



# Cisco Green Networks Vision

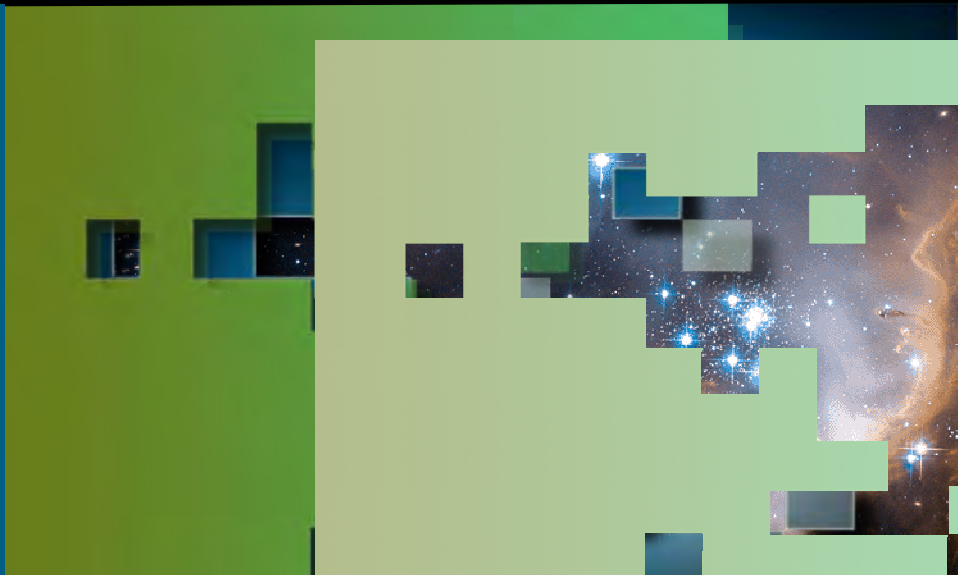
**Make Every Connection a  
Green Connection**

**Yoshiki Kawakami**

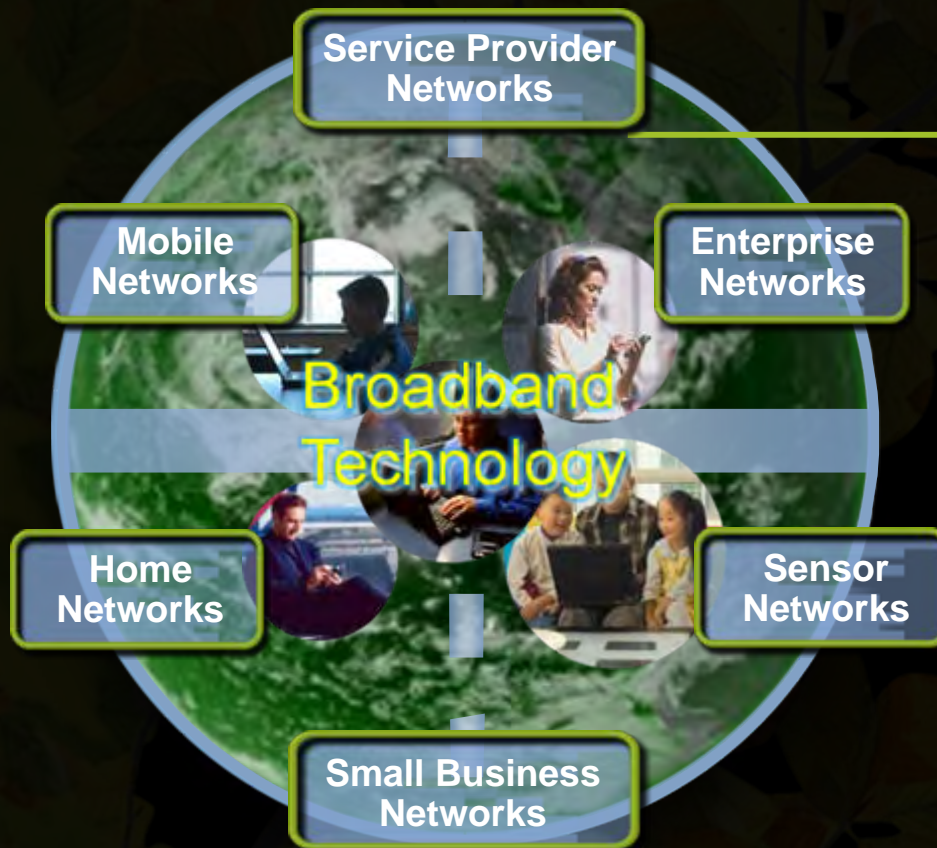
**Director of Enterprise Operations**

**Cisco Systems G.K.**

**April 16, 2008**



# Green Networks Vision



## Make Every Connection a Green Connection



**Electricity Use in Offices**  
**Appliances in Homes**  
**Traffic Flows in Cities**

# “From Carbon to Collaboration” Clinton Global Initiative

**In FY2007, Cisco committed at the Clinton Global Initiative to reduce carbon emissions from corporate air travel by 10% and committed \$20 million in collaboration technologies**

## FACTS

- In FY2007, Cisco successfully decoupled revenue/headcount growth from carbon emission growth and reduced carbon emissions from travel by 10% per employee.
- Accomplished through the use of TelePresence and Unified Communications. In FY2007, Cisco installed about 110 TelePresence units in more than 20 countries and almost 60 cities worldwide.
- In FY2007, Cisco held nearly 25,000 meetings via TelePresence (98 one-hour TelePresence meetings = 1 cross country flight.)



