
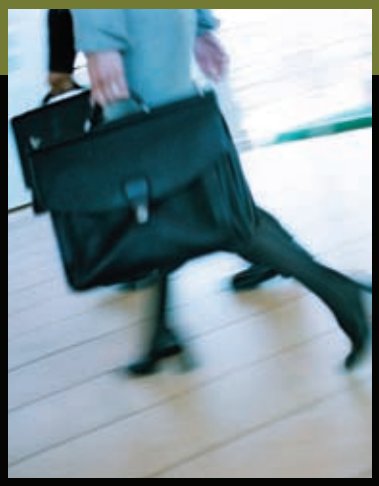

Healthy Business Strategies for Transforming the Toxic Chemical Economy

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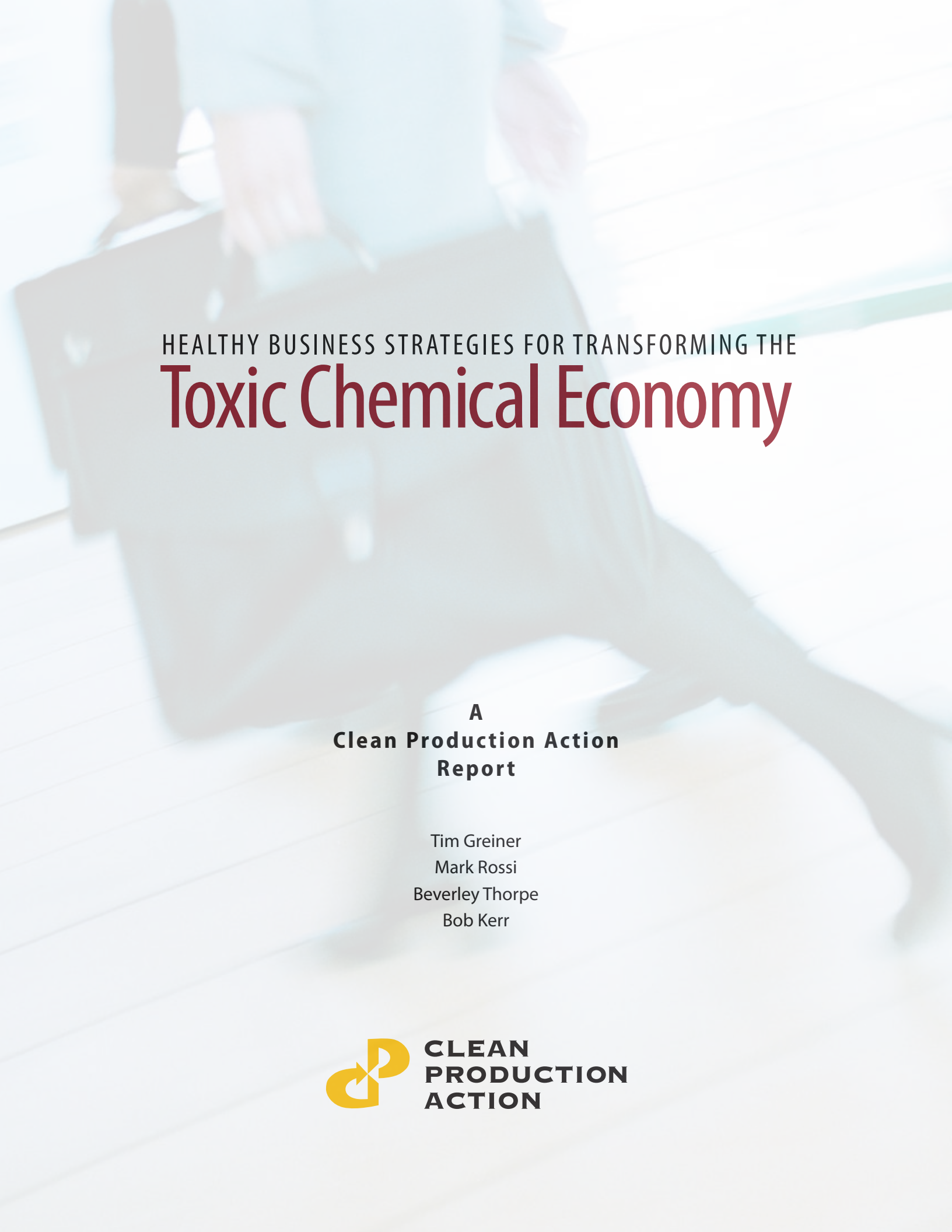

