



Sustainability Matters – Beyond Operational Carbon Reduction

Food for Thought from IBM

EPA Climate Leaders Panel – October 8th, 2008

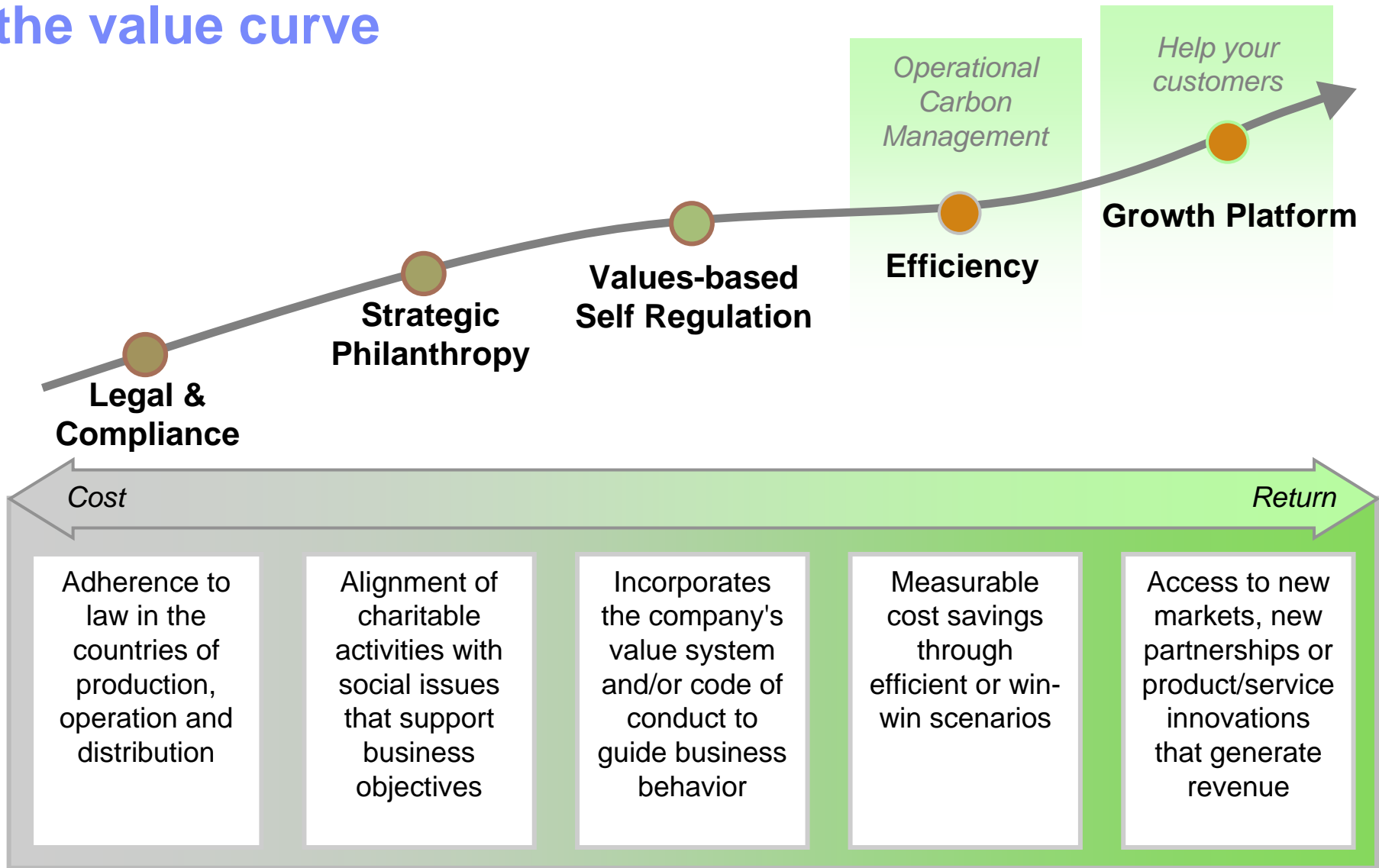
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Innovation and Sustainability Solutions

