orange

involvement in Green IT

June 12th 2008
agenda

1. orange Green IT portfolio: focus on B to B solutions
2. orange commitment to reduce its internal $CO_2$ emissions
telco estimated at 0.3% of total CO₂ emissions

- 2% of today's global CO₂ emissions come from the IT industry
- similar to airline industry
- compared to 18% emitted by road transport

CO₂ emissions by sector

1 year of mobile usage equals 1 h car highway
e-strategy for CO₂ reductions in Europe
first steps for 2010: 50 million tons CO₂ reduction per year with ICT

- travel replacement: 24 million tons CO₂ / year
- e-dematerialisation: 4 million tons CO₂ / year
- flexi-work: 22 million tons CO₂ / year
- other…
responsability across our geographical footprint

170 million customers in 28 countries
- 112m mobile customers
- 45m fixed lines
- 13m internet customers

in Europe, 12m ADSL customers
- 6.8m livebox
- 5.4m VoIP users
- 1.4m IPTV users

in Europe, 15m broadband mobile customers

- local support in 166 countries and territories
- serving 3,750 multinational companies

data as of March 31st, 2008
responsability across our technical footprint

- equipment from manufacturers
  - sourcing contract
  - partnership in eco conception
  - energy consumption standardisation

- buildings & travel
- vehicle fleet
- FT network & data centers

- dematerialisation
  - e-billing
  - e-conferencing

- devices
  - product Eco conception
  - WWF partnership

- waste management
  - WEEE
1. orange Green IT portfolio: focus on B to B solutions

2. orange commitment to reduce its internal CO$_2$ emissions
Orange Business Services - our portfolio helps Green IT become a reality

1. promoting collaborative work
2. optimizing vehicle fleet management
3. consolidating IT infrastructure
4. implementing paper-free workflows
5. deferring IT hardware renewal
6. developing remote personal services

F R O S T & S U L L I V A N

2007 European Green Excellence Award for Product Innovation
Orange Business Services - our portfolio helps Green IT become a reality

1. promoting collaborative work

- **Business Everywhere**: more than 850,000 end users worldwide at the end of 2007 (x2 in a year)
- **Business Together**: brings together the best in web, voice and videoconferencing technologies to make it easier for teams to work together
Orange Business Services - our portfolio helps Green IT become a reality

2. optimizing vehicle fleet management

- Fleet Advanced machine-to-machine solutions (M2M)
  - optimize routes and service our client vehicle fleets remotely
  - reduce travel distance
  - with better tuned engines
  → and therefore less polluting
Orange Business Services - our portfolio helps Green IT become a reality

3. consolidating IT infrastructure

- virtual, eco-friendly servers
  - optimized access to critical applications
  - reduction in the number of servers by up to 80%
  - reduction in energy consumption by up to 90%
Orange Business Services - our portfolio helps Green IT become a reality

4. implementing paper-free workflows

Example of orange experience
% of electronic invoice for residential in France

- In the last twelve months, we have saved over 21,500,000 pages, i.e., more than 53 tons of paper
Orange Business Services - our portfolio helps Green IT become a reality

5. long lasting equipment/deferring IT hardware renewal

- benefits from virtual workstation:
  - lasts longer than a regular PC (five years compared to three)
  - uses approximately ten times less power (20 W)
  - can be easily shared by several users
  - is easier to recycle because it uses fewer electronics
  - avoids unnecessary commutes because users can access data remotely via the Internet
orange - our portfolio helps Green IT become a reality

6. developing remote personal services

- Point Visio-Public®: 800 virtual meetings using this solution over the last 12 months saved 6 tons of CO₂ emission

- Orange Healthcare line of products
  - M2M applications for regular monitoring
  - columba by orange
  - autonomie visio
  - hostonautes program

- M2M solutions
agenda

1. orange Green IT portfolio: focus on B to B solutions

2. orange commitment to reduce its internal CO$_2$ emissions
FT commitment towards its CO$_2$ emissions

- reduce group CO$_2$ emissions by 20% below 2006 level by 2020
  - transportation: change our entire fleet of 55,000 vehicles to reach in average 130 g CO$_2$/km emission in average
  - buildings: new environmental friendly buildings, lightning optimization
  - network: data center virtualization program (-40% servers by 2010) and new optimized cooling solutions implemented
  - 40% of group invoices send electronically in 2009
  - develop our Green IT portfolio services internally