# Product Energy Efficiency

**Cisco has incorporated power-reduction features into many of our consumer products.**

## FACTS

- The hard drive in the Scientific Atlanta set-top box digital video records automatically goes into sleep mode between the hours of 1:00 am and 6:00 am.
- Cisco Unified Communications Manager V4 allows the displays on all the IP phones connected to a network go dark at a given time after business hours. This results in a savings up to 25% of a phone's energy consumption
- All Cisco power adapters meet the ENERGY STAR requirements

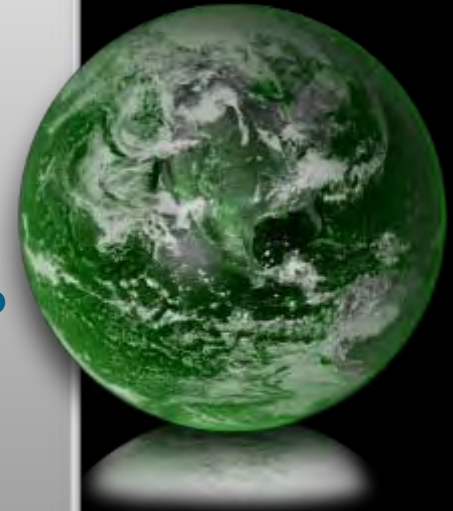


# Connected Urban Development

**Cisco has launched an initiative that embeds advanced information communication technology in urban infrastructure and management systems in order to reduce global warming.**

## FACTS

- **Cities consume 75% of the world's energy and are responsible for 80% of greenhouse gas emissions.**
- **Piloting in three cities: San Francisco, Seoul, Amsterdam. Total investment in this initiative estimated at \$15 million. The Amsterdam initiative is expected to save 76K tons of CO2 over five years.**
- **Cisco's product development organization will determine how to use technology innovation to manage traffic patterns and create an urban communications infrastructure that increases the efficiency of traffic flows.**



# Energy Efficient Data Center

**Cisco's Energy Efficient Data Center (EEDC) can increase storage asset utilization up to 70% through virtualization—enabling consolidation and decreasing dependence on appliances that support server groups.**

## FACTS

- **Cisco power supplies for its data center products are +90% efficient on AC supply when loaded at 60% or higher.**
- **Cisco's service module architecture provides a more efficient solution as compared to conventional appliance-based models.**
- **Cisco has dedicated R&D resources in its data center business unit focused on power-efficient solutions.**



# Connected Real Estate (CRE)

Cisco connected Real Estate can help owners and operators of commercial buildings improve environmental performance through reduced consumption of materials and equipment, improved energy efficiency and reduced greenhouse gas emissions, reduced space needs, and reduced electronic and office waste.

## FACTS

- Buildings consume 50% of the world's energy
- Emissions associated with buildings and their appliances are estimated to grow more rapidly than in any other sector
- Emissions from commercial buildings are estimated to increase by 600 megatons by 2030, while emissions from residential buildings are expected to remain flat



# Connected Workplace at Cisco

Creates a flexible work environment through use of technologies, including IP communications, wireless network, and VPNs. Employees work at a variety of desks, conference rooms, outdoors, home, and remote locations equipped with networking capability—enabling anytime / anywhere productivity.

## FACTS

- **Connected Workplace at Cisco results:**
  - 40% increase in office space utilization
  - 40% reduction in electrical demand
  - 54% reduction in IT cabling
  - Significant reduction in construction materials & land due to fewer sites being needed
  - Increased collaboration
  - Increased telecommuting and reduced traffic congestion
  - All factors lead to reduced greenhouse gas emissions





# Travel Reduction

## Voice Conference

Ad-hoc



## Desktop Video/ Web Conference

“Homeshoring”




## TelePresence


Virtual F2F Conference



# Cisco on Cisco TelePresence Overview



**181** Cisco TelePresence in major cities globally  
Overall average utilization is **45%**



**76,578** TelePresence meetings  
scheduled to date  
(average 1 hour and 15 min per  
meeting)

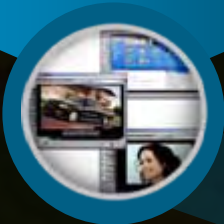
**12,850** Meetings avoided travel  
~\$50.34M to date

Cubic meters of emissions saved  
– **15,323,555** (6,473 cars off the road)

