

# *A Blueprint for Green*

Middle East companies are developing operational strategies that are eco-friendly and profitable too <sup>1</sup>

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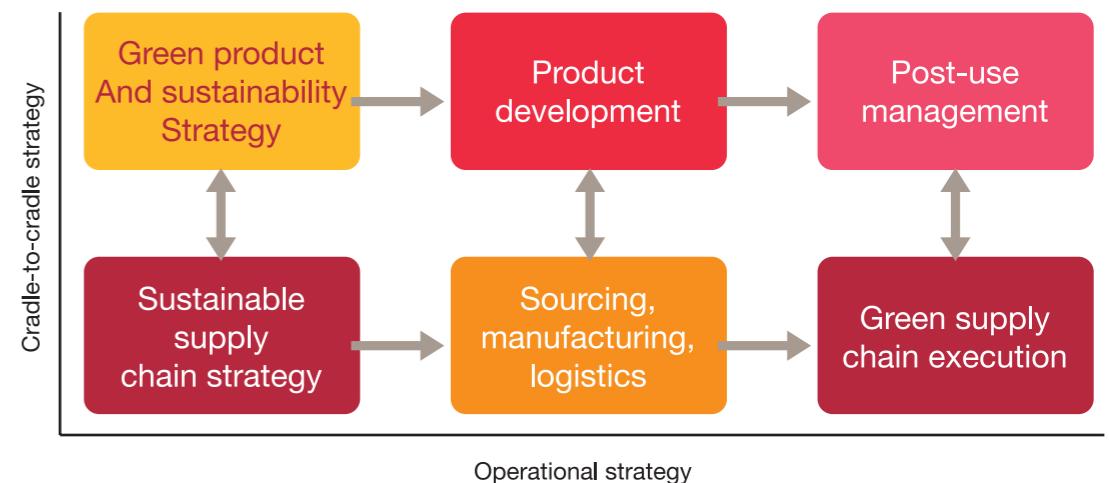
The pressure to become environmentally sustainable has intensified over the past few years. Increased energy costs, customer awareness, worldwide regulations, and But how does a company “go green” while keeping the bottom line in the black? The right operational strategy can turn the green challenge into a competitive advantage.

Companies everywhere are feeling the pressure to “go green” and build environmental sustainability into their business practices. This imperative is reflected in consumers demanding more natural products, environmental groups pushing for waste reduction, and legislators enacting increasingly complex carbon dioxide emissions when deciding whether to extend loans to utilities or other But it's one thing to embrace green, and another thing entirely

to do it while growing revenues and profit margins. The right path forward is inherent in the company's operational strategy—how a company leverages the various facets of its operations for competitive advantage. In order for a green operational strategy to be effective, it's essential to incorporate sustainable practices into both product lifecycle and supply chain management (Figure 1).

Historically, the Middle East and North Africa have not been leaders in environmental issues, and countries in the region have a great deal of room for improvement. Yet there are signs that local firms, regional offices of multinational companies, and governmental organizations are beginning to incorporate sustainable practices in their operating models.

**Figure 1: Components of a green operational strategy**



<sup>1</sup> Adapted from “Blueprint for Green” by Shoshanah Cohen, Mark Hermans and Aspasia Karamalegos, PRTM Insight, Third Quarter 2008

*Designing products that support green manufacturing and transportation can significantly impact a company's environmental footprint*

## **Managing the green product lifecycle**

In the past, most companies used a cradle-to-grave approach to product planning, where they considered product and service development from product conception (the cradle) to end-of-life (the grave). After a product was sold, the company was no longer held responsible, so a consumer who had finished using the product would simply dispose of it in the trash.

This approach is undergoing serious rethinking. Lack of landfill capacity, repercussions of toxic materials leaking into water supplies, and stricter regulations mandating recycling and end-of-life product take-back programs are forcing companies to evaluate their product lifecycle and portfolio management strategies. Now, instead of cradle-to-grave planning, companies with an environmental conscience are developing cradle-to-cradle solutions.

The idea behind this approach is simple. Companies are thinking about how they can design, source, manufacture, and deliver products with less energy and greater efficiency. At the same time, they're thinking about how these products can be transformed into different or new ones later in their lifecycle.

