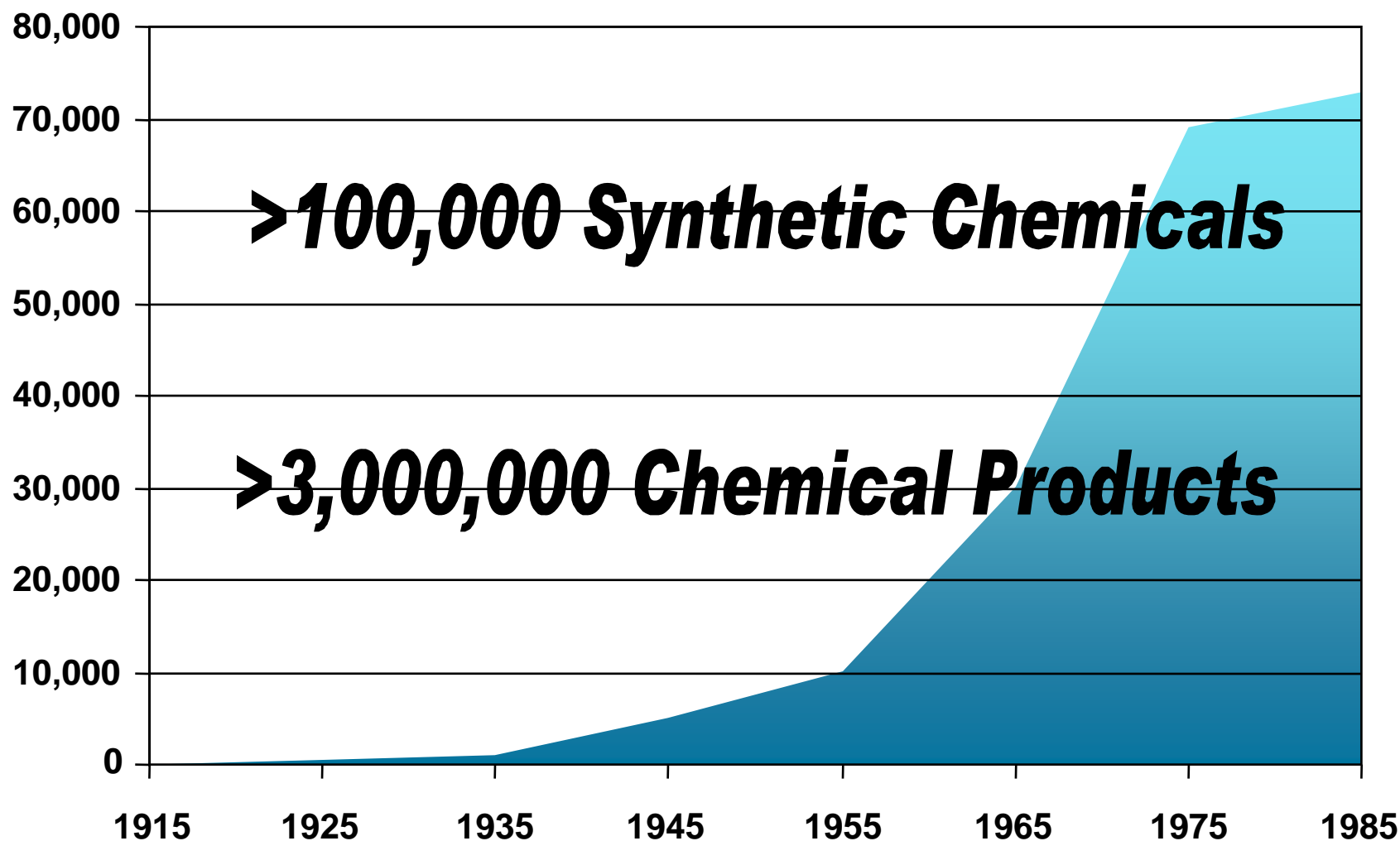


CUSTOMER CORE CHALLENGES

- Environmental, Health & Safety
 - Fewer MSDS to Manage and Update
 - Reduction in Regulatory Reporting
 - Improved workplace safety
 - Reduction in potential environmental impact
- Operations / Maintenance
 - Manage the organization & replenishment of products
 - Eliminate the need for ad hoc sourcing activities
 - Consistent performance of products throughout organization
- Procurement / Supply Chain
 - Reduction in Product Count
 - Reduction in Chemical Spend
 - Decreased On-hand Inventory
 - Vendor Consolidation
 - Lifecycle Cost Reduction