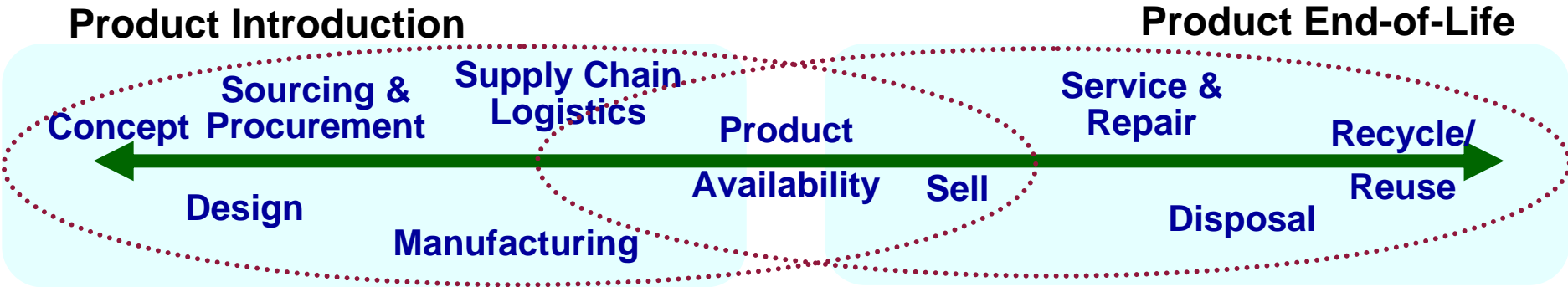
IBM Industrial Sector

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There is a shift from cost to return as we ascend the value curve



In response, Industrial Sector companies are implementing *Green Initiatives*, especially within the areas of PLM and SCM.



Also Green IT... Carbon Management ... Water Management

IBM is Proud of its Environmental Heritage



1992

IBM becomes charter member of EnergyStar program



2000

Charter member of World Wildlife Fund's Climate Savers Program

2005

IBMers "jam" on innovations for a better planet, and IBM invests \$20M

2007

Founding member of The Green GridSM



40%

Reduction in IBM's total worldwide CO₂ emissions attributable solely to its energy conservation efforts between 1990 and 2005.

1990

Start measuring global greenhouse gas emissions

Big Green Innovations
Intelligent Utility Network

Redirect \$1B/yr



Saved more than \$100M since 1998 by conserving energy

1971

IBM formally establishes a corporate policy on Environmental Affairs



1996

In remarks at a White House briefing on climate change, Vice President Gore applauded IBM's new PFC emissions reduction goal.

"These developments send a strong message: A healthy environment and a healthy economy go hand in hand," the Vice President said. "Through technology and innovation, we can turn this challenge into a huge opportunity for business and for America. And the sooner we act, the easier it will be."

2000

Charter member of World Resources Institute's Green Power Market Development Group

2003

Charter member of Chicago Climate Exchange[®]



2006

Qualifies for and joins U.S. EPA's Green Power Partnership; also joins EPA SmartWaySM Transport Partnership



2002

Charter member of U.S. EPA's Climate Leaders program



Turning our experience “inside out” IBM’s Energy and Environment Solutions

Project Big Green

IBM to reallocate \$1 billion each year

- To accelerate “green” technologies and services
- To offer a roadmap for clients to address the IT energy crisis
- To create a global “green” team of almost 1,000 specialists from across IBM
- Doubling compute capacity by 2010 without increasing power consumption
- Freeing up technical skills to move from system admin to value-add work

2008

Intelligent Utility Networks

- IBM and CentrePoint Energy are engaged in a strategic effort to develop and deploy Intelligent Utility Network (IUN) solutions

Intelligent Transport Systems

- Stockholm Congestion Tax Project
Differentiated pricing by time of day, congestion level and potentially emissions levels
First month results saw traffic reduced by 100,000 vehicle passengers per day (25%) and public transportation passengers increased by 40,000 per day