Goodyear, for example, is using new technologies to design tires that have less of an impact on the environment. The company is also promoting the reuse of scrap tires for the construction of playgrounds, brake pedals, highway noise barriers, and more.

### **Product conception.**

For a company that wants to adopt more sustainable practices, it's important to put on green glasses during idea generation and conception, since these decisions affect so many of the later product lifecycle phases, as well as the design of the future supply chain. HP, for example, designed up front a printer made of 83% recycled plastics and packaged in 100% recyclable materials. The printer also incorporates HP technology that allows the user, when printing from the Internet, to combine portions of different web pages all on one page to conserve paper<sup>1</sup>.

During the product conception stage, it is important to consider not only how the product will be produced, distributed, and disposed, but also how the product can impact marketing and hiring strategies.

Developing an eco-friendly product can also help open up new markets if there are unmet consumer needs. For example, in Tunisia, where semi-automatic washing machines account for about two thirds of the market, conventional detergents create high foam levels and require more water for rinsing, which is costly for consumers. Henkel addressed this problem by developing a detergent formula that requires less water but is just as effective as other brands<sup>2</sup>.

Masdar City took steps to promote sustainability through building design and technology. The materials used to build the walls of this Abu Dhabi city had to comply with internal standards that ensured high recycled content, low waste generation, and little impact on indoor air quality and health... The aluminum on the inner facades is 90% recycled. In addition, the city partnered with a local concrete producer to produce a new "green concrete," a replacement for cement based on an industrial waste product. This reduced the concrete carbon footprint by 30-40%<sup>3</sup>.

Moreover, to source its 100% sustainable timber, Masdar City partnered with a GCC-based company. A member of the Emirates Green council, the firm works with companies in Asia and North America to source products that are LEED-certified and derived from renewable sources such as rapid growing bamboo, and rice husk, a by-product of rice paddies.



*The greenest companies choose suppliers with a green mindset*

## **Greening the supply chain**

### **Design and development.**

Taking full advantage of the product design phase is key to selecting raw materials that will make the product and its packaging as green as possible.

Designing products that support green manufacturing and transportation can also significantly impact a company's environmental footprint.

The design phase is also the time to be thinking about design for reuse. Making these green decisions up front is far more efficient and cost-effective than making incremental improvements later.

### **Sourcing.**

The greenest companies choose suppliers with a green mindset. They establish green criteria for the supplier selection process, asking questions such as: Where are suppliers located? How far do materials need to be transported? What types of environmentally friendly practices have suppliers adopted? It's also important to build partnerships with suppliers that share the same green philosophy, and to hold suppliers accountable for their green contributions.

Aveda, the US based cosmetics firm, counts sustainability as one of its core values. For a range of their skincare products, Aveda went to Morocco

to sustainably source oil from the Argan tree. The Argan forests have suffered deforestation in recent years, and to combat this a cooperative of local women was formed in order to harvest the oil contained within the seed of the fruit, giving the forests an economic value, thus encouraging conservation. The women in the cooperative sustainably harvest and process the oil from fallen seeds in the Argan forest, and the harvesting process follows strict guidelines<sup>4</sup>.

<sup>1</sup> [http://www.hp.com/hpinfo/newsroom/press\\_kits/2008/igpenvironment/fs-dj-d2545printer.pdf](http://www.hp.com/hpinfo/newsroom/press_kits/2008/igpenvironment/fs-dj-d2545printer.pdf)  
<sup>2</sup> <http://sustainabilityreport.henkel.com/products/laundry-and-home-care.html>  
<sup>3</sup> <http://www.masdarcity.ae/en/63/sustainability-and-the-city/supply-chain/>

<sup>4</sup> <http://www.aveda.com/discover/ingredients.tml>



## Manufacturing.

The supply chain and manufacturing network can also benefit from a green approach. First, reconfiguring the physical layout of the end-to-end supply chain to locate suppliers, manufacturing, and customers near each other helps cut fuel consumption and other costs.

Adopting “Lean” principles is an obvious way to improve efficiency and reduce waste inside the factory. And relatively simple things, like co-locating different processes, can have noticeable benefits outside the factory. SABIC, the Saudi Arabian manufacturer of chemicals, fertilizers, plastics and metals, has taken steps to cut down on energy use during the manufacturing process of resins. The company’s Innovative Plastics Strategic Business Unit has developed resin products that contain up to 60 percent post-consumer content derived from discarded PET bottles. These products require less energy consumption than traditional plastics throughout the entire manufacturing process<sup>5</sup>.

