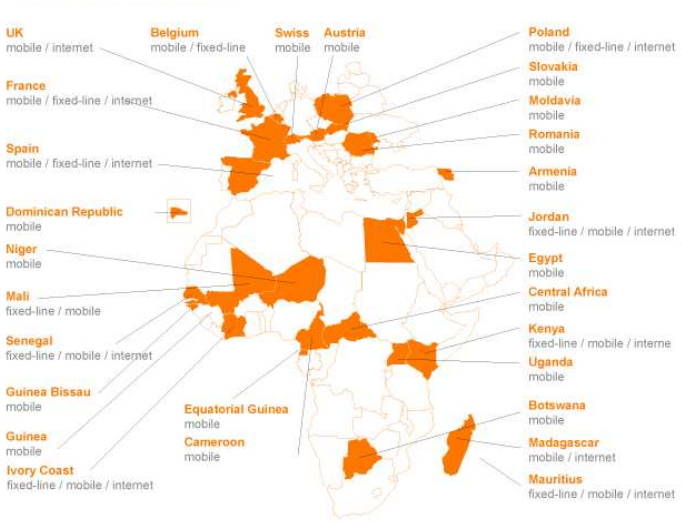
Green Power For Mobile

Thierry Barba

Sept 23 rd, 2009

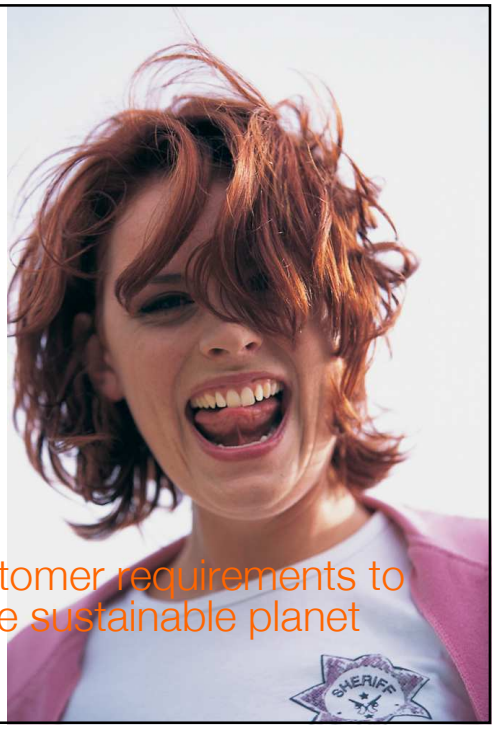
FT/Orange : balanced international footprint serving more than 182 millions customers worldwide



2

Green is…

- popular
- passionate
- efficient
- exists in many forms



Leveraging customer requirements to create a more sustainable planet

Operators have a double responsibility

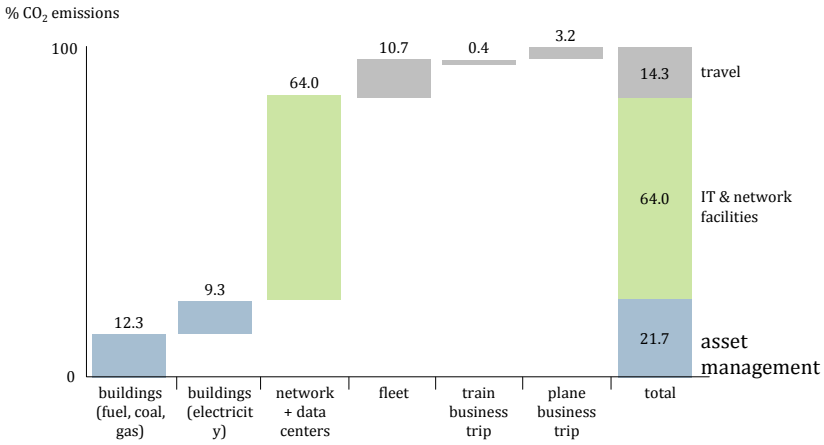
1 reduce own environmental footprint

2 help society at reducing environmental footprint

deliver “real” environmental benefit



The Orange group CO2 emission sources
1 466 000 tons in 2008



source: France Telecom corporate social responsibility report 2008

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Orange has undertaken three major initiatives in order to reduce by 20% its CO2 emission in 2020

1 travel
- collaboration and mobility solutions such as telepresence, Business Everywhere, etc.
- teleworking
- green fleet management

2 IT and network facilities
- deploy more efficient technologies and solutions
- consolidate infrastructures
- virtualized servers and storage
- optimize air cooling/air conditioning

3 asset management
- implement centralized building management systems
- build new headquarters with HQE standard

Innovation

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Delivering innovative solutions

1 - Eco rating
2 - Mini SIM Card
3 - Universal Charger
4 - Solar powered base station