HEALTHY BUSINESS STRATEGIES FOR TRANSFORMING THE

Toxic Chemical Economy

A
Clean Production Action
Report

Tim Greiner
Mark Rossi
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CLEAN
PRODUCTION
ACTION

Clean Production Action
Mark Rossi, Beverley Thorpe
Clean Production Action promotes the use of products that are safer and cleaner across their life cycle for consumers, workers and communities. Our mission is to advance Clean Production which we define as the design of products and manufacturing processes in harmony with natural ecological cycles, the elimination of toxic waste and inputs and the use of renewable energy and materials.

Pure Strategies, Inc.
Tim Greiner, Bob Kerr
Pure Strategies helps companies improve their environmental and social performance using clean production tools, sustainable materials, strong community relationships and transparent measures of progress.

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H&M: Fashion Chemistry

You've got to have your supply chain aligned to manage chemicals in retail fashion. In this fast moving industry, designs sell out in six months. With this high turnover rate, fashion companies like H&M never design the same product twice. As a result, chemistry for dying and finishing textiles is set during the earliest stages of the design process. Once design is complete, there is no chance to go back and redefine the chemicals used in the product.

H&M Chemicals Restriction Policy

H&M's first efforts to restrict chemicals started back in 1993, when the company decided to restrict the use of toxic Azo dyes in response to proposed German legislation to ban their use. But efforts to look beyond regulatory limits accelerated with the advent of an eco-cotton trend that spread across Europe in the mid 1990's. To meet these new eco-cotton requirements, the company developed its first detailed criteria around acceptable dying and finishing chemistry. But when the eco-cotton trend faded and customer interests shifted to synthetic polyester and nylon fibers, H&M was faced with deciding what to do with the knowledge they had gained about unsafe chemicals in the textile dying and finishing processes. Should they apply these same standards to the new lines which had no eco-branding? Faced with this choice, the company chose to bring the eco-criteria from its cotton experience to its entire line of products. As Corporate Social Responsibility Manager Ingrid Schullstrom tells it:

> **"The chemistry issues relevant to cotton were not necessarily relevant to other fabrics. But our experience with eco-cotton raised our awareness that dangerous**

HENNES & MAURITZ, INC.

H&M is a clothing retailer specializing in chic fashion apparel, which everyone — kids and adults — can afford.

- **Founded in 1947 in Sweden by Erling Persson**
- **Based in Stockholm, operates in 22 countries**
- **45,000 employees worldwide**
- **$ 9.2 billion annual revenue**
- **Sales growth rate 2004-2005: 14%**
- **Owns and operates all of its 1,200 stores**

chemicals were used in textile manufacturing. Once we applied ourselves to developing a broader list for more fabric types, and worked with our suppliers to develop testing and assurance methods, we just kept on adding new chemicals. We decided to adopt the strictest of any country policy for any sales country and later adopted the precautionary principle. Since then we've updated the list every two or three years by adding new substances or lowering the allowable limits of certain chemicals in our products."

The company first introduced its chemicals restriction policy in 1995 and revised versions in 1996, 1999, 2002, 2003 and 2005. Early on, H&M's policies were largely aspirational. Working in Hong Kong with its suppliers, H&M gave its mostly Asian-based suppliers a compass — that the company was planning on restricting materials in products, these restrictions would be contractual and H&M would not implement them immediately but instead would provide suppliers with time and in some cases resources to move away from chemical hazards. Today, H&M's restricted chemicals list is comprised of approximately 170 chemicals or chemical categories.