- 100% of FT group employees will be involved in reducing our CO$_2$ footprint

- 25% of FT's Group electricity in Africa to be sourced from solar site by 2015
tangible “Green IT” results within Orange

group CO₂ emissions 2007: 1.3m tons
reduction vs 2006: -0.6%
reduction for 2008E: -3%

energy consumption TOE/000s customers

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>7.21</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>6.36</td>
<td>-11.8%</td>
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</table>

kg CO₂ per customer

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
<th>Change</th>
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</thead>
<tbody>
<tr>
<td>2006</td>
<td>7.69</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>7.33</td>
<td>-4.7%</td>
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</table>
orange CO₂ emissions reduction solutions

in 2007
- > 850,000 video-conferencing = 1.7 million travel saved
- 5,000 Business Everywhere kits for managers

- use of electric, hybrids, flex fuel, stop/start system vehicles
- accelerated replacement of vehicles: 15,000 replacement since 2006

about 300 servers virtualized in 2007

“optimised ventilation” (system reducing energy consumption by 7) implemented on 800 technical sites

sharing applications to reduce hosting needs: over -600 local application since 2006

switching to High Voltage Direct current (HVDC): -10% energy consumption

buildings & travel 28%

network & IT 60%

green fleet 12%

ADEME 2007 award

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ADEME 2007 award
our key sustainable development challenges

1. innovative solutions serving sustainable development
2. developing access for all
3. meeting customers’ expectations
4. mobilizing our staff
5. promoting responsible purchasing principles
6. responding to concerns over electromagnetic waves
7. involvement in communities
8. fighting climate change
9. optimizing waste management
examples
eco design also part of our actions (residential market)

- Livebox 1.2 footprint has been **reduced by around 20%** in comparison with Livebox V1
  - -35% on volume
  - -30% for card board size
  - only one plastic type,
  - energy consumption optimized

- universal charger for all our mobile terminals working group
example: promoting collaborative work

- world leader in products and systems for electrical installations and information networks
  - present in 60+ countries
  - 130,000 product references
  - 33,000 staff worldwide

**issues and challenges**
- share the strategic vision of the group with executives scattered over five continents
- offer access to meetings to as many executives as possible, without wasting time or money

**orange solution**
- managed videoconferencing allows simultaneous connection of 30 group sites
  - an Orange Business Services expert supervises site connections and controls videoconferences in real time

**results and benefits**
- 500 to 600 executives are able to participate in remote meetings
- an enhanced sense of cohesiveness
- saves money, time and carbon footprint by limiting travel
example: promoting collaborative work

- a newly independent semiconductor company (founded by Philips)
- global presence in more than 20 countries
- worldwide N°1 position in many areas
- knowledge-intensive business

<table>
<thead>
<tr>
<th>issues and challenges</th>
<th>orange solution</th>
<th>benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>share complex projects with a network of partners and internal staff based in 20 countries</td>
<td>Business Together with Microsoft</td>
<td>secure and controlled collaboration solution that supports compliance</td>
</tr>
<tr>
<td>increase team productivity</td>
<td>a hosted and managed secure IM solution for 25K users</td>
<td>reduces the need to travel</td>
</tr>
<tr>
<td>document sharing requirements</td>
<td>enabling federation to external partners</td>
<td>expected productivity and end-user satisfaction improvement</td>
</tr>
<tr>
<td></td>
<td>providing additional features: archiving, extended reporting</td>
<td></td>
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<tr>
<td></td>
<td>– planned extension to OCS 2007, SharePoint Server</td>
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GEFCO is one of Europe’s top ten transport and logistics groups
- 21 subsidiaries covering 80 nations around the world
- 50,000 clients
- 52,000 shipments per day
- 9,400 employees

**issues and challenges**
- obtain a simple, customizable on-board telematics solution for its 21 subsidiaries worldwide
- track deliveries with precision across Europe
- optimize truck routes
- ensure security of freight and staff

**orange solution**
- on-board box incorporating a GPS and a GPRS modem + mobile system connected through the vehicle’s cigarette lighter
- Internet access to delivery details (departure time, position, route, etc.) in near real time

**results and benefits**
- budget control: no initial investment, fixed monthly charge for on-board box
- improved traceability of deliveries (secure on-line monitoring)
- organizational optimization (GPS positioning systems, allowing optimization of routes at any given moment)
example: developing remote personal services

AXA is one of the worldwide leading insurance companies
one of the largest assistance generalists in the world
strongly involved in healthcare solutions
developing comfort and welfare approach

issues and challenges
- create innovative solutions of prevention in the healthcare field, for
  - chronic diseases management (e.g., diabetes)
  - assistance for elderly and disabled persons,
  - help for Alzheimer patients
- take a competitive advantage with these solutions

orange solution
- co-development for blood pressure measure with M2M solutions
- geolocalization solutions for Alzheimer persons using an electronic bracelet
- emergency calls solutions with geolocalization for elderly persons using a specific mobile phone

results and benefits
- better conditions of life for insured persons
- prevention of accident
- secured solutions for staying at home instead of hospitalization
- positive image for AXA
- positive contribution to the social dimension of sustainable development
orange

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June 2008