

# Mainstreaming Green Chemistry

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Green Chemistry and Commerce Council (GCC3) Innovator's Roundtable



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# David Packard's garage – Where Silicon Valley started

HP is the world's largest technology company, delivering innovation in printing, personal computing, software, services, and IT infrastructure.



David Packard creating exhibits for the Monterey Bay Aquarium at his forge in Big Sur in 1984 at the age of 73.

Source: National Geographic





# Size and Scope – Supply Chain Complexity

- Fortune 10 – U.S.
- Fortune 26 – Global
- Operate in 170 countries
- ~330,000 employees
- ~\$120 billion revenue (2012)
- One of the largest supply chains in the world
- ~400,000 employed by suppliers
- ~150,000 sales partners
- ~210,000 service partners
- ~88,000 retail locations



# Our strategic focus areas

## Education

We empower the next generation of innovators with breakthrough products and solutions that advance science, technology, engineering, and math teaching and learning.



## Environment

We're transforming the ways people live and work to be more sustainable, with tools and solutions that allow them to achieve more with less.



## Global health

Through our partnerships, technology, and mobile health solutions, we're making a positive impact on global health, helping to save lives.



# Our guiding principles

We believe corporate success is wholly intertwined with being good environmental and social stewards.

Find sustainable solutions that balance growth with demand

Advance how people live and work offers unprecedented opportunities for innovation and leadership.

HP is seizing this opportunity by applying our scale, talent, partnerships, and portfolio to be a positive force for change.



# We build reputation and engagement

## Community engagement

We make a positive impact in the communities through our more than 330,000 employees who give their time and talent to make a difference.

## Stakeholder engagement

We liaise with influential environmental and social stakeholders to demonstrate brand value and corporate reputation.

## Operations

Our operations team follows high standards and measures performance by the criteria of a balanced scorecard.





# Building Green Chemistry into an Existing Framework

## Filtering burdensome chemicals from new products

DfE Criteria since 1998

General Specification for the Environment

Executive support

## Assessing Risk of Existing Chemicals in Use

Alternatives Assessment using Green Screen®

Exposure scenarios

LCA

## Transparency on what we know and where we want to go

Global Citizenship Report (GCR) with Materials Timeline

Using hazard categories to promote design freedom



<http://www8.hp.com/us/en/hp-information/global-citizenship/index.html>



# GREEN SCREEN

HP is the world's leading practitioner of the **Green Screen** tool. This tool, developed by the NGO Clean Production Action, is an open source tool used to identify substances that are inherently less hazardous for humans and the environment. It enables informed decisions to substitute materials eliminated from our products.

HP is championing wider acceptance of the Green Screen within industry, the environmental NGO community and regulatory bodies.





# Mainstreaming Green Chemistry - The 10 year vision

Green Chemistry = Chemistry

What needs to change?

What can GC3 do to help make it happen?

Short-term (1-2 years)?

Long-term (3-5 years)?



# 2013 GC3 business statistics

98 registrants

31+ companies

14+ sectors

> \$ 890 billion in revenue (2012)\*

Almost 3 million employees\*



\* Not including chemical manufacturers

# Thought-starter on Moving to Inherently Benign Chemistry

## A simple business case:

- Choosing between innovation and a safer chemical seems like a false choice
- Safer chemicals = Innovation (Green Chemistry Principle #4)

(I want both, so do my co-workers, my channel partners and my customers)

- End the push of environmental burden down the supply chain – my compliance costs should factor in to the price of the chemical
- A less burdensome chemical has better value for down stream users
- Consider the regulatory burden of the next actor in the supply chain





# Thoughts on Moving to Inherently Benign Chemistry

Voluntary programs work best when tied to preferential procurement

Regulation levels the playing field

- Harmonization is preferred – lowers cost of compliance and reduces complexity
- Cost penalty for jumping early without regulatory driver

NGOs are essential participants

- Educate consumers
- Keep industry honest
- Make government enforce the law





Step out of the  
Hyperbolic  
Chamber



# Thank you





## Learn more about Sustainability and Social Innovation

[www.hp.com/environment](http://www.hp.com/environment)  
[www.hp.com/social-innovation](http://www.hp.com/social-innovation)  
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# Environmental sustainability in action

## Energy-efficient portfolio

Improving performance and efficiency from desktop to data center

## Reuse and recycling

Developing industry-leading programs that reduce waste

## Materials innovation

Reducing amount of materials used and substances of concern

## Manage carbon footprints

Reducing GHG emissions for HP, customers, and suppliers

## Analog to digital printing

Helping businesses print only what they need, when they need it

## Sustainable data center

Rethinking how data centers are designed, built, and managed

## Transporting products

Shifting to efficient delivery modes; reducing fuel use and emissions

## Water consumption

Introducing water conservation and efficiency measures globally



# Environment

Positive Impact: HP's drive to help conserve more than we as a company consume



## Portfolio of products, services, and solutions

Help people achieve more with fewer resources and less waste.

Increased energy efficiency of today's HP products by 50%<sup>1</sup>



## Partnering with the supply chain

Collaborate to promote sustainability throughout the IT supply chain.

Produced more than 1 billion Original HP ink cartridges using recycled plastic<sup>2</sup>



## Performance of our operations

Innovate to reduce HP's environmental footprint and drive sustainable growth.

Reduced greenhouse gas emissions by 20% in 2011 compared with 2005

<sup>1</sup> The average energy consumption of HP products is estimated using high-volume product lines representative of the overall shipped product volume. Energy consumption has been estimated in 2005 and annually since. The high-volume product lines include notebook and desktop computers, inkjet and LaserJet printers, and industry-standard servers.

<sup>2</sup> Total cartridges as of October 2011. Many Original HP ink cartridges with recycled content include at least 50% recycled plastic by weight. Exact percentage of recycled plastic varies by model and over time, based on availability of materials.





# Environmental Leadership



HP ranked first among technology companies and placed fifth overall among the Best Global Green Brands



FTSE4Good

HP has been on the FTSE4Good Index since 2003



HP ranked #1 in Electronics sector of 2011 Climate Counts Company Scorecard



HP listed on the Carbon Disclosure Project's S&P 500 Carbon Disclosure Leadership Index



HP ranked #2 on the 2011 Top Green-IT Vendors



HP listed on DJSI North American Index



HP ranked #1 in the 17th Greenpeace Guide to Greener Electronics (2011)



HP listed in top of rankings from 2009-2011; in 2011, HP kept the #2 spot on the U.S. 500 list, and is one of three technology companies in the top 15 of the Global 500



HP received Carbon Trust Standard 2010



# Social Innovation Leadership



Just means Social Innovation  
Award for Early Infant Diagnosis  
program

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HP LIFE program selected by CSR  
Europe as best practice in CSR

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Global Business Coalition Health  
Award for disease surveillance  
and mapping system in  
collaboration with PING

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Recognized by the WSJ Europe  
Innovator Awards for  
partnership on Global  
Authentication Service

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Computerworld Honors Award in  
Health category for Early Infant  
Diagnosis program