Know Thy Chemistry

With 22 offices around the world in locations as far flung as India, Romania, Turkey and China, H&M has placed the responsibility for chemicals restrictions in each of its 22 in-country quality offices. The restriction list, which is contractual, is presented to the supplier at the onset of the relationship, along with testing procedures and recommended testing labs. Like most textile firms, H&M represents a fairly small portion of a typical supplier's volume. With the help of company chemists, the quality staff conducts assessments of each product combination — conjecturing which chemical(s) might be found in a given product. Since colors, prints, fabrics and markets vary so widely, few if any chemicals on the list are relevant to every product. Products are then sent to H&M approved labs that run approved test regimes to detect the presence of restricted chemicals. H&M targets its random testing on products and suppliers with poor test records. Suppliers pay for the 70,000 tests (costing roughly $90 each) H&M conducts on running orders, totaling $1.75 million annually. The FAQ section of the company's 2005 chemicals restriction guidance document offers the following advice on supplier compliance assurance:

"The fastest, cheapest and easiest way (to comply with the restrictions) is to have total control over the substances used in the production of your products. H&M Chemical Restrictions must be handed over to your dye mills, print mills, tanneries and chemical suppliers, and you should tell them not to provide you with any chemical products containing substances listed in H&M Chemical Restrictions. Furthermore, tests could be carried out for substances that for some reason are difficult to have control over. Preferably at a laboratory recommended by H&M and as early as possible."

Overcoming Barriers

In implementing its policy, H&M must avoid compromising the look and feel of the garment — doing so would reduce consumer interest. Some substances are more difficult to replace than others, and may require a completely different approach. Alternatives can, for example, make use of other technical properties, other chemicals or changed processes. You might think that identifying all the areas where a chemical is used would be straightforward, but many suppliers and their chemical vendors don't necessarily know which chemicals they are using.

Sometimes substitute chemicals are more expensive for the first 100,000 pieces. While H&M will pay the premium for the new and untested material, most cost obstacles are temporary. Beyond short-term cost increases, H&M reports that restriction efforts sometimes require slight adjustments to design. In a few rare cases where H&M could not eliminate a material, it elected to discontinue the product. Examples include plastic toddler swim rings made from PVC and feather boas

H&M CHEMICAL RESTRICTIONS
(2005 VERSION)

- **Azo Dyes and Pigments**
- **Disperse Dyes**
- **Other Dyes**
- **Flame Retardants**
- **Short Chained Chlorinated Paraffins (SCCP's)**
- **Formaldehyde**
- **Polyvinyl Chloride (PVC)**
- **Phthalates**
- **Organotin Compounds**
- **Triclosan**
- **Bisphenol-A (BPA)**
- **Antimony (Sb)**
- **Arsenic (As)**
- **Cadmium (Cd)**
- **Chromium (Cr)**
- **Chromium VI (Cr6+)**
- **Cobalt (Co)**
- **Lead (Pb)**
- **Mercury (Hg)**
- **Nickel (Ni)**
- **Phenols**
- **Pesticides**
- **Alkylphenol Ethoxylates/ Alkylphenols (APEO/AP)**
- **Distearyldimethylammonium-chloride (DSDMAC)**
- **Isocyanates**
- **Perfluorinated Alkylated Substances (PFAS)**
- **Polychlorinated Biphenyls (PCBs)**
- **Polychlorinated Triphenyls (PCTs)**
- **Chlorinated Bleaching Agents**
- **Chlorinated Aromatic Hydrocarbons**
- **Solvents**

that required harmful flame retardants to meet flammability requirements.