Growth in Production Rate of Synthetic Chemicals



Source: www.healthgoods.com

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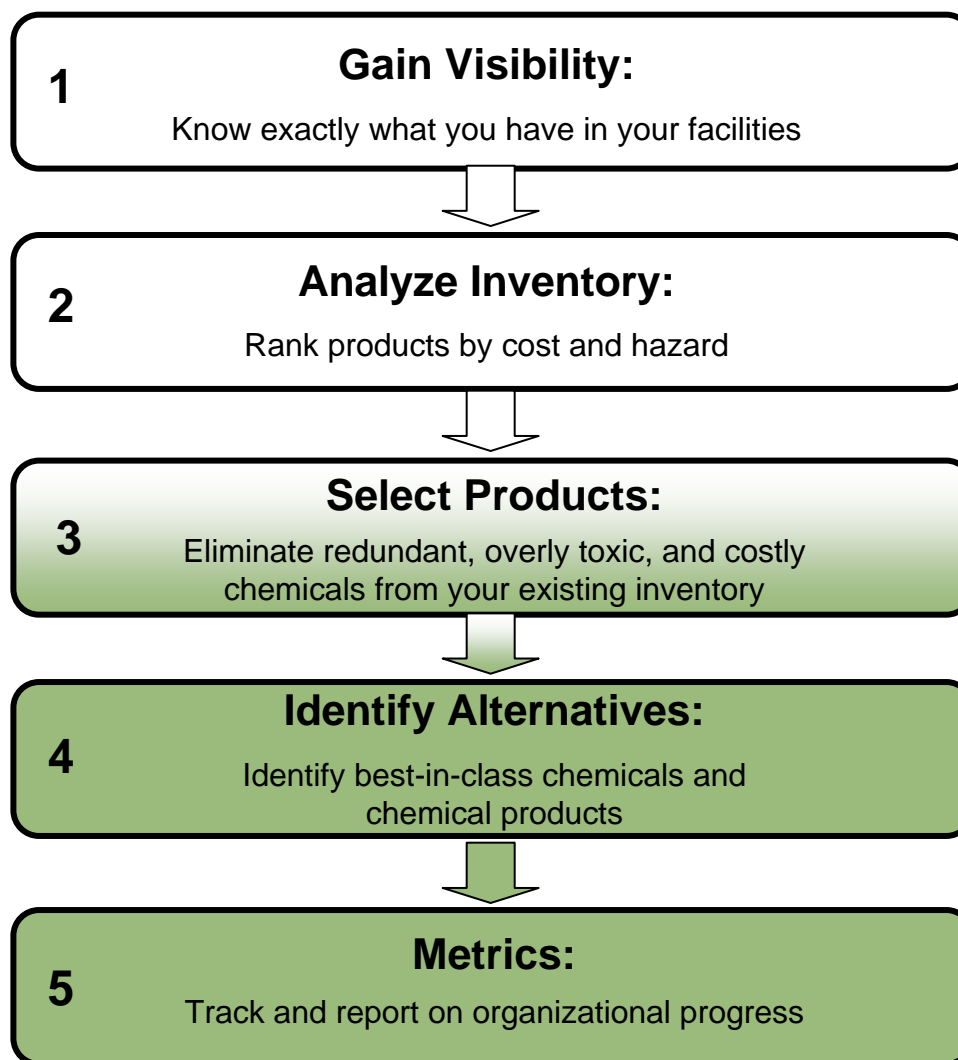


Problem Identified

- Using MSDS data as a procurement record, we found the following:
 - Most companies had MRO product proliferation issues
 - Multiple sites buying multiple products for the same use
 - Costs were high and out of control
 - No central purchasing of MRO products
 - Local buying
 - Large price variance between products
 - Human and Environmental Hazards varied widely across products
 - Typically the hazardous nature of a product was not part of the buying decision



Steps to Toxic Chemical Reduction



1

Gain Visibility:

Know exactly what you have in your facilities



Prepare for Inventory

- Define information to be captured
 1. Quantities
 2. Use categories
- Define banned products

Take Physical Inventory

- Flag product for disposal, waste or phase out
- Capture internal part numbers, ID numbers

