# GSMA
# Green Power For Mobile

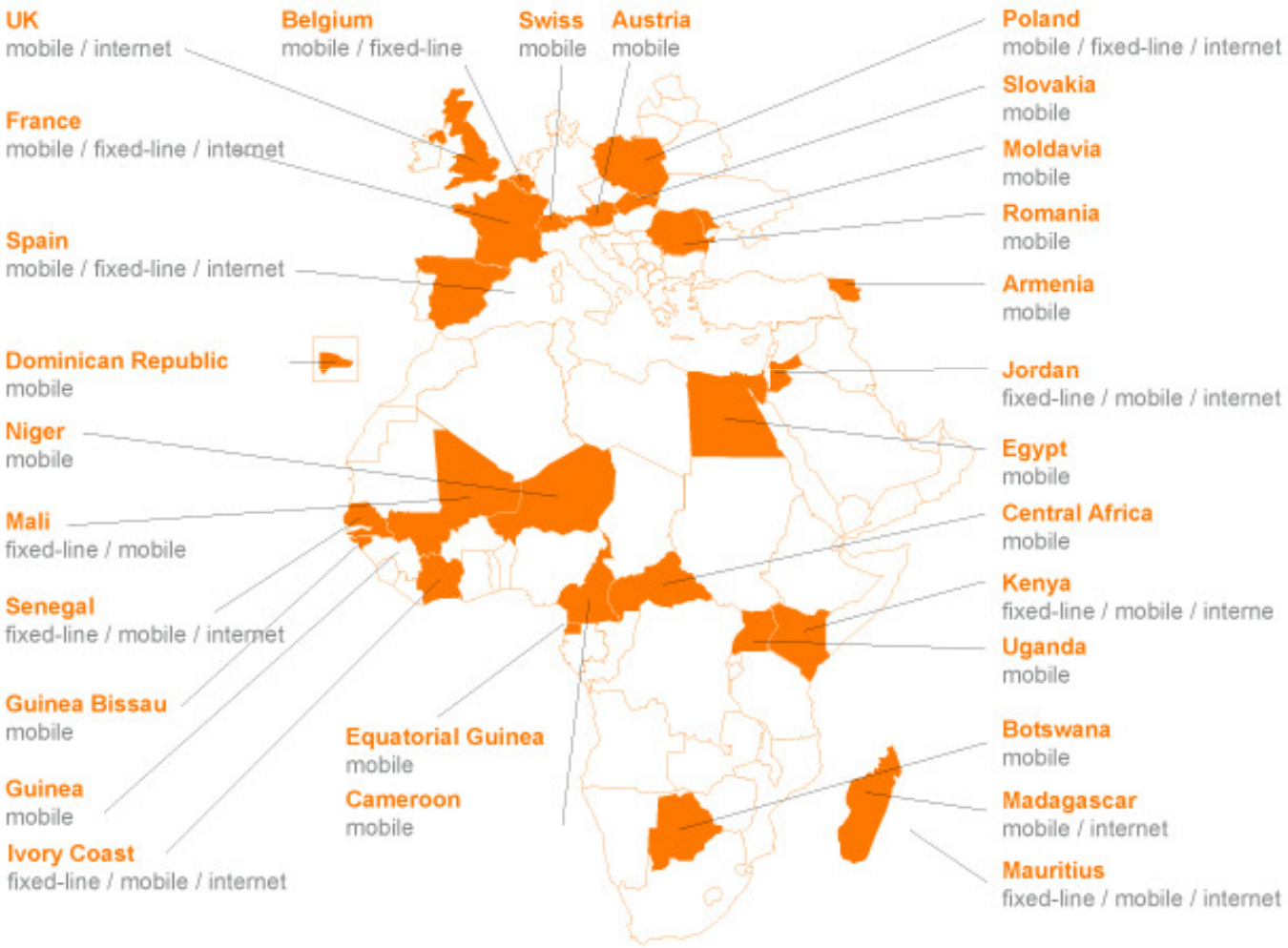
## Cairo Meeting, March 23rd,2010

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orange™

# FT/Orange international footprint : serving more than 193 millions customers worldwide



# Operators have a dual responsibility

1 reduce their own environmental footprint

2 help societies to reduce their environmental footprint

## Orange turns to the Sun



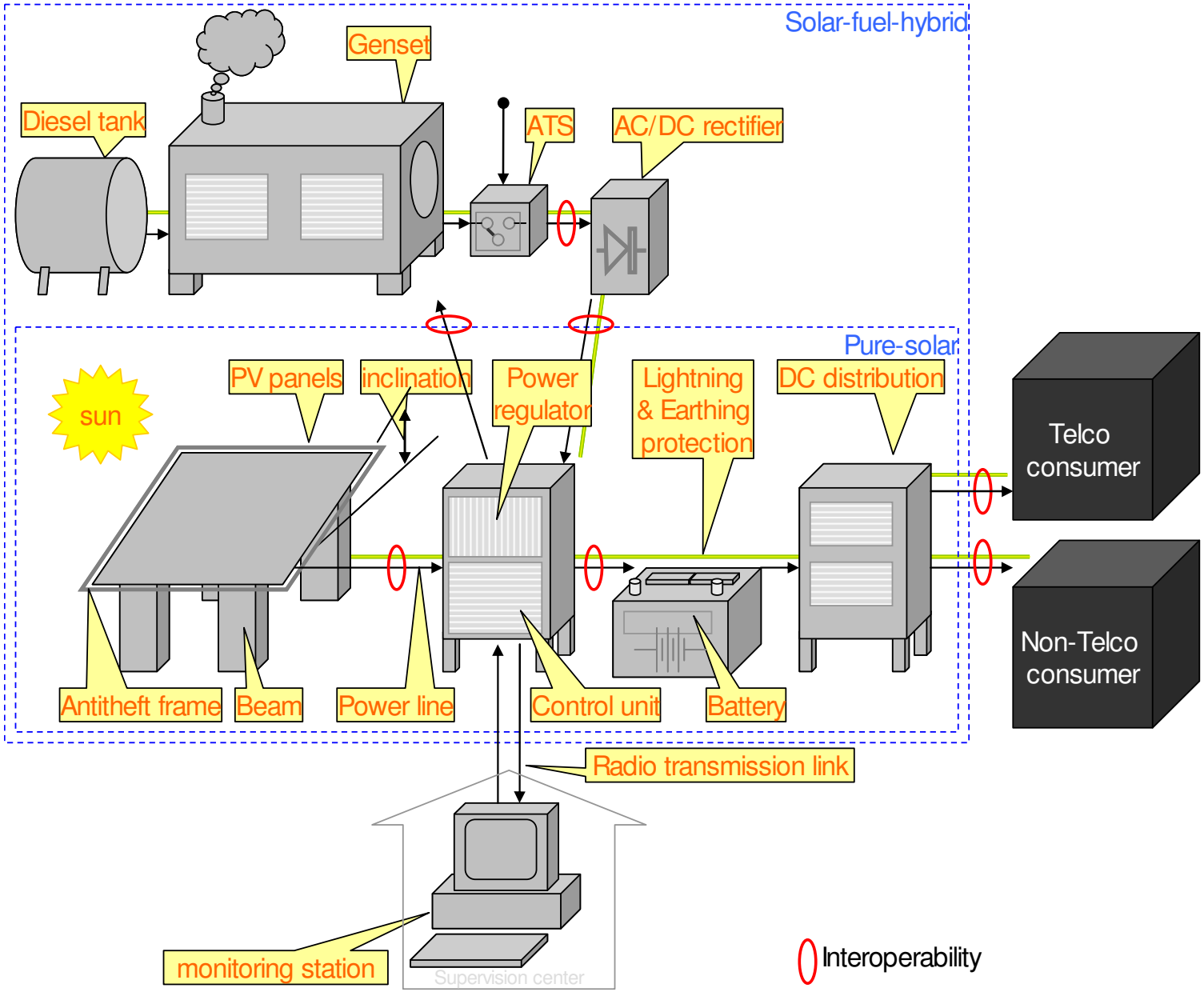
# Oryx is the name of Orange Green Power entry

- A solar base station programme enhancing mobile networks in rural areas, founded in **Q1 2007**
- The intent is to design and deploy innovative engineering solutions in Africa, Middle East and Asia (AMEA) responding to **three major objectives**:
  - > Reduce operating costs
  - > Improve Quality of Service
  - > Develop Group Sustainable Development commitments, with preference to renewable energy
- By the end of 2009, the programme covered a total of **700 solar-powered BTS sites in 13 countries**
  - > This represents about **6% of the total BTS sites** deployed in the emerging countries





# Oryx


Solar-fuel-hybrid
Genset
Diesel tank
ATS
AC/DC rectifier
Pure-solar
sun
PV panels
inclination
Power regulator
Lightning & Earthing protection
DC distribution
Telco consumer
Non-Telco consumer
Antitheft frame
Beam
Power line
Control unit
Battery
Radio transmission link
monitoring station
Supervision center
Interoperability

# Socio, Economic, Environmental benefits

The programme contributes notably to:

- **Reducing** Orange CO2 emissions by 20% by 2020
  - > Per solar power plant: at least 35 tons of CO2 and 13,000 litres of fuel saved per year