Purging PVC

H&M's PVC elimination efforts illustrate the steps and missteps in chemical substitution efforts. In the mid 1990's, after first testing products to understand where PVC might be used, the company began a multiyear discussion with its suppliers, telling them that a formal restriction would come within a few years. H&M found PVC in children's rainwear, anti-slip plastic on baby socks, prints on t-shirts, ski gloves, zipper pullers and product labels. Each application required a different substitution approach: some used polyurethane, others ethyl vinyl acetate, still others silicon, polyester or acrylic prints. Eventually, the company set a 2001 phase out date. But as Ingrid Schullstrom recounts, "We came up with solutions for everything except a few uses (bags, ski gloves for kids and sequins) where we were having no luck. We extended the deadline, but still with no luck. Eventually, we had to set a hard and fast date for substitutes. Otherwise we were not going to sell the product. When we did that, suddenly our suppliers found a substitute. Sometimes, technical barriers get solved once you put your foot down." H&M successfully phased out PVC from its products in 2002, with no long-term increase in cost and very limited impact on design and quality.

H&M's PVC elimination efforts weren't without a misstep or two. Finding a PVC alternative to anti-slip bumps on baby socks proved difficult until H&M realized that silicone might work. The biggest miscue occurred during the company's 2002 Christmas underwear campaign. With a marketing campaign using famous models posing in H&M underwear already underway, the company found that the sequins used to decorate some underwear products contained PVC. Chemists and quality control had missed the 100 percent PVC sequins because, up until that point, all PVC uses were in soft plastics. Marketing wanted to sell the sequin underwear, but corporate responsibility protested and prevailed. It wasn't very popular at the time to market products that the consumer could not buy, but H&M's decision made a statement about the company's chemical restriction efforts: if you tell the world your product does not contain a chemical, you cannot compromise.

What Motivates H&M?

The company's history and values have a lot to do with why it's possible for H&M to implement its chemicals restriction program. H&M's Board Chair and major owner, Stefan Persson, is the son of the founder. This lineage has helped the company to retain the founding family's sense of responsibility towards its customers and for the environment. Still, to grow and prosper as H&M has, the company must take decisions that make business sense.

So what benefits does the company accrue for its precautionary chemicals policy? H&M does not brand its products as environmentally conscious in any way. To date, the company has not sought attention for its environmental policies. Company staff cannot point to specific supply chain cost savings, increased sales, brand differentiation or reduced operating costs. The main benefits that seem to accrue to the company fall into two themes. The first is managing business risk. By implementing changes based on chemical hazards, the company stays ahead of legislation and advocacy campaigns. By staying ahead, the company can avoid bad publicity and da-age to its reputation. The alternative practiced by many companies is to respond to legislative mandates in a crisis mode. The second theme involves learning about H&M's supply chain. The restrictions push H&M designers, product development and quality staff to work closely with their suppliers, where they learn about materials selection, manufacturing and quality.

Somewhat surprisingly, H&M is not looking to keep its green chemistry expertise proprietary. On the contrary, the company works closely with other textile businesses on chemicals policy. It not only learns from colleagues in other companies, but also finds that its efforts to restrict toxic chemicals become easier when other retailers join in to create a global standard for safety. That's why H&M participates in textile industry-wide forums to share its knowledge — for example, H&M contributed significantly to the apparel restricted substances list compiled by Business for Social Responsibility. And by sharing its knowledge on topics such as test methods and where to expect restricted materials in products, H&M helps move an entire industry to higher levels of chemical consciousness.

Healthy Business Strategies
for Transforming the Toxic Chemical Economy

Business leaders are creating value by embedding concerns for human health and the environment into their products. Healthy business strategies differentiate a company's brand from its competitors — lowering costs, enhancing consumer and employee loyalty and increasing market share by creating healthier products for people and nature. For these leading companies, using environmentally preferred chemicals and materials is a core value, not a secondary assignment relegated to the periphery of the company.

This report profiles six companies that are crafting healthy strategies for using chemicals and materials in their products. While their individual actions to address toxic chemicals vary, their best practices, when gathered together define the terrain of healthy chemical strategies:

- Identify all chemicals in products.
- Eliminate high hazardous chemicals.
- Strive to use only green chemicals.
- Commit to product re-design.
- Take responsibility for products from cradle-to-cradle.
- Adopt internal chemical policies, including the precautionary principle.
- Work collaboratively with environmental advocates.
- Publicly support government reform of chemical policies.

These strategies exemplify the approaches companies must take if they are serious about creating a healthy chemical economy.

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