Review and Reconcile Data

- Confirm products in electronic database are still in use, identify those that are obsolete
- Ensure chemicals are in appropriate locations



2

Analyze Inventory:

Rank products by cost and hazard



Two Key Categories of Hazard Analysis



Human Health Hazards

- Carcinogens
- Mutagens
- Reproductive Toxins
- Acute Toxins
- Neurotoxins
- Endocrine Disruptors

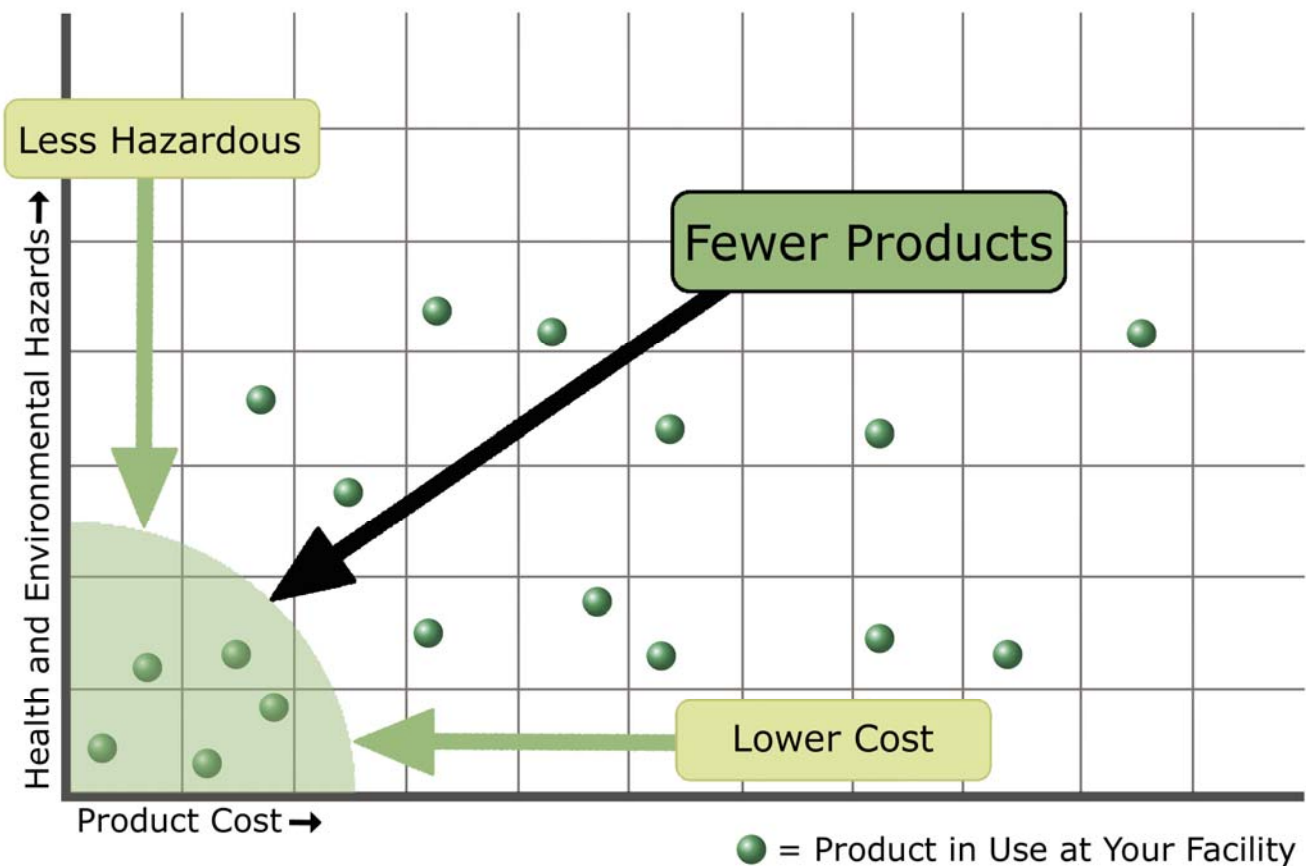


Environmental Hazards

- Hazardous Air Pollutants
- Ozone Depleting Substances
- Hazardous Waste
- PBTs
- Aquatic Toxins



