Networked Sustainability

David Hsieh

Vice President, Emerging Technologies

The Cisco Vision

changing the way we
work, live, play, and learn...

in a more sustainable way.

"By deploying innovative information technology and using the network as a platform for 21st century environmental management, we believe we can significantly alter our greenhouse gas footprint and help our customers meet their sustainability goals."

John Chambers
Chairman and CEO

SMART 2020: ICT Climate Change Solutions

SMART 2020: Enabling the low carbon economy in the information age

- According to the SMART 2020 Report, ICT could reduce global emissions up to 15% by 2020; five times its own footprint in 2020.

- Key requirements to capture opportunity:
  - New Business Models
  - Energy Efficiency
  - R&D Investments
  - New Ecosystems
  - New Regulatory Models
  - Active Carbon Markets

Vision

MONITOR

MANAGE

REDUCE

If it's Connected to the Internet, it can be Greener

- Electricity use in offices
- Appliances in homes
- Traffic flows in cities

Cisco's Commitment To Reduce

25% Reduction in GHG Emissions by 2012

- **Labs and data centers**
- **Cisco connected workspace**
- **Collaboration technologies**

Differentiated Strategy

EcoBoard:
Set vision, accountable to Cisco Operating Committee

Green Task Force:
Execute vision of EcoBoard via long-term programs and initiatives

Green Engineering Task Force:
Deliver thought leadership & product solutions focused on climate change

Global Green Working Teams:
Execute near-term initiatives, all initiatives and programs reported under ISO 14001

Cisco's Sustainable Business Practices

Collaborating across organizations to build new models for dealing with environmental issues, for both Cisco and our customers

Operations

Products

Solutions

Employees & Advocacy

Sustainable Company Operations

- Understanding our **carbon footprint** and helping others understand theirs.

- Lowering energy consumption and business air travel, **and using technology** to reduce our overall GhG emissions.

- **Energy efficiency** and responsible use of scarce resources in our labs, data centers and office buildings.

- Strategic procurement of **green energy** in our operations.

- **Involving employees** in all aspects of the company's environmental efforts.