# Cisco TelePresence – ROI

Improving Sales  
Success Rate

+ \$127 Million  
2% Increase



Reducing Sales  
Cycle

+ \$68 Million  
2% Decrease



Travel Savings

- \$61 Million  
5.5% Decrease



Executive & Employee  
Productivity Gains

+ \$42 Million



Cost Avoidance  
In Services

\$21 Million



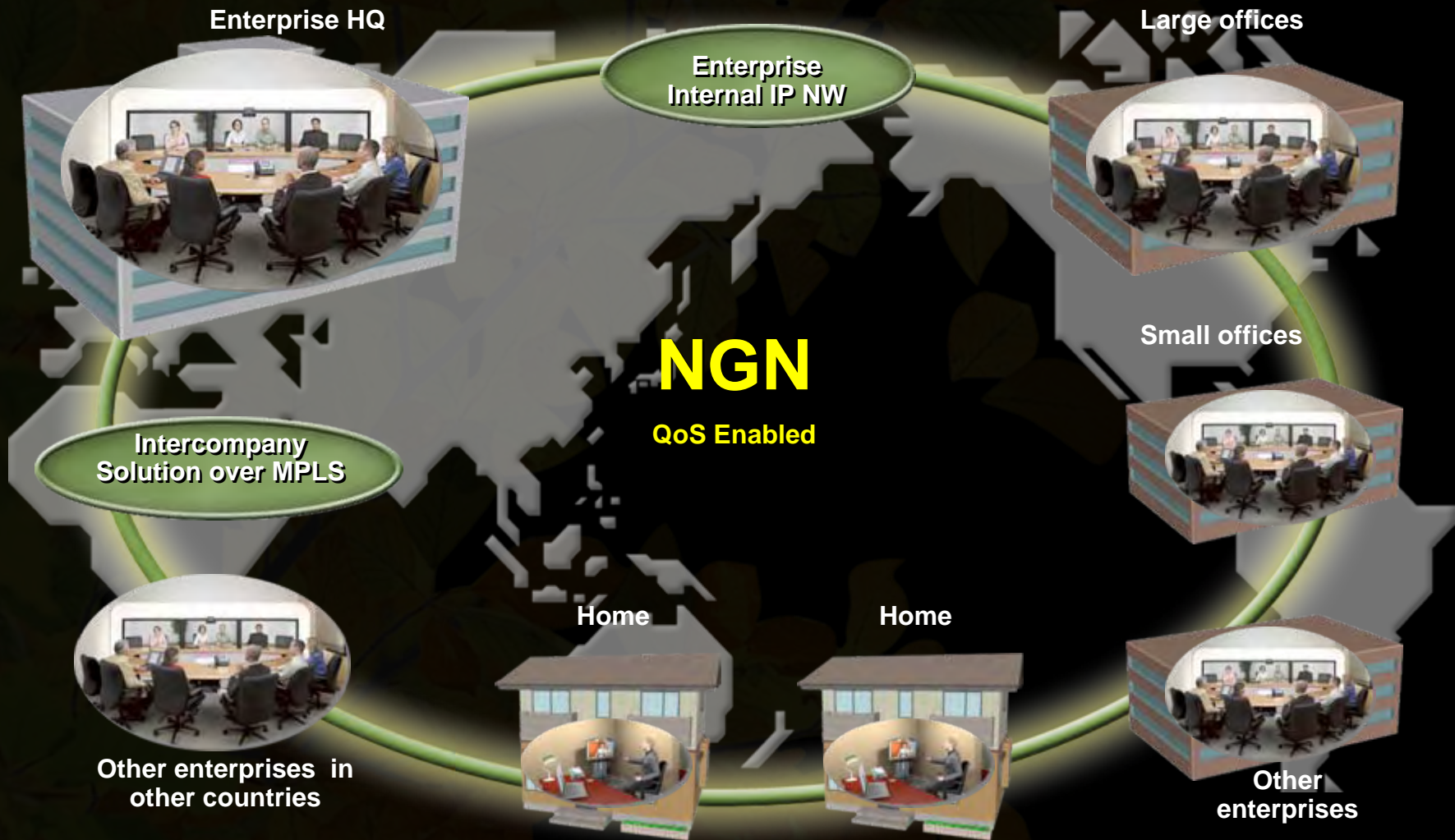
**\$240M**

**Changing the Way We  
Work, Live, Play and Learn**

Source: Cisco IBSG, 2007

\* Data is based on present value of free cash flows over a three-year period.

# Any-to-any Connection



# TelePresence: Future Green Solution

- Provide customers with **visible evidence of carbon savings**
- At session termination, **carbon savings label appears** on screen or VoIP display
- Send an e-mail with data to customer after the call
- Session data stored as part of travel tool or other application



Energy Used

0.9 kWh

Talk Time

2 hours 35 min

Distance

1527 km

Avoided Carbon Emissions

270 kg CO<sub>2</sub>e

