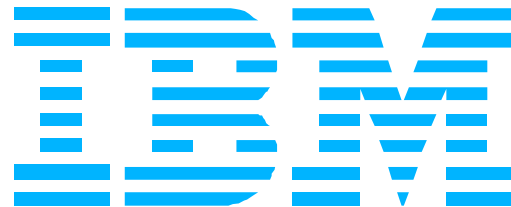


**US Conference of Mayors'
MWMA Annual Meeting**

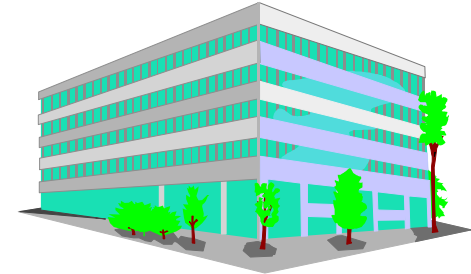
**March 6, 2001
Washington, DC**

**Reducing Electronic Waste
IBM Perspective**





31 Manufacturing, Development, and Research sites in 14 countries.



311,000 Employees

Product and Service Diversity



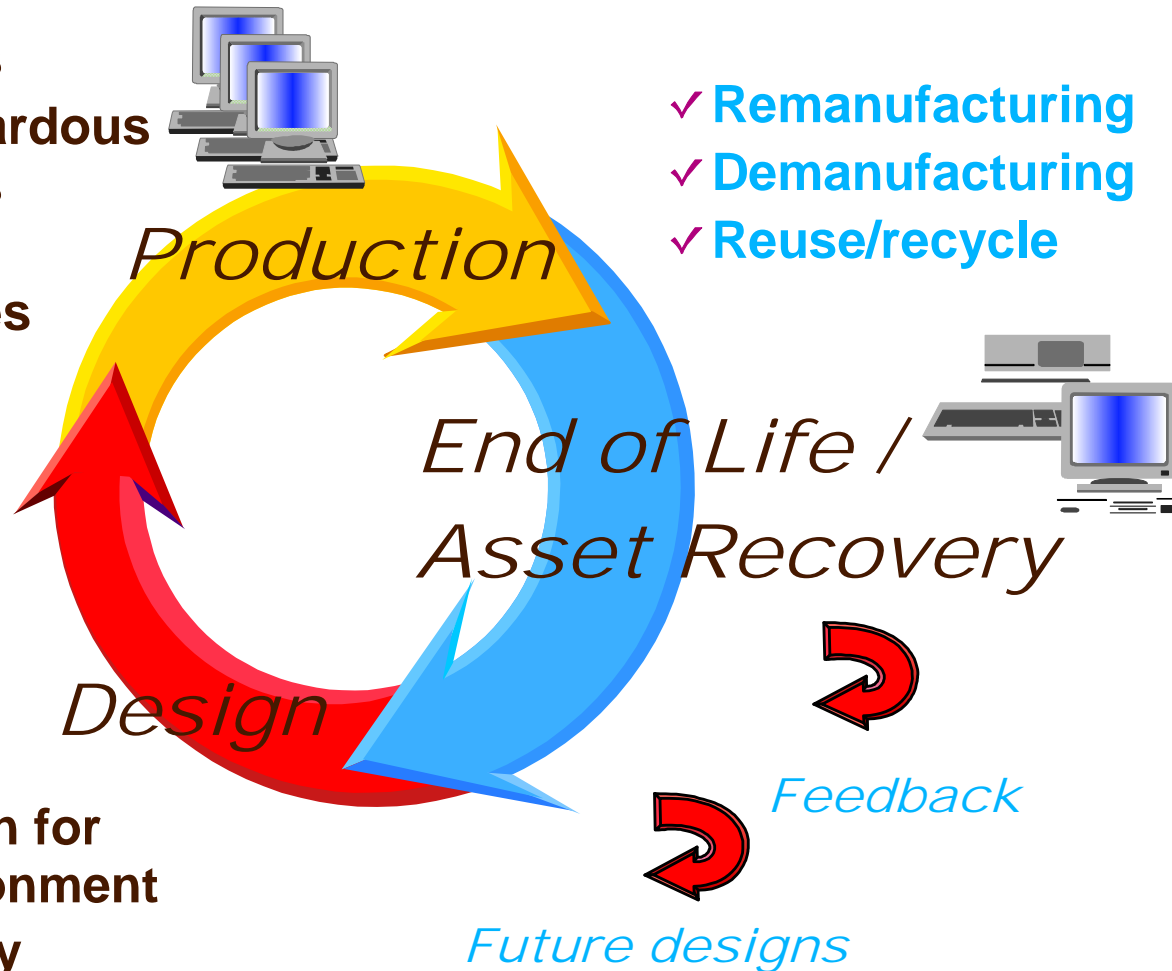
**\$88.4 billion in 2000 revenue;
\$5.7 billion annual research and
development investment**