IBM Energy & Environment Framework

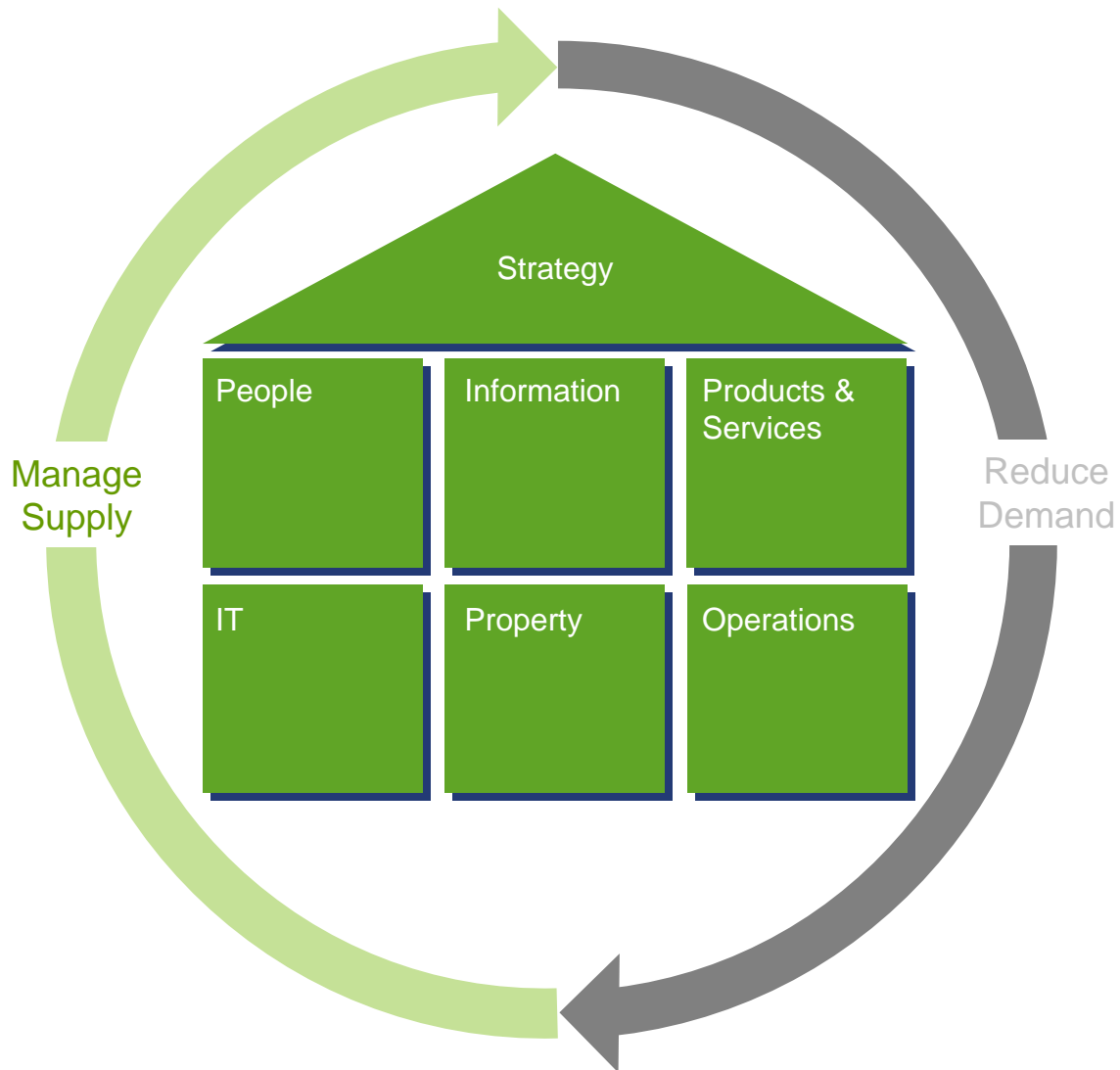
- Environmental Strategy & Carbon Diagnostic
- Carbon Trade-off Modeller (CARBAN)
- Green Sigma™ Operational Innovation
- Environmental Product Lifecycle Management

Big Green Innovations

- Advanced Water Management
- Carbon Management
- Alternate Energies



The IBM Energy and Efficiency Framework



Challenge Areas

Market Forces

- Regulations / Legislation / Targets
- Pressure groups
- NGOs
- Media

- Customers
- Shareholders
- Financial & Market Analysts
- Competition

Strategy

- What do you want to achieve with your energy & environment efficiency efforts?
- **How integrated is your energy efficiency strategy with your overall business strategy?**
- Do you have an integrated programme of action?

People

- How do you establish and implement effective green HR policies regarding travel, work place, collaboration?
- **How do you engage with our employees, your business and alliance partners on the green agenda?**
- How do you enable and sustain behavior change across your organization?

Information

- How do you measure and monitor information on energy efficiency consistently and efficiently?
- How do you demonstrate regulatory and policy compliance?
- **How can you leverage IT to deliver smarter, greener solutions to the market?**

Products & Services

- **What are the new green market opportunities and how can you exploit them?**
- **How can you design our products & services to be more energy-efficient & environmentally-preferable?**
- **How do you optimize these benefits throughout the full product lifecycle?**

IT

- How do you integrate energy efficiency & environment management into an IT Strategy?
- How do you identify which areas of IT provide the greatest opportunities for energy efficiency?
- How do you minimize energy consumption in each area of IT, now and in the future?
- How do you optimize to get more IT capacity for less energy?
- How do you address capacity/power issues?

Property

- How do you manage energy efficiency in:
 - Buildings, offices and branches?
 - Production plants?
 - Distribution centers & stores?
- How does the property portfolio contribute to your carbon footprint & ecological balance sheet and how can you improve it?
- How do you work towards a more sustainable property portfolio?