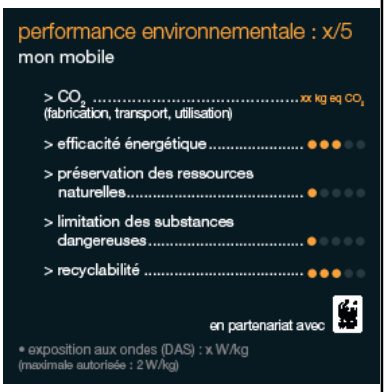
Eco-rating

- What is eco-rating?
  - > The assessment of the environmental performances of products (e.g. devices) distributed and sold within Orange shops
- Objectives
  - Help customer's choice by providing information on environmental performances of the devices
  - Influence manufacturers to deliver more environmental-friendly products
  - Promote eco-friendly devices providing reliable assessment and information about "green" devices as claimed by manufacturers

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Eco-rating label as displayed in France

- A global environmental performance rating : x/5
- 5 indicators
  - > **CO2 emission**: amount of CO^2 produced during key stage of the product life cycle i.e. manufacture, transport &use
  - > **Energy efficiency**: evaluate the energy consumption of the device while in-use and the means enabling it to be reduced
  - > **Preservation of resources**: actions taken by manufacturers to limit sensitive & non-renewable substances (environment, economy or society)
  - > **Limitation of Hazardous Substances**: highlight products containing few chemical component
  - > **Recyclability** : measure the contribution of the terminal and its packaging to a reduced waste production (components, life duration, recyclability and reparability)
- An additional information providing the SAR



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Project facts & figures

- The project relies on a best-in-class innovative evaluation method defined with Orange' teams and
  - > WWF's experts,
  - > Bio Intelligence Service (specialist of Life Cycle Analysis)
- Nearly 100 mobile handsets and a dozen of DECT have been rated with environmental performance
- TOP5 mobile handsets according to the eco-rating have been promoted within Orange shops
- Eco-rating will be made available in other Orange affiliates in Europe in 2010.

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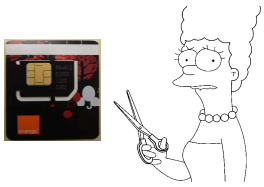
Mini Sim Card





Mini Sim Card

- > 2,900,000,000 cards sold to MNOs by SIM suppliers (2008)
  - =>11,600,000 kg
  - Would cover 1,753 football fields
  - ABS or PVC >1,000 years to degrade
- 10% card = plug-in (the part that the customer uses)
  - assume only 50% registered
  - > 11,020,000 kg “un-used material”
- Orange is the first European Operator to introduce Mini Sim Cards in support of environmental commitments



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Universal Charger for Mobile phone



Universal Charger for Mobile

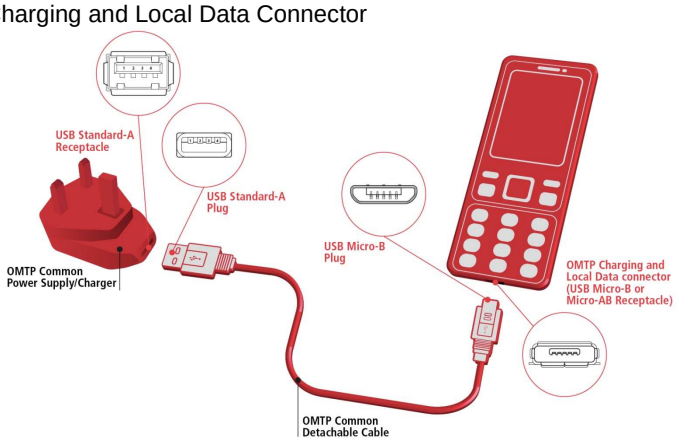


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Universal Charging Solution (UCS)

UCS is comprised of three distinct parts;

- Common Power Supply
- Common Detachable Cable
- Charging and Local Data Connector



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Universal Charging Solution Project

- A GSMA Project, supported by major GSM mobile network operators and handset vendors, for example;

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Orange Objectives

- Achieve environmental benefits by limiting the number of charger models shipped and improving charger energy efficiency
- Enhance customer experience by simplifying charging of a mobile phone
- Promote standards based and interoperable charging solutions compatible for many mobile devices, worldwide
- Over two thirds of Orange sales will rely on this new charging solution

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Solar base station



Base stations



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Oryx Solution

- **An optimise site engineering solution**
  - > Wide climatic range for telecom equipment
  - > Ventilated outdoor BTS + transmission cabinets (without cooling)
  - > 100% solar power plants (*with possible genset backup*)
  - > guarded 24/24
  - > equipped with anti-theft system
  - > supervised and monitored through GPRS /GSM
  - > Up-gradable and scalable
  - > maintained by the supplier that commits on SLAs

- Oryx contributes to reduce our CO^2 emissions by 20% by 2020
  - > per ORYX power plant: at least 35 tons of CO2 and 13000 litres of fuel saved per year

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Orange is adapting to this new environment

- Integration of different technologies to improve energy efficiency for network systems
- Innovation to deliver new services to our customer
- International presence in dedicated organizations to deliver standards



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