

**ECO-BRIEF**

**The Environmental Product Life Cycle:  
Environmentally Friendly Manufacturing**

Sponsored by: HP

Matthew Eastwood  
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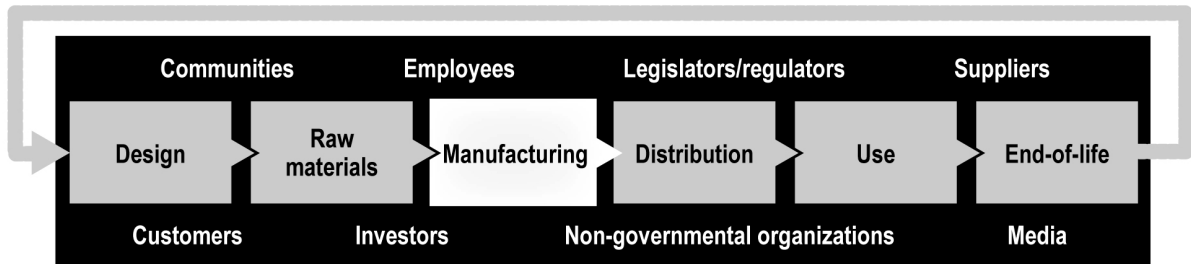
**EXECUTIVE SUMMARY**

Since its founding in the 1930s, HP has recognized the importance of being a responsible member of its community, and this vision remains in place today for the company as well as its employees, customers, and partners across the globe. HP recognizes that part of this vision is building and bringing to market environmentally friendly products, with a key component being environmentally friendly manufacturing. HP addresses this vision through its global citizenship program, in which it works with suppliers and partners around the globe to introduce environmentally responsible manufacturing processes. For a graphical depiction of the role of manufacturing in the IT product life cycle, see Figure 1.

**FIGURE 1**

HP Approach to Reducing Environmental Impacts and Engaging Stakeholders Across the Product Life Cycle

Reducing environmental impacts and engaging with stakeholders across the product life cycle



Source, IDC, 2007 adapted from HP

## BACKGROUND

Successfully implementing a global citizenship program is not easy, particularly in an industry that changes as fast as the IT infrastructure marketplace. New customer requirements are constantly emerging that can have a significant impact on product design, manufacturing, and distribution. It is critical for suppliers to balance environmental design and manufacturing goals with other customer requirements such as product quality, reliability, and price. This eco-brief examines HP's approach to environmentally benign manufacturing today and how it implements its views of social responsibility through the HP Supplier Code of Conduct.

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## HP Approach

### *Environmentally Benign Manufacturing*

Environmentally benign manufacturing encompasses the technologies, operational practices, and manufacturing strategies necessary to ensure sustainable production. Its goal is to introduce benign materials into products while reducing the amount of waste through remanufacturing, reuse, and recycling. This approach is particularly important for IT products because of their relatively short life spans and their expensive and complex manufacturing processes. Additionally, the types of raw materials incorporated into IT products such as monitors, disk drives, circuit boards, printers, and complete computer systems pose particular challenges from an environmental perspective. For example, incorporating something as seemingly simple as lead-free solder requires significant increases in temperatures during the manufacturing process, which can negatively impact componentry and complicate recycling initiatives.

In 1992 HP created Design for Environment (DfE) guidelines to guide the environmental performance of manufacturing processes of partners throughout its supply chain. Today, HP continues to work with partners and competitors alike to ensure that alternative technologies are fully evaluated when determining trade-offs between product functionality, reliability, safety, cost, and environmental impact.

### *Social Responsibility*

Being an effective and responsible global citizen requires not only that an organization make a commitment to effective corporate governance and business ethics but also that it put the commitment into daily practice. For HP, social responsibility translates to a focus on three key areas:

- ☒ **Reducing the environmental impact of its products.** HP aims to reduce the environmental impact of its products by placing environmental considerations at the forefront of all product and manufacturing decisions. By minimizing the impact of raw materials used in its products, reducing energy requirements, and incorporating recycling considerations into product design, HP has significantly increased its product reuse and recycling levels year over year.

- ☒ **Transferring principles to its worldwide supply chain.** The sheer size of HP's supply chain — one of the largest in the IT industry today — enables the company to broadly extend its social and environmental standards. Through its Supply Chain Social and Environmental Responsibility (SER) Policy, HP encourages its top 600 suppliers to develop internal management capability and build continuous improvement into their manufacturing facilities.
  
- ☒ **Increasing user access to technology.** Finally, HP continues to work to reduce the global digital divide in which only 15% of the world population has access to personal computers and the Internet. HP believes this is an important consideration in addressing social and economic inequality in both underserved communities and developing countries.

### ***Supplier Code of Conduct***

Growth in manufacturing outsourcing, coupled with an increasingly global supply chain, underscores the importance of working collaboratively to further the goals of social responsibility. HP teamed up with a number of other IT suppliers to develop standards focusing on labor and employment, ethics, environmental protection, and health and safety practices to apply to suppliers throughout the global supply chain. For example, HP's Supplier Code of Conduct includes universal bans on child labor, employment discrimination, and disciplinary wage deductions, which in many cases far exceed the legal requirements in the supplier's home country. HP actively leads and participates in the Electronic Industry Code of Conduct (EICC) and the Global e-Sustainability Initiative (GeSI) to eliminate redundant and inefficient assessments, audits, and reporting for common suppliers.

HP continues to evolve its corporate social responsibility program, drawing on its own manufacturing expertise to train its business partners as well as the experience of industries that were on the pioneering edge of socially responsible manufacturing such as apparel and agriculture. The resulting program now includes virtually all members of the HP global supply chain. HP performs regular supplier audits to ensure compliance, with HP sourcing managers scoring suppliers based on social responsibility, technology, delivery and responsiveness, pricing, and quality. The goal of the program is to align the business goals of HP and its suppliers while overcoming potential cultural barriers and ensuring success for the supplier and its employees.

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### **IDC Analysis**

For 15 years, HP's DfE program has pursued three priorities: energy efficiency, materials innovation, and design for recyclability. Although many companies are recognizing the benefits their brands receive from effective eco-responsibility programs, the primary goal for most organizations — HP included — is satisfying customer demand for these programs. The most important buying criteria for consumers and businesses alike with regard to IT products are still price, performance, and quality. However, it is clear that environmental awareness is on the rise across the globe, from Europe to Asia to the Americas. As a result, customers are beginning to consider global citizenship issues — in particular eco-labels and recycling programs — when selecting IT products. Such awareness is particularly

evident among public sector customers, but IDC is beginning to see consumers and businesses both in Europe and in Asia pay attention to this issue. Further, IDC believes that a strong supplier code of conduct is an important extension of the IT brand and will be important to maintaining a loyal customer base in the future.

## **CONCLUSION**

While the effort to reduce the environmental impact of IT products extends to all stages of the product life cycle, the manufacturing phase is of particular importance. Consumers and business customers alike are becoming far more aware of global citizenship issues to the point where basic offerings such as eco-labels and support for recycling programs are becoming fundamental requirements for suppliers looking to participate in today's IT marketplace. In response, HP is working closely with supply chain partners around the world to facilitate a supplier code of conduct that addresses environmentally friendly manufacturing processes and creates positive results for customers, partners, employees, and HP.

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## **HP Products and the Environment Document Series**

This eco-brief is part of a series of IDC documents commissioned by HP to discuss its environmentally aware policies and practices. This series includes a core white paper, *HP Products Built to Protect the Environment*, as well as standalone eco-briefs focusing on specific product areas: product design, manufacturing, power and cooling, and product end of life.

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