The World's Largest Information Services Company



Optimize Total Materials Life Cycle

- ✓ Recycled materials
- ✓ Non-hazardous materials
- ✓ "Green" processes



- ✓ Remanufacturing
- ✓ Demanufacturing
- ✓ Reuse/recycle

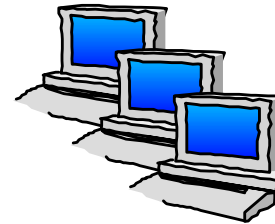
- ✓ Design for Environment
- ✓ Energy efficiency



Goal

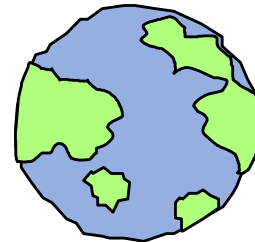
- Provide environmentally sound, cost effective product disposal options for our customers worldwide

"All products"



"All customers"

"All places"

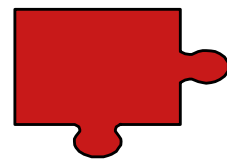




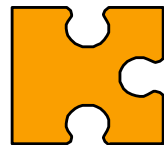
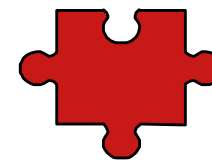
Diversity in the Solutions



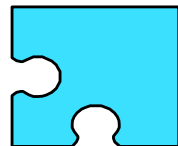
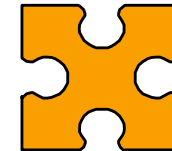
Solutions will vary by geography based on differences in these key factors:



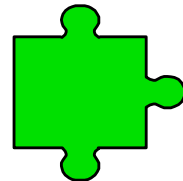
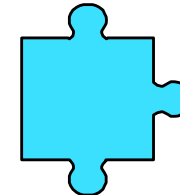
Recycling
Infrastructures