Customers Green Goals

Optimize Business Operations

Reduce GhG Emissions
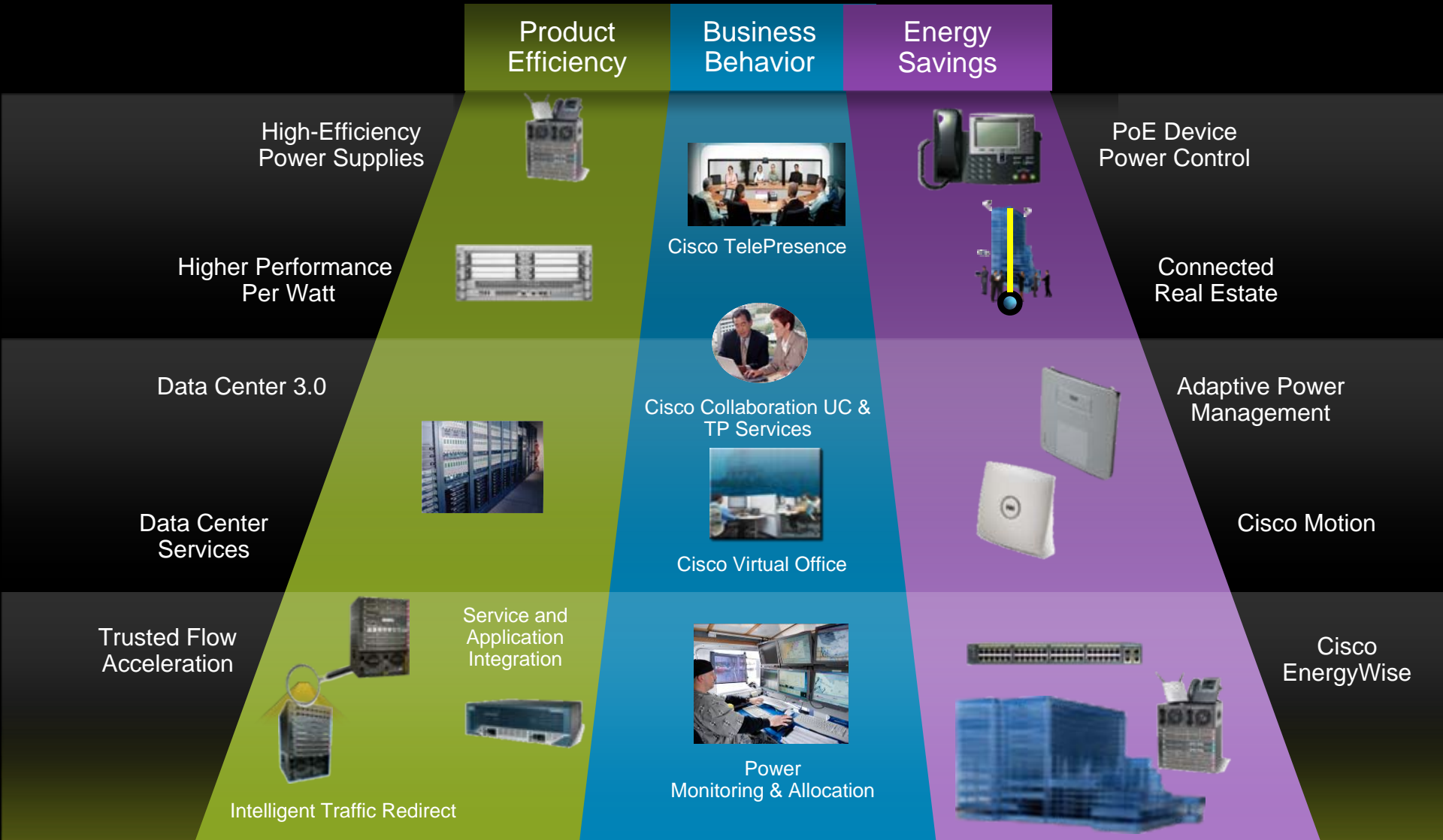
Reduce Energy Consumption and Costs