Operations

- How can you make your end-to-end operations more energy-efficient & less impacting to the environment?
 - Supply Chain: Procurement, Logistics, Warehouse, Manufacturing
 - **CRM: Targeting / Segmentation, Sales**
 - Waste & Recycling
- How do you communicate your green credentials (Branding, Marketing,

Solution Areas

Strategy

- Carbon management diagnostics
- IBM financing for carbon management programmes

People

- HR diagnostics
- Telepresence services
- Collaboration tools
- Travel footprinting
- Travel management
- Workforce transformation
- Tangible culture
- Think CO₂
- Employee engagement programmes to support carbon strategy

Information

- **Carbon balanced scorecard**
- Carbon information system
- IBM Director/Active Energy Manager
- System z Gaz meter
- GARS certification of compliance with EU guidelines on equipment disposal and recycling
- Certified used equipment

Products & Services

- **Environmental PLM**
- **Strategy development for new markets**
- **Design of IBM technology and innovation into clients' products**
- **Deep Thunder**
- **Visualisation and modelling**
- **Vendor financing programme**
- **Certification of recycling of client infrastructure**

IT

- IT carbon strategy study
- IT optimisation study
- Application Portfolio Assessment and Benchmarking
- Data centre energy efficiency assessment
- Data centre thermal analysis
- Server consolidation study
- Storage assessment
- End user virtualisation business case assessment
- Scalable Modular Data centre

Property

- Property carbon audit
- Sustainable property portfolio analysis
- Sustainable property procurement
- Workplace transformation
- Process and organisation optimisation
- Integrated Technology for building management

Operations

- **Green supply chain strategy**
- Energy efficiency studies for manufacturing operations
- Process optimisation
- Carbon optimisation for transport and logistics
- Fleet optimisation telematics
- **Green procurement strategy and ethical sourcing**
- Equipment disposal processes
- **Green Sigma™**

Engage with customers to address global challenges

innovationjam™ 2008
An invitation to collaborate

BUILDING THE
GLOBAL ENTERPRISE
OF THE FUTURE

October 5 – 8, 2008



BUILT FOR
CHANGE



THE NEW GLOBAL
ENTERPRISE



THE PLANET AND
ITS PEOPLE



CUSTOMERS AS
PARTNERS



Globally Integrated
Enterprise Summit 2008

27th-28th October

Sheraton Shanghai Hotel & Residences
Shanghai, China

Agenda

Day One – 27th October, 2008

Interactive Client Briefings, 9:30a.m. – 5:30p.m.

Throughout the course of Day One, we will have a range of interactive client briefings available for you to choose from. Upon registration, please indicate the top five sessions you would prefer to attend. The following is a list of the sessions which will be offered:

- Optimization Strategies for Success in a Maturing Semiconductor Industry
- Green Semiconductor
- Green Supply Chain
- IBM Testing Services
- Rewiring for Global Integration: Connecting Electronics Value Chain with SCA
- Electronics Supply Chain Risk Management
- Embedded Systems / Software Lifecycle Management
- GView (Globally Integrated View) / Manufacturing Cockpit
- Marketing Transformation
- Strategic Market Planning and Forecasting
- The Electronics CMO Version 2.0: Changing the OEM Marketer's Role in Consumer Electronics
- Corporate Brand and Reputation Analysis (COBRA) Demo
- Consumer Electronics Market in China
- White Goods Market Dynamics
- IPTV Market Trends
- Practical and Game-Changing Strategies for the Major Players in the Mobile Device Market
- How to Survive the Next Wave of Consolidation Among Network Equipment Providers
- Intellectual Property Protection & Cross Border Transactions
- IBM Innovation Jam debrief

Reception and Dinner, 6:00p.m. – 10:30p.m.

Ballroom C, 2nd Floor, Sheraton Shanghai Hotel & Residences, Pudong

Day Two – 28th October, 2008

8:30 a.m.	Keynote address: The Electronics Enterprise of the Future	Dr. Sungyoul Lee Partner, Global Industry Leader - Electronics Industry IBM Global Business Services
	The Globally Integrated Enterprise - Panel Discussion	Bruce A. Anderson IBM General Manager Global Electronics Industry
	Break	
	Multi-Channel Management - Panel Discussion	Sean Lafferty, Associate Partner, IBM Global Business Services
	Global Branding and Customer Experience - Panel Discussion	Lee Green, Vice President, IBM Brand and Values Experience
	Lunch	
	Mergers & Acquisitions - Panel Discussion	Ron Holmeister, Partner, M&A Practice Leader, IBM Global Business Services
	Market-Driven Product Innovation - Panel Discussion	Paul Brody, Partner, IBM Global Business Services
	Break	
	Global Talent Management - Panel Discussion	Ted Hoff, Vice President, IBM Center for Learning and Development, IBM Corporation
4:45 p.m.	Closing	Bruce A. Anderson IBM General Manager Global Electronics Industry