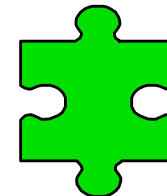
Collection Programs



Regulations

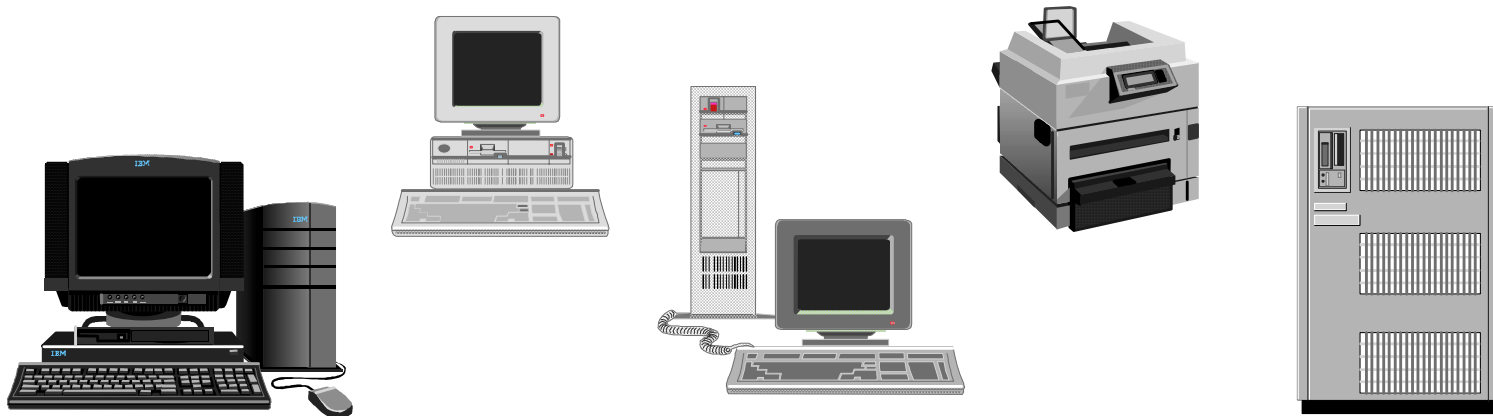


Customer Demand





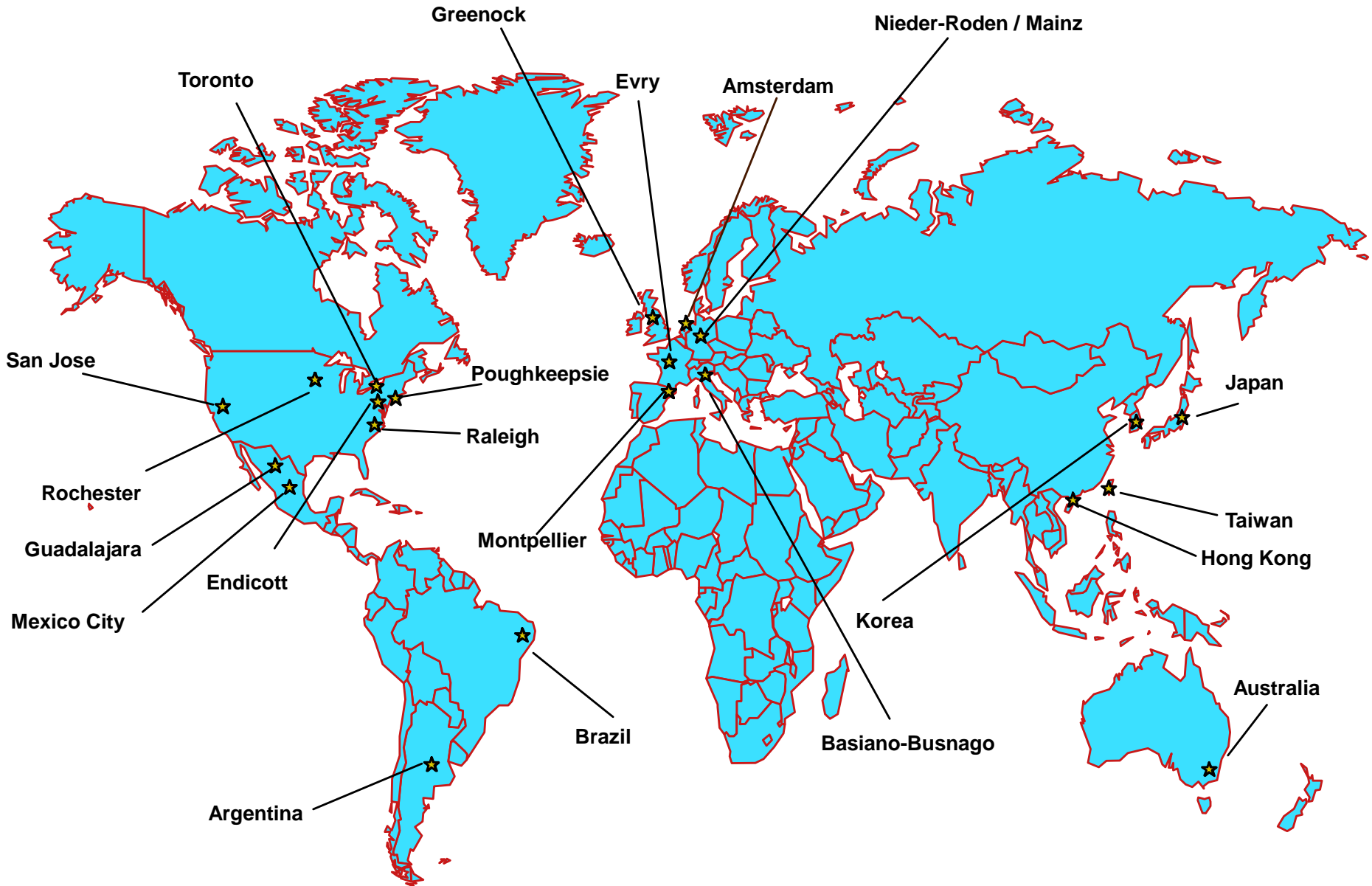
Commercial Offerings



- **Systems for commercial equipment largely in place**
 - Manufacturer takeback programs
 - Third-party equipment recyclers
- **IBM has commercial takeback offerings in 14 countries**
 - Europe, U.S., Japan
 - Accommodation offerings available in other countries