Comply With Government Directives

Create Competitive Differentiation

Continuum of Sustainable Innovations

Product Efficiency	Business Behavior	Energy Savings

High-Efficiency Power Supplies

Higher Performance Per Watt

Data Center 3.0

Data Center Services

Trusted Flow Acceleration

Service and Application Integration

Intelligent Traffic Redirect

Cisco TelePresence

Cisco Collaboration UC & TP Services

Cisco Virtual Office

Power Monitoring & Allocation

PoE Device Power Control

Connected Real Estate

Adaptive Power Management

Cisco Motion

Cisco EnergyWise

Cisco's Sustainable Solutions

Smart+Connected
Transportation

Smart+Connected
Safety and Security

Smart+Connected
Utilities

Smart+Connected
Real Estate &
Communities

Smart+Connected
Education

Smart+Connected
Health

Smart+Connected
Government

Smart Connected Energy Roadmap

Phase 2 : Smart Connected Buildings
July 2009

Phase 1 : EnergyWise
February 2009

Energy management for
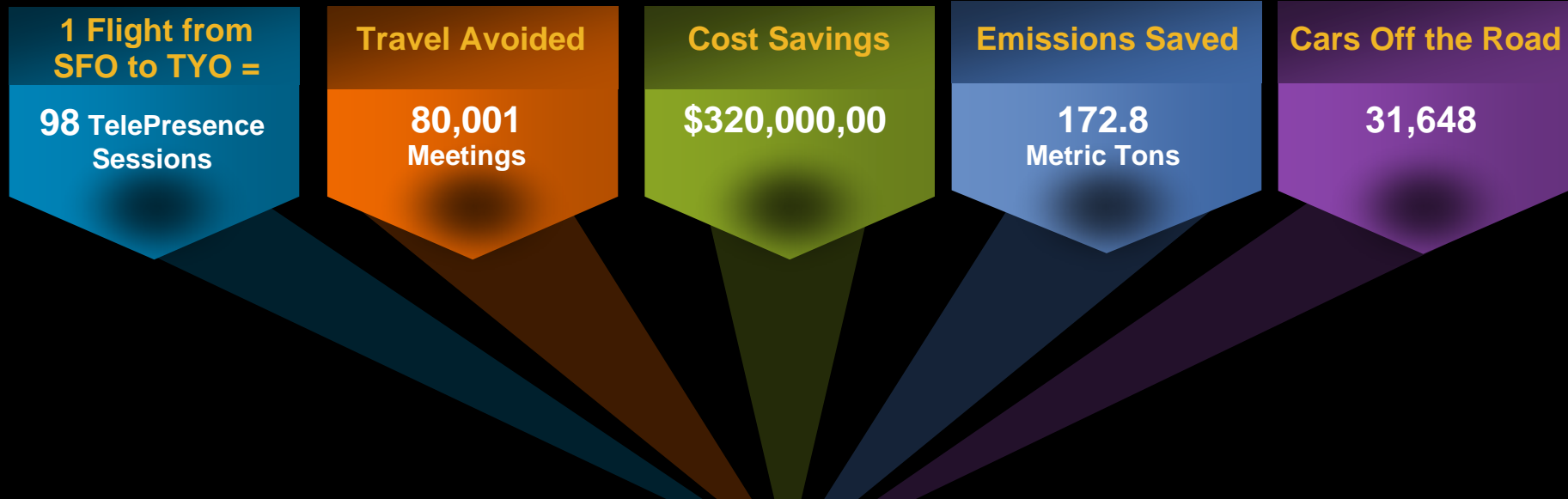IT Systems and Devices