The next wave of planning solutions coming to market should make these tasks easier. These tools can help assess current energy usage and identify cost, profit, and sustainability trade-offs from various options.

## Logistics.

It makes sense that the least expensive way to ship products to customers typically has the least environmental impact. Companies use various methods for lowering these logistics costs. They determine how many distribution facilities are needed and where they are best located. In addition, they weigh the benefits and trade-offs of air, rail, and truck options. They also increase the minimum loads of carriers being used.

Aramex, the Middle East-based logistics and transportation solutions provider, have introduced a new line of hybrid motorbikes for its couriers throughout Lebanon. The bikes incorporate the latest technology, making them more fuel efficient, which contributes to the firm’s bottom line. Notes Chief Sustainability Officer Raji Hattar, “The hybrid bikes enable us to not only lessen our carbon footprint, but also bring a more [fuel] efficient fleet of bikes into function within our Lebanese operations<sup>6</sup>.

Lipton, a brand of tea popular in the Middle East and subsidiary of Unilever, has made changes to their shipping operations in order to

reduce transportation costs between India and Dubai. The introduction of ‘slip sheets’ to replace traditional wooden pallets for transportation result in a greater load per container, as well as minimizing wood usage. Tim Lever, Vice president of supply chain for Unilever North Africa and Middle East expects the initiative to result in ocean freight savings of approximately 10-20%<sup>7</sup>.

## End use and disposal.

While consumer awareness and lobbying efforts have pushed companies to think about product recycling and disposal, regulations across the globe are pushing the envelope even further. Most notably, the European-led Restriction of Hazardous Substances (RoHS) and Waste Electrical and Electronic Equipment (WEEE) directives have already forced companies to limit use of certain raw materials in end products and to deploy after-life product recycling and take-back programs.

Global packaging firm Tetra Pak makes recyclable packaging and encourages users worldwide to dispose of packaging responsibly. Tetra Pak launched its U.S. recycling programs in 1999; today, the number of its packages recycled worldwide is more than 27 billion. In the GCC, recycling rates have lagged behind due to a lack of recycling infrastructure, but Tetra Pak have been working with NGOs, paper traders, and paper mills in Egypt to improve recycling rates. Over the past five years, collection rates have increased from zero to 13% of all cartons sold<sup>8</sup>.

The easiest way to develop a solid end-of-life strategy is to tackle it during the design stage. Although in some cases companies have less margin for redesigning a product, waste materials can be “up-cycled” to create a useful input to a process. McDonalds in the UAE have piloted a process for converting waste vegetable oil into a bio-fuel for their delivery trucks. This innovation makes distribution more carbon-friendly while helping to close the loop on their lifecycle<sup>9</sup>.

## Going the green distance

It’s safe to say going green is not a fad: Eco-friendly operational strategies are required for long-term success. To go the green distance, companies must ensure that the strategies they introduce today become integral to the company in the future. There are a number of ways to do that:

### Green reviews.

Eco-friendly companies know where they are green and where they aren’t. By conducting a complete environmental assessment across the entire product lifecycle and supply chain, firms can identify where they are having the most negative impact on the environment and develop innovative solutions to leapfrog beyond incremental improvements. Although each company’s business and operational strategies dictate which measurements are the most relevant, many companies now regularly track energy usage, fuel and transportation costs, water consumption, and total carbon emissions.

Green performance assessment and tracking helps identify the best areas for improvement. The Jumeirah Group, a luxury hotel chain based in Dubai, developed a real-time carbon emissions calculator for each of its properties. Knowing how much

carbon is being released helps the firm focus on the right areas for emissions reduction. A computerized building management system which adjusts temperatures depending on room occupancy. These green initiatives have helped Jumeirah realize cost savings of \$3.8m annually<sup>10</sup>.