3 Select Products:
Eliminate redundant, overly toxic, and costly chemicals from your existing inventory



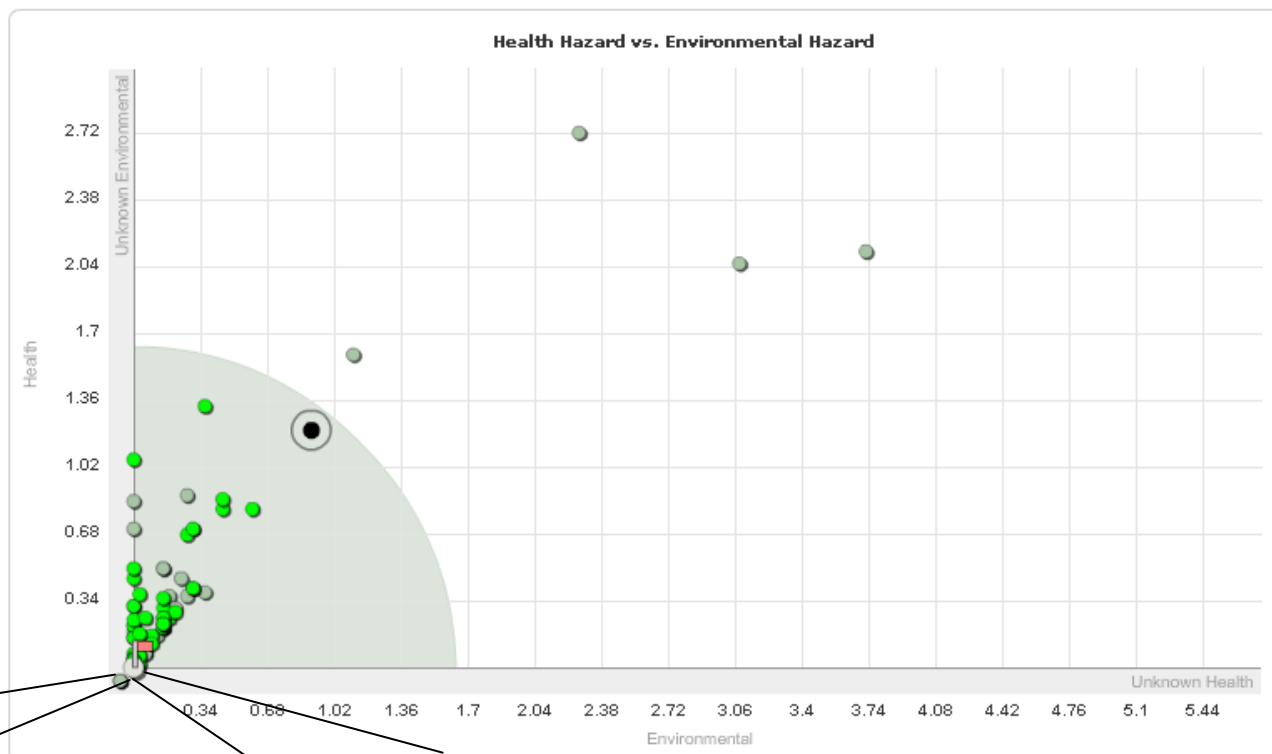


4

Identify Alternatives:

Identify best-in-class chemicals and chemical products

- Utilize industry certifications to identify true best-in-class alternatives for each functional use:
 - EcoLogo
 - GreenSeal
 - DfE (EPA's Design for the Environment)



★	Recognition	▲	Product #	Product Name
★	EcoLogo			VERT-2-GO GLASS CLEANER
★	EcoLogo			ENVIRO CARE, GLASS CLEANER



Can it Work ?

Case Study Information

Case Studies



Initial Chemical Inventory Analysis

- 10,000 Active MSDS Count
- 36 Geographic Sites in North America
- Product Selection: 80% chance that a chemical products' use is unique to one facility
- Nearly \$5 Million Annual MRO Chemical Spend



Case Studies



Human and Environmental Hazards

- 150 chemical products contained Mercury/Lead, or Mercury/Lead compounds
- 1200 products contained SARA 313 Toxics
- 1000 products contained Human Carcinogens, Reproductive Toxins, or Mutagens



Case Studies



Initial Consolidation Results

- 38% reduction in Health Hazards
- 25% reduction in Environmental Hazards
- 43% reduction in Overall Product Count
- Between 4 to 40% Cost Reduction in key categories





IHS Environment Domain Solutions