Energy management
for building
Systems and Devices

Phase 3 : Smart Grid
2010

Energy management
across the Grid

13
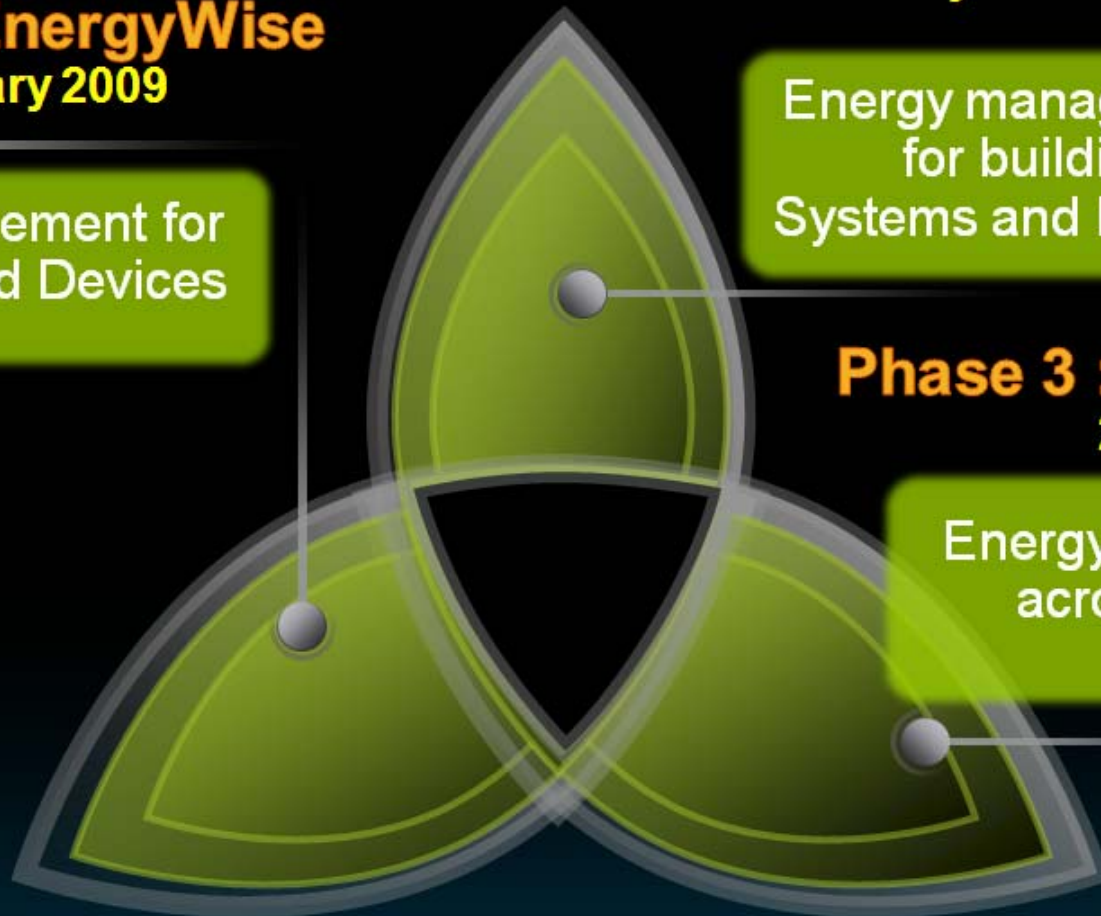
Sustainable Solutions: TelePresence

| 1 Flight from SFO to TYO =	Travel Avoided	Cost Savings	Emissions Saved	Cars Off the Road
98 TelePresence Sessions	**80,001** Meetings	**$320,000,00**	**172.8** Metric Tons	**31,648**

Changing the Way We Work, Live, Play and Learn

Source: Cisco TelePresence
Executive Metrics Dashboard
Time Frame: 153 Weeks
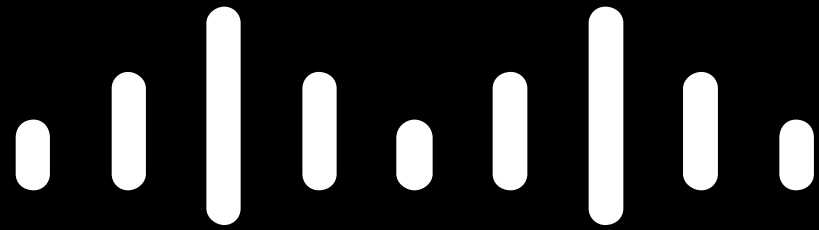
Cisco and Climate Change

- Official Telepresence sponsor of COP15

    Systems in Copenhagen connected to 70+ cities globally

- UN hosted "Global Climate Change Meeting Platform"

- Global connectivity for climate change community of interest:

    Governments

    NGOs and IGOs

    Press

- UN deployments in Geneva, New York, Bonn and Nairobi
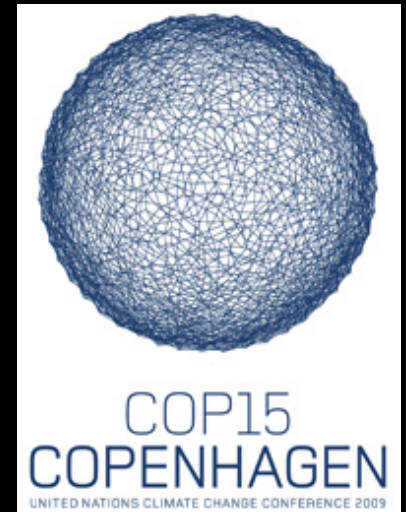
Telepresence in the Healthcare industry

Telepresence with John D. Halamka, MD, MS

• Chief Information Officer of Beth Israel Deaconess Medical Center
• Chief Information Officer of Harvard Medical School
• Chairman of the New England Healthcare Exchange Network
• Chair of the US Healthcare Information Technology Standards Panel
• Co-Chair of the HIT Standards Committee
• Practicing Emergency Physician

Environmental Concerns

Climate Change is a High Political Priority

- U.S. Goal – 83% emissions reduction by 2050
- Japan announced "Cool Earth 50" to cut GhG emissions in half by 2050
- California set GhG emission cap to 1990 levels by 2020
- EU "20-20-20" reduces GhG by 20%, use 20% renewable energy by 2020

GhG emission projections pose climate changing threat

"World CO_2 emissions are projected to rise from 28.1B metric tons in 2005 to 42.3B metric tons in 2030." | *Energy Information Administration*

"Commercial buildings are third- fastest growing CO_2 emissions source." | *IEA, Emissions by Sector*