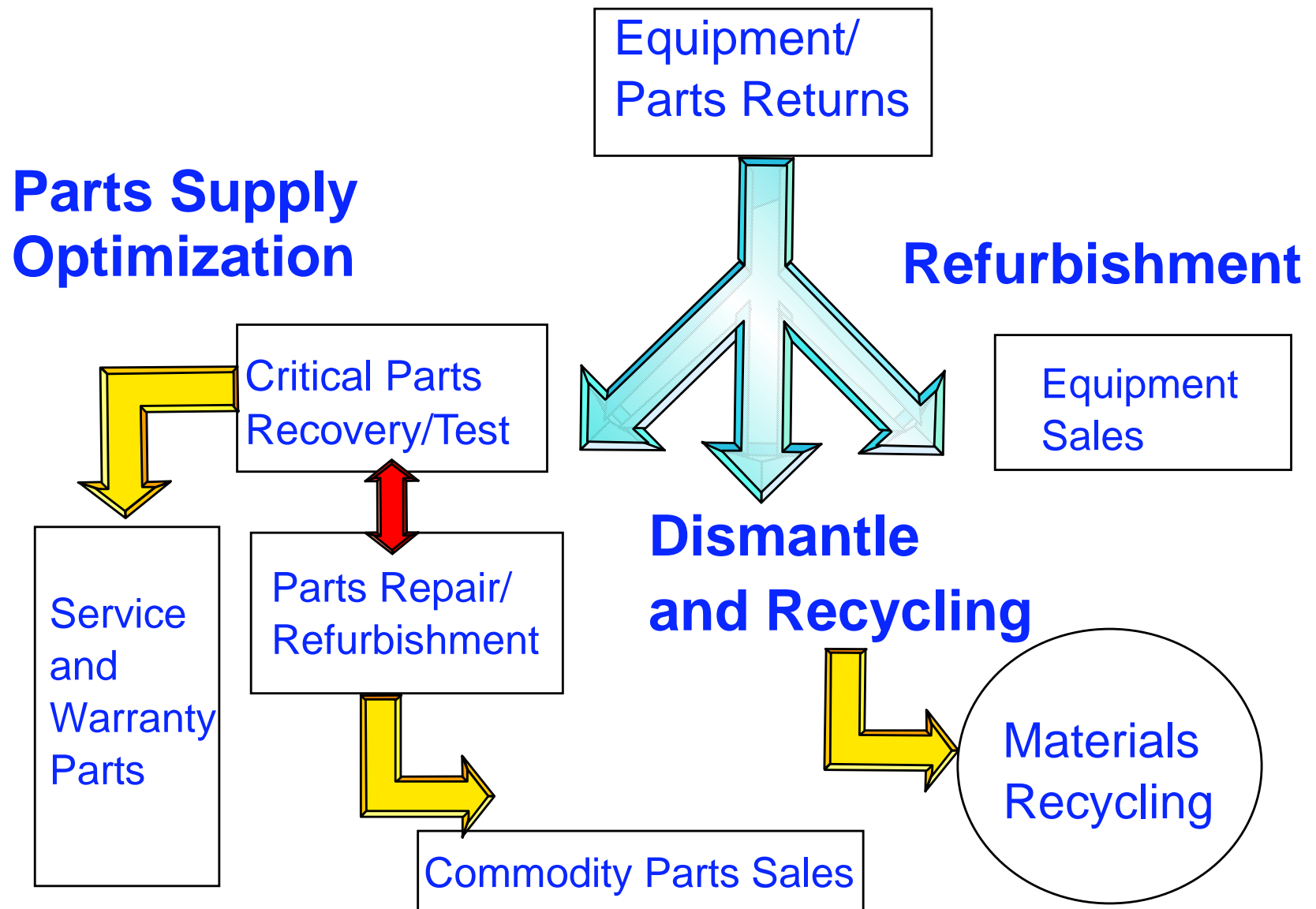


IBM Demanufacturing Infrastructure



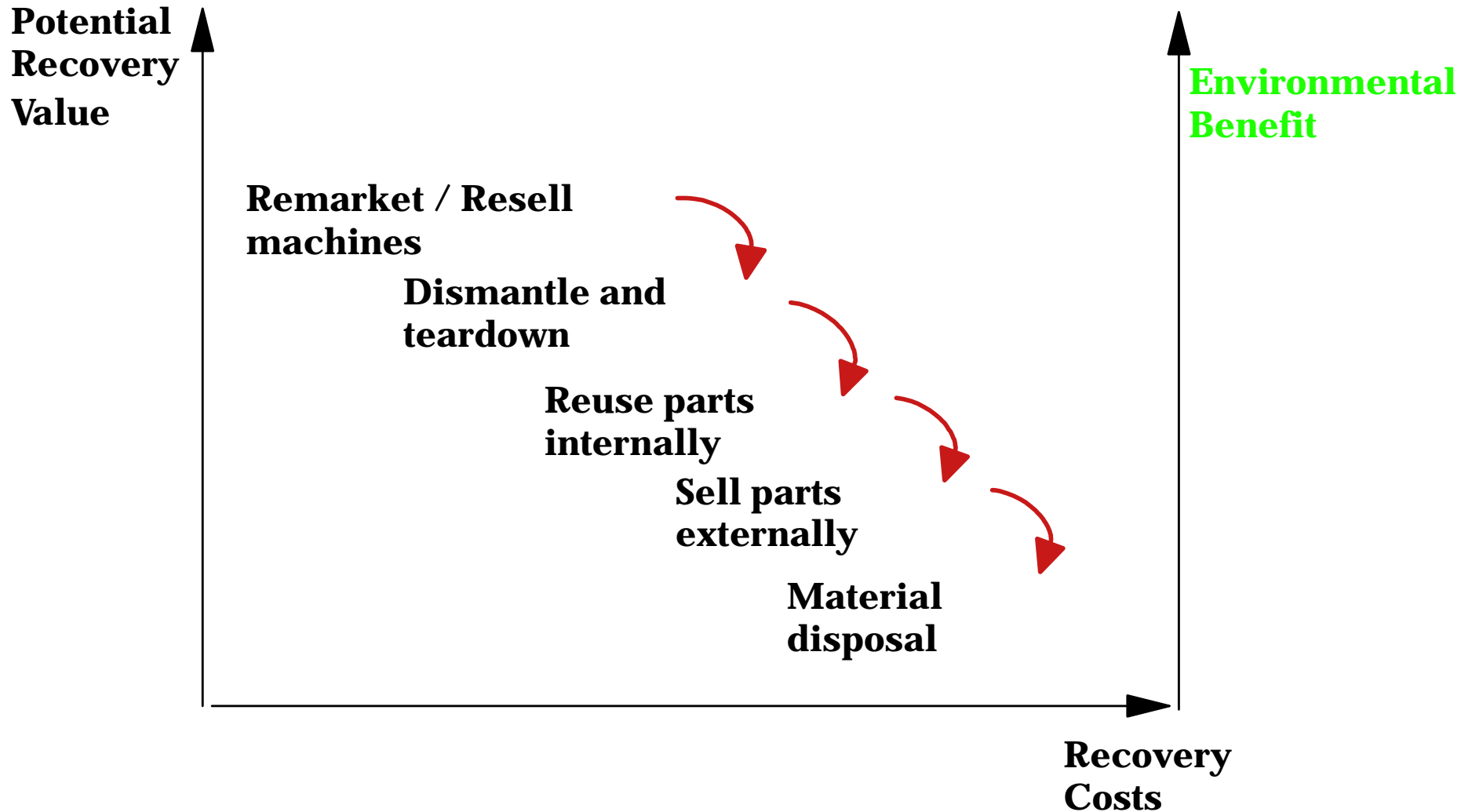


Parts / Equipment Return Process



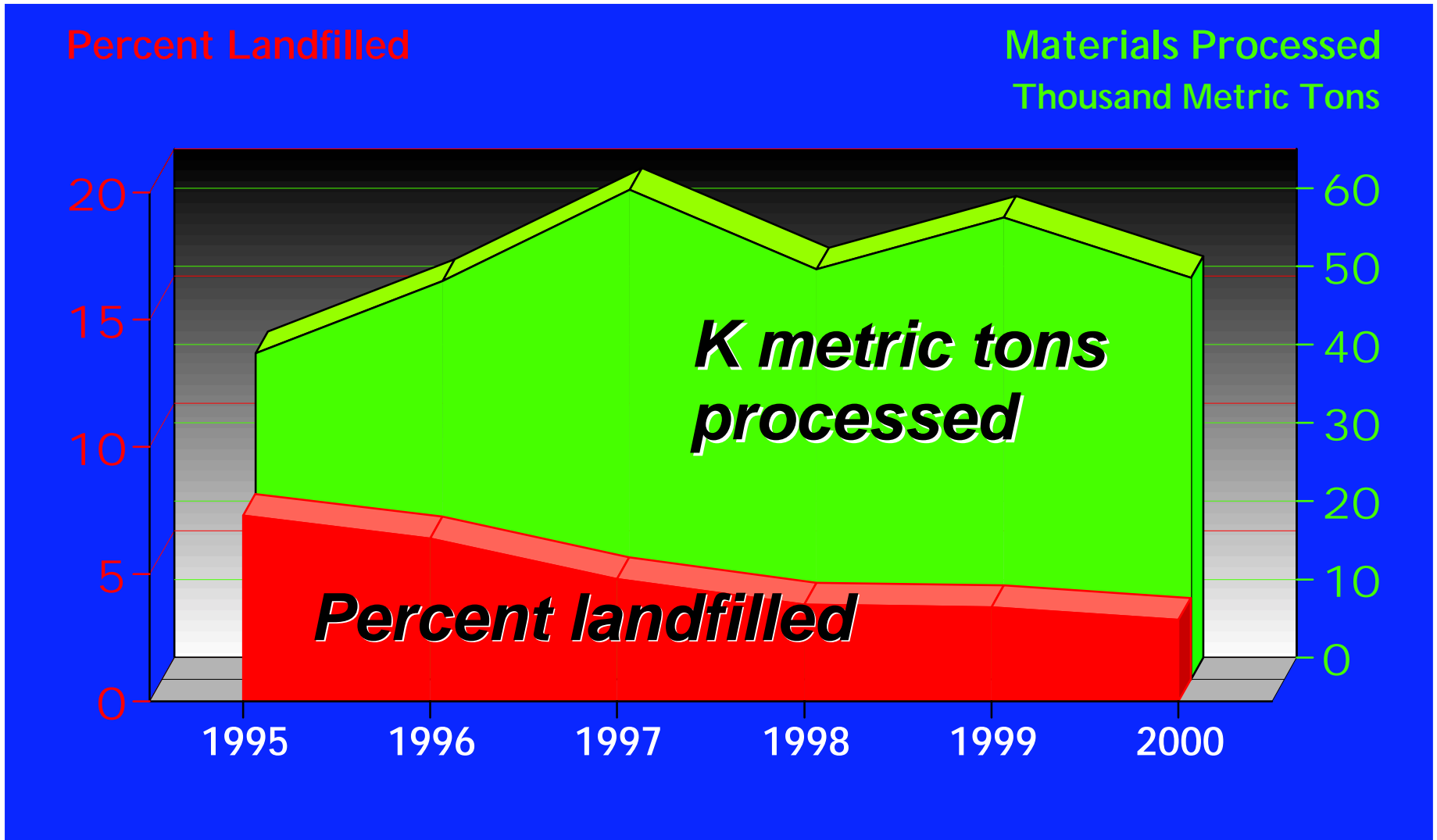


