



YOU CAN GO GREEN

EVEN DURING A GLOBAL RECESSION

Manufacturing and supply chain managers are under pressure to reduce costs in the face of lower sales volume. At the same time, they are expected to plan for new sustainability initiatives, which are being driven both by the rising tide of consumer awareness and more recently, by legislation that has been proposed in Congress and the White House. Because of the volatility of the market, pragmatic supply chain managers are reluctant to get ahead of the curve when it comes to the greening movement. One reason is because focusing on the financial bottom line is as crucial now as it ever has been.

Priorities require that survival comes first, profitability comes second, and green initiatives get addressed where feasible. Yet, the relative importance of these priorities is changing. If too little attention is paid to sustainability and green initiatives, profitability and survival can be put at risk. That is why the most successful leaders are finding ways to align priorities and pursue initiatives that simultaneously address the critical financial objectives and growing green objectives of their company.

CORPORATE FOOTPRINT

One of the biggest impacts on both financial performance and sustainability measures is the manufacturing and dis-

tribution footprint of a company, including how it either facilitates or constrains operational flexibility. Fortunately, it is often a natural consequence that by improving financial performance of the supply chain footprint, a company also reduces the environmental impact. This typically comes in the form of lower miles travelled, improved manufacturing efficiencies and more efficient material consumption – all of which reduce costs and environmental impact. However, there are times when difficult trade-offs need to be evaluated and hard decisions made. In these cases, it is not always evident whether a change to the supply chain footprint to improve performance will have a small or large impact on sustainability measures; or on the flip side, if specific sustainability improvements will have a small, large or no impact on long-term financial performance.

BEST OPPORTUNITIES

Here is a quick guide to help companies understand how to quickly and effectively align supply chain improvement initiatives with sustainability initiatives.

1. Infrastructure – The structure of a supply chain network determines 75 to 80 percent of a company's supply chain costs. Therefore, it is the biggest opportunity to reduce those costs. Once manufacturing and distribution assets are in place and major transportation contracts are negotiated, companies are limited in how they can improve operations and efficiencies in the supply chain. The time to discover the biggest supply chain improvement opportunities is when a company is assessing or re-assessing the infrastructure that currently exists. This includes manufacturing capability, raw material sourcing, major transportation lanes, distribution facilities and delivery

to customers. By having stable and robust processes in place to evaluate and optimize the supply chain infrastructure, companies will be able to realize maximal cost savings and minimize the environmental impact to position their organizations to run a truly optimal operation – both now and in the future.

It is a natural extension of supply chain infrastructure planning processes to contain environmental impacts and measures alongside financial objectives. Standard practices include environmental impact statements when selecting manufacturing and distribution sites for new construction. The next wave of joint financial and environmental analysis also consists of:

- > Structuring supply chain networks to reduce the length of transportation hauls to minimize both cost and emissions
- > Consolidating manufacturing/distribution sites to improve utilization and reduce expenses and footprint
- > Evaluating fully on-shoring vs. off-shoring, taking into account the full supply chain impact both in terms of cost and environmental impact
- > Considering raw material consumption and sourcing to find alternate raw materials and suppliers to reduce cost, improve reusability and minimize consumption of non-renewable resources.

2. Manufacturing – While supply chain infrastructure is the key driver to achieving long-term financial and environmental efficiency, there are still plenty of opportunities to align financial and environmental objectives within manufacturing plants. Certainly, process engineers are making improvements every day, specific to company operations.

Here are a few interesting initiatives that are applicable across all industries:

- > **Scheduling** – In co-operation with energy suppliers, manufacturers are strategically scheduling energy-intensive operations during non-peak hours. This vertical integration of suppliers and manufacturers allows them to reduce costs and environmental impact only by working in concert with one another.

> *“Green” plant facilities* – As new, more efficient and greener technologies slowly replace older ones, leading companies are strategically re-assigning production allocations to “greener” plants over “brownier” ones. This includes evaluating the trade-offs between capital expenditures, improved operating costs, and environmental impact to understand the appropriate time and place to implement newer manufacturing technologies.

> *Production scheduling* – Applying the latest technology in production scheduling enables companies to increase throughput at existing plants. This typically improves operating efficiencies, reduces the need for capital expansion and lowers the environmental impact by doing more for less.

3. Transportation and distribution – Transportation and distribution operations are areas extremely well-suited for companies that seek simultaneous cost and environmental-impact reductions. For each mile less travelled, companies save dollars and reduce emissions.

Proactive companies are using the following strategies to reap these benefits:

> *Territory layout and fleet planning* – Changing economic conditions means that the customer base and ordering patterns of these customers is in regular flux. Being able to quickly re-align transportation fleet and delivery schedules to meet these new demand patterns with the fewest number of vehicles and the most efficient delivery routes, takes constant planning.

> *Scheduling of pick-up/delivery* – Idling trucks are bad for the environment and the bottom line. By proactively scheduling to minimize wait times, companies win on both fronts.

> *Choice of mode of transport* – There is a lot to consider when deciding on the best transportation. Do the volumes warrant considering rail over truck? Should you move larger volumes to distribution points closer to the customer before putting them on smaller route delivery trucks? Understanding the trade-offs of capital investment, operating costs and,

when prudent, environmental impact is essential to make the right decisions.

> *Reverse logistics planning* – If returns of containers, spent products or damaged goods are a significant part of your supply chain, congratulations! You’re already improving sustainability by recycling. However, planning the efficient return of these materials through the supply chain can have a big impact on costs and the carbon footprint.

GETTING STARTED

Once a company chooses the area(s) where it can have the biggest impact, it is important to select several “alternate futures” that will serve as the frameworks for plans. These frameworks may differ from each other in the assumptions of energy costs, the pace of sales volume changes or the regulatory environments that are chosen in the future. Within these frameworks, minimize the cost and environmental impact by identifying where these goals are complimentary and secondly by identifying and quantifying where and how trade-offs

can be made. These plans need to be updated as macroeconomic and macro-sustainability factors change. Given the confluence of the current economic and regulatory trends, the manager will look for opportunities that highlight a balanced combination of footprint and cost reduction. For example, a building products manufacturer was able to reduce the carbon footprint of their distribution network by 17 percent at the same time they optimized their sourcing and carrier selection to reduce their annual total delivered cost by more than \$2 million.

The key to success is to use a data-based decision process that marries operational cost data with the company’s operational environmental impact data. Only by looking at both sets of data in an integrated fashion can companies score two-for-the-price-of-one in the parallel games of profitability and sustainability. **mt**

Alan Kosansky is president and **Ted Schaefer** is director of logistics and supply chain services with Profit Point, a company that specializes in helping businesses optimize complex processes. The authors can be reached at 866 347-1130 or by visiting www.profitpt.com.

