

## Using Technology to "Green" the Supply Chain

In this era of environmental accountability, keeping a "green" inventory is a business necessity that provides returns in more ways than one. Reducing or eliminating hazardous chemicals from around manufacturing plants, commercial spaces and offices is a huge plus for worker safety, of course. As such, it can reduce the company's insurance premiums and exposure to litigation, providing both economic and environmental benefit for a "double green" effect.

Companies of all kinds worldwide often store large volumes of unnecessarily toxic chemicals for maintenance, repair and operations (MRO). Medium to large-sized companies use between 5,000 and 50,000 chemicals for MRO. Often, these MRO chemicals are poorly controlled for both price and toxicity. Moreover, there can be as much as a 300% cost difference between MRO chemicals used for the same purpose.

The "greening" of the supply chain can seem like a daunting task. Indirect chemical inventories – or those not used for major manufacturing processes – aren't always easy to track and screen for health or environmental hazards, and finding more benign replacements also can be challenging, unless the right technology is used to support this process.

It is critical for companies to establish a systematic means for assessing all chemicals in their inventory, then removing those that are excessively hazardous and replacing them with products that are safer. The good news is that, done properly, this isn't an overwhelming job, and it's one that's certain to have a sizeable payoff in both risk reduction and cost savings for most companies.

The primary steps in greening the inventory are shown in Figure 1.

### Gaining Visibility

To get started on the path to a safer, more cost-effective inventory, the first step is known as gaining visibility, or reviewing what is known about a company's

current situation.

The following are good questions to ask:

- What chemical products are used at the facilities?
- Is a formal inventory needed to obtain a more accurate picture?
- What chemicals are in those products?
- Is it possible to leverage existing compliance and material safety data sheet (MSDS) data to gain insight?
- What is the true, indirect chemical cost, which includes not only the product cost, but also lifecycle costs involved in handling, environmental health and safety and waste disposal?



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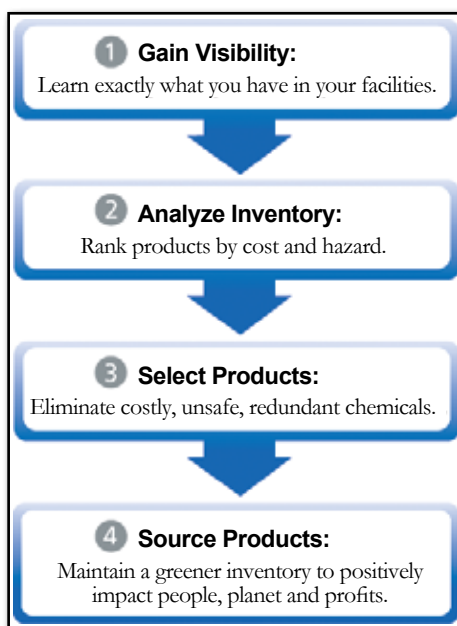


Figure 1. Primary steps in greening the inventory.

### Analysis

In the past, assessing the cost and toxicity of different chemicals was an almost impossibly complex procedure. Today, it can be rendered straightforward and simple with the Green Product Selector (GPS) by IHS Dolphin.

The GPS database platform presents chemicals in more than 700 functional use categories, such as adhesives, degreasers, laboratory chemicals, pesticides, paints and

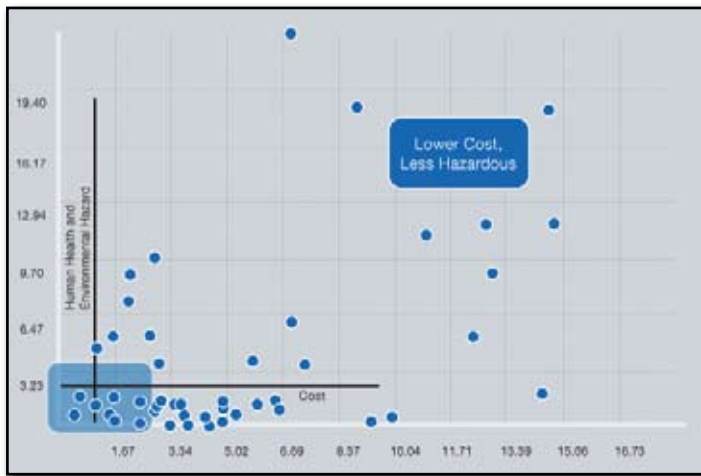


Figure 2: The Green Product Selector plots the hazard scores against the lifetime cost of owning the chemicals in a particular category of usage.

coatings, etc. More than 300 MRO uses are identified within these categories.

Product information utilized in the analysis includes the product name, manufacturer and use category, as well as ingredient information and percentage contribution, which measures the amount of a chemical ingredient used to make up the product. For example, if one product has a hazardous ingredient that makes up 5% of the product, it would be considered less hazardous than a product that has 50% of the same hazardous ingredient.

The platform evaluates the detailed product data against others in the same category. To effectively analyze products

currently in use, it is also possible to capture and leverage existing chemical product information, either by converting an organization's existing electronic chemical database or through physical inventory.

Using proprietary algorithms, the platform sorts and presents inventory data by cost and hazard ranking, the latter in terms of potential dangers to both the environment and human health. Product details are presented in easy-to-read graphics, providing a relative ranking of current products in use versus safer, cleaner alternatives for simplified decision making (see Figure 2).

By using this application, companies can reduce the chemical count and number of vendors, reduce costs (both direct and indirect lifecycle costs), reduce health and environmental hazards, and meet operational needs.

### Implementation

Once safer products are selected, a company is ready to implement changes to the organization's buying process. This phase requires collaboration among cross-functional teams of procurement, operations and environmental health and safety decision-makers.

IHS Dolphin user Lorne Cooper of Mosaic Mining's potash division observed: "In our multi-point chemical management system, we look at the reduction of the number of products we use and toxicity. We're reducing costs, maintaining and auditing the control of our system and ensuring that we're purchasing chemicals that are effective for their intended use."

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# MRO Inventory Get Lean and Green

Fewer & Safer MRO Chemicals

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Reduce Employee Exposure

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Improve Worker Productivity

**People**

Eliminate Hazardous MRO Chemicals

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Choose Effective 'Greener' Alternatives

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Ensure Regulatory Compliance

**Planet**

Significantly Reduce MRO Inventory

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Identify Less Costly Equivalents

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Optimize Order Points/Quantities and Lead Times

**Profits**

Your maintenance, repair and operating (MRO) inventory can hurt. Obsolete, redundant and overpriced parts and materials hurt your bottom line. Hazardous MRO chemicals can hurt your employees and the environment.

Visit [www.intermat.com](http://www.intermat.com) or [www.dolphinsafesource.com](http://www.dolphinsafesource.com) to learn how IHS Intermat and Dolphin can optimize your inventory to protect people, planet and profits.