Product Disposition Hierarchy





Worldwide Landfill Reduction Trend

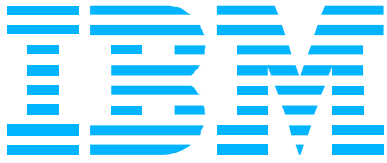




Consumer Offerings

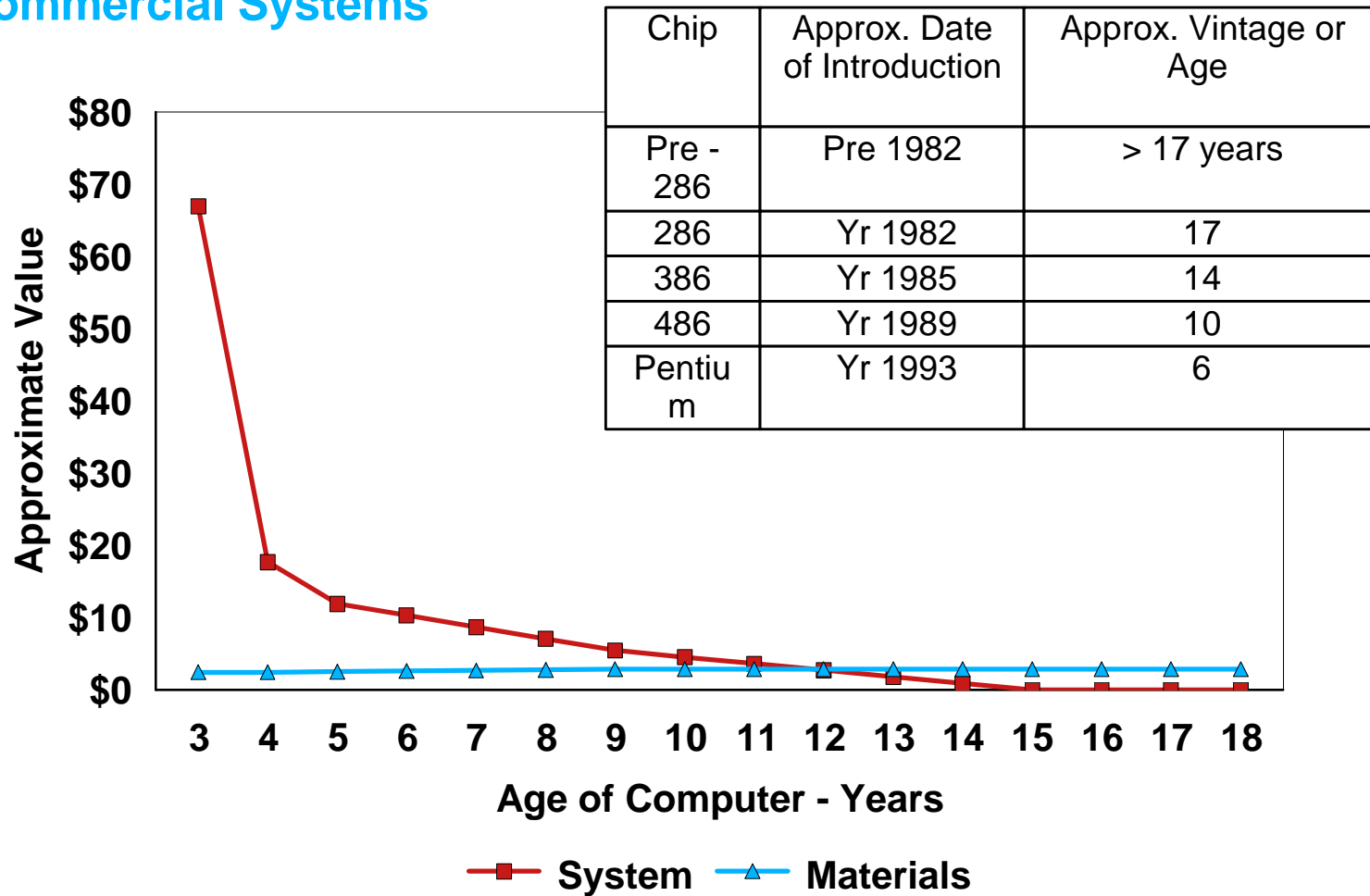
- **Consumer markets are bigger challenge**
 - Low Value (Typically exceeds 10 years old)
 - ▶ No Parts Value
 - ▶ Materials value of PC < 3\$
 - Dispersed among millions of households
 - Collection and transportation are keys