In Dubai’s Media City, IBM launched an energy conservation program in collaboration with TECOM Investments’ Sustainable Energy and Environment Division to significantly reduce IBM’s carbon emissions. The program involved simple measures such as reducing lighting usage by keeping window blinds open during daylight hours, setting the air conditioning on a higher temperature after office hours, and switching off printers and fax machines during weekends and holidays. These low-hanging fruit seem straightforward, but can in fact have a significant impact. IBM’s energy savings in Dubai increased by approximately 9%<sup>11</sup>.

Executives can use the data from green performance tracking to create a portfolio of green projects that is the best mix of quick returns and longer-term results for the company’s unique investment and growth strategy. A portfolio approach can guide timing and resource allocations for the various green initiatives being pursued.

<sup>5</sup> <http://www.sabic.com/cep/en/AboutUs/SustainabilitySolutionsDetail/postconsumerrecyclesolutions.html>  
<sup>6</sup> <http://www.ameinfo.com/234415.html>  
<sup>7</sup> <http://www.arabianbusiness.com/lipton-reinforces-green-supply-chain-operations-in-middle-east-45794.html>

<sup>8</sup> [http://www.tetrapak.com/about\\_tetra\\_pak/press\\_room/news/Pages/news\\_env\\_72increase\\_in\\_tonnage\\_recycledinEgypt\\_200801.aspx](http://www.tetrapak.com/about_tetra_pak/press_room/news/Pages/news_env_72increase_in_tonnage_recycledinEgypt_200801.aspx)  
<sup>9</sup> <http://www.globalpost.com/dispatches/globalpost-blogs/the-casbah/mcdonalds-goes-green-the-gulf>  
<sup>10</sup> <http://www.ecoventures.ae/ImprovingtheBottomLineApril10.pdf>  
<sup>11</sup> <http://www-03.ibm.com/press/us/en/pressrelease/34879.wss>

*Environmentally conscious companies view stakeholders not as adversaries, but as partners critical for fulfilling green goals*

**Green on the inside.**  
The greenest organizations are green from top to bottom. Senior management must create the momentum, but employees must be involved as well. Says PepsiCo's Lynch: "For corporations to have a serious green program, you need both grass-roots efforts and a strong commitment from the top. You need a CEO who says, 'We will do this.'"

Establishing roles that signal the importance of green is also critical. In 2010 Aramex launched "Green Champions," an environmental program in their Global Support Office in Jordan. The program trains employees on the basics of sustainability so that they can guide other employees in sustainability initiatives and make an impact on business practices as well as day-to-day workplace activities.

**Green on the outside.**  
Environmentally conscious companies view themselves as part of the greater community. They view stakeholders—institutional investors, environmental groups, and nongovernmental organizations—not as adversaries, but as partners critical for fulfilling green goals. Green companies also make a point of staying attuned to what future supply chain requirements and regulatory measures are likely to be.

While Europe and many other nations worldwide have begun to phase out incandescent bulbs, the GCC regions still lack a policy for moving to energy efficient lighting. Philips has taken the lead on this issue, voluntarily phasing out the sale of home-use incandescent lamps in the GCC to reduce carbon emissions, according to Louis Hakim, chairman of Philips Middle East and vice president of Royal Philips Electronics. Hakim said, "Philips is also calling for action to accelerate the renovation of existing infrastructure and buildings in cities, in the battle against climate change.<sup>12</sup>"

Regardless of whether a company is a small business or a Fortune 500 giant, there are any number of ways to grow

greener while improving revenues and profits. It's clear that the greenest companies yield an important source of competitive advantage. And, given the growing number of consumers who are putting their wallets where their environmental conscience is, it won't be long before green becomes critical to staying in the game.

## *How green is your operational strategy?*

### **Ten key questions to ask**

- Do you understand customers' environmental requirements?
- Is "green" considered during product conception, design, and development?
- Do you actively seek more environmentally friendly raw materials?
- Is environmental conscience a criterion for selecting suppliers?
- Is your carbon footprint a consideration for improving your manufacturing operations?
- Do customer and supplier agreements include green goals?
- Do you measure the environmental impact of your end-to-end supply chain operations?
- Have you optimized your distribution network to reduce environmental impact?
- Is your reverse supply chain as efficient as possible?
- How much of your product can be and is recycled?

<sup>12</sup> <http://www.bme-global.com/Philips%20participates%20in%20GEF.pdf>

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