Personal Computer Recovery Value Versus Machine Age

Commercial Systems

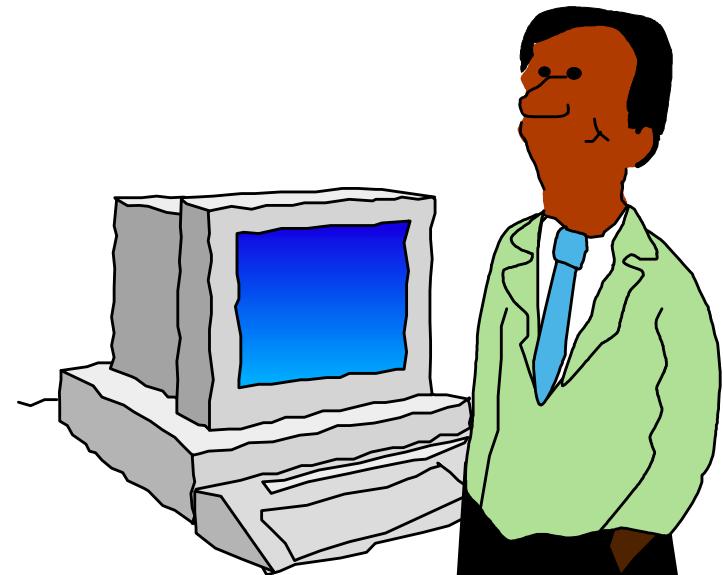
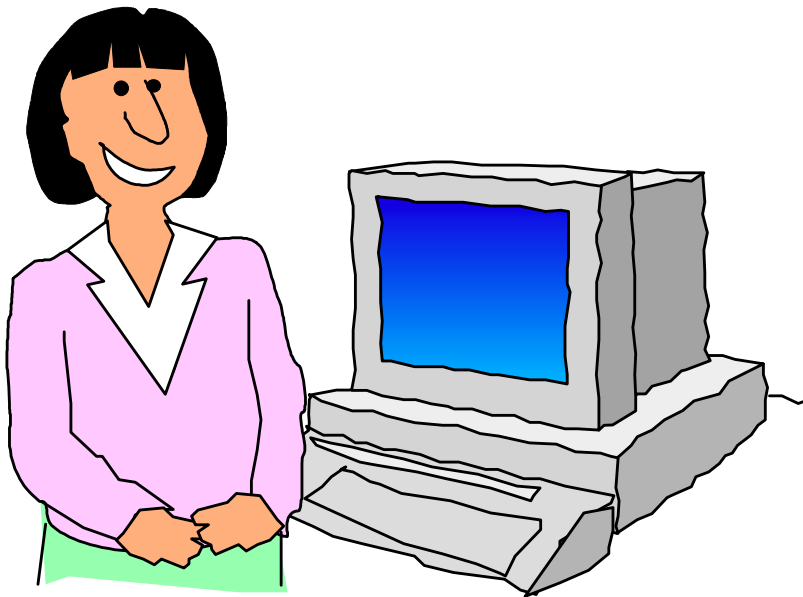




IBM Announces New Product Recycling Programs in U.S. and Canada

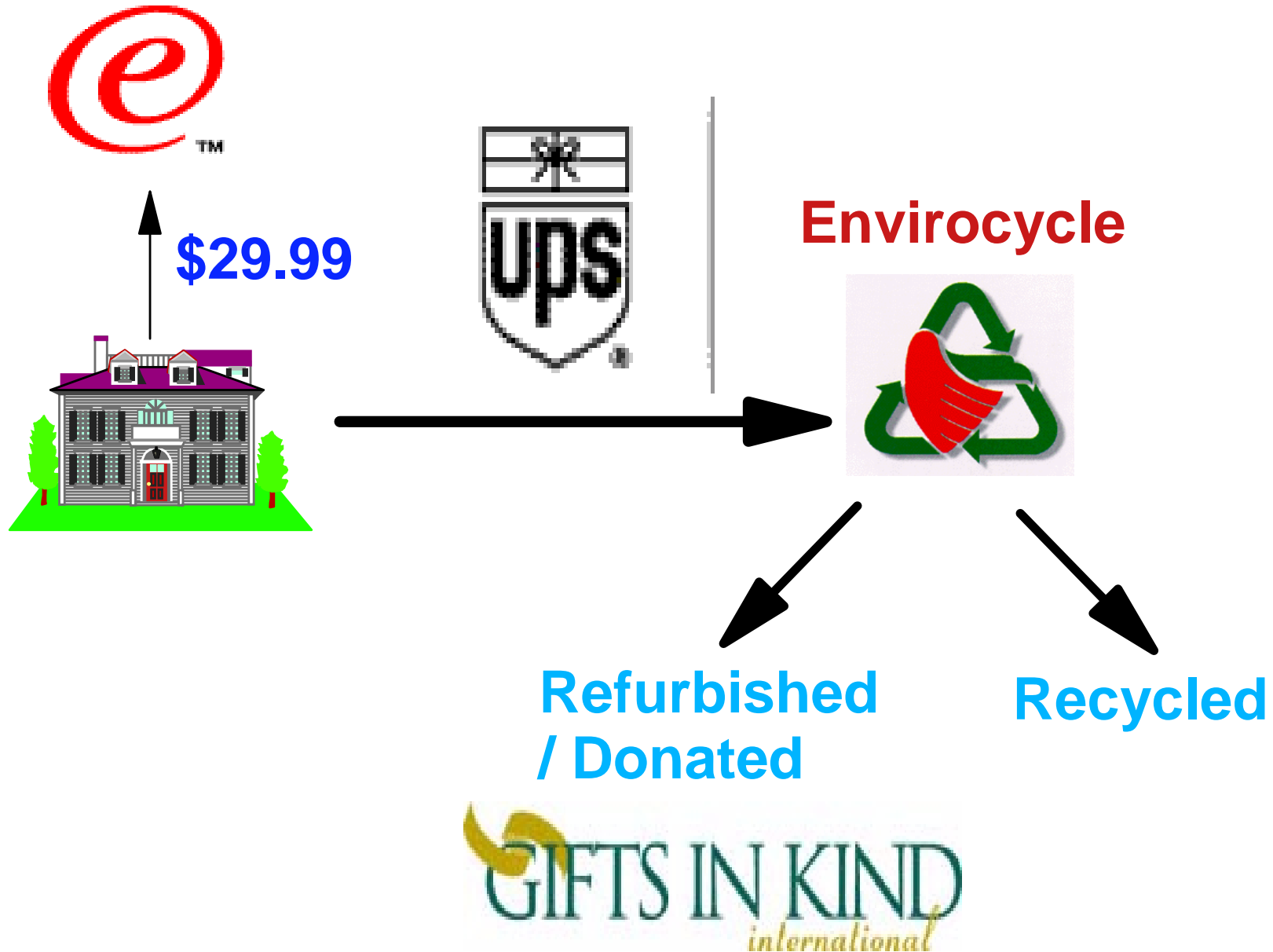
IBM PC Recycling Service

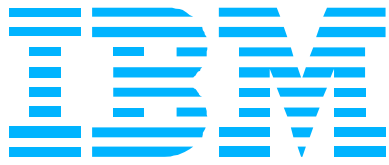
for consumers and small businesses





IBM PC Recycling Service in U.S.





Purchasing PC Recycling Service

Customers can purchase the service:

- When buying any new IBM system
- Separately



Online at:
www.ibm.com/shop



By calling:
1- 888 - SHOP - IBM



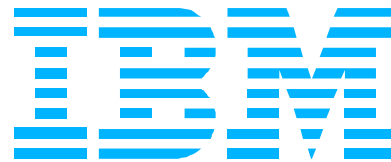
IBM PC Recycling Service in Canada



Discount

$\leq 8\%$

on new



products

Computers
for Schools





Purchasing PC Recycling Service



Online at:
pc.ibm.com/ca

By calling:
1-877-553-6488



Visiting:
29 IBM Stores across Canada



IBM continues to work with trade associations and the government to support end-of-life management options.



Principles for Long Term Solutions

- **Must bring cost down to increase consumer participation**
 - Local / regional recycling solutions to minimize transport
- **Industry wide solutions for recycling and disposal are best**
 - Increased economies of scale
 - Sorting adds significant cost
- **Municipal collection systems will benefit the consumer**
 - Existing infrastructure most cost effective
- **Fair and equitable financing process needed**



Summary

- **IBM supports Government / Industry efforts to develop recycling solutions for electronic products**
 - Systems for commercial enterprises largely in place and functioning well
 - Consumer markets are greatest challenge
- **Shared responsibility is key for development of cost effective and efficient systems**