  - > **Increasing** the share of renewable energy in the Group's overall consumption

- **Decreasing** the digital divide
  - > By extending our networks to rural areas
  - > By providing low cost solutions

- Having a **positive** economic impact in the country
  - > Encouraging local employment (a guard ensures site security and the link with local populations)
  - > Transferring competency on new technologies
  - > Using green solutions
  - > Limiting non-renewable energy dependency and allowing autonomy regarding energy resources

# Key business benefits

- They are related to the three main objectives of the programme.
  - > The effective reduction of operating costs, with a good return on investment, enables to extend the solution to more areas and more countries where the ARPU is quite low.
  - > It also helps to develop a solid position in the AMEA countries

- The improvements to the Quality of Service benefits our customers and contributes to their loyalty, which in turn helps Orange to win new customers.
  - > The spontaneous testimony of a village chief in Senegal speaks for itself: “This year, during rainy season, phone kept on working. No cut! “

# Future plan

- Since the beginning Q4 2007 up to the end of 2009, the deployment has been focused on new, pure solar sites created to extend our coverage in rural areas.
  - > This deployment will continue in the coming years.

- Starting from 2010, the programme will however also expand to address the existing sites running on gensets which consume fuel.
  - > The aim is to implement a re-engineered design in order to transform them into pure solar as far as possible or into hybrid solar/fuel sites using a majority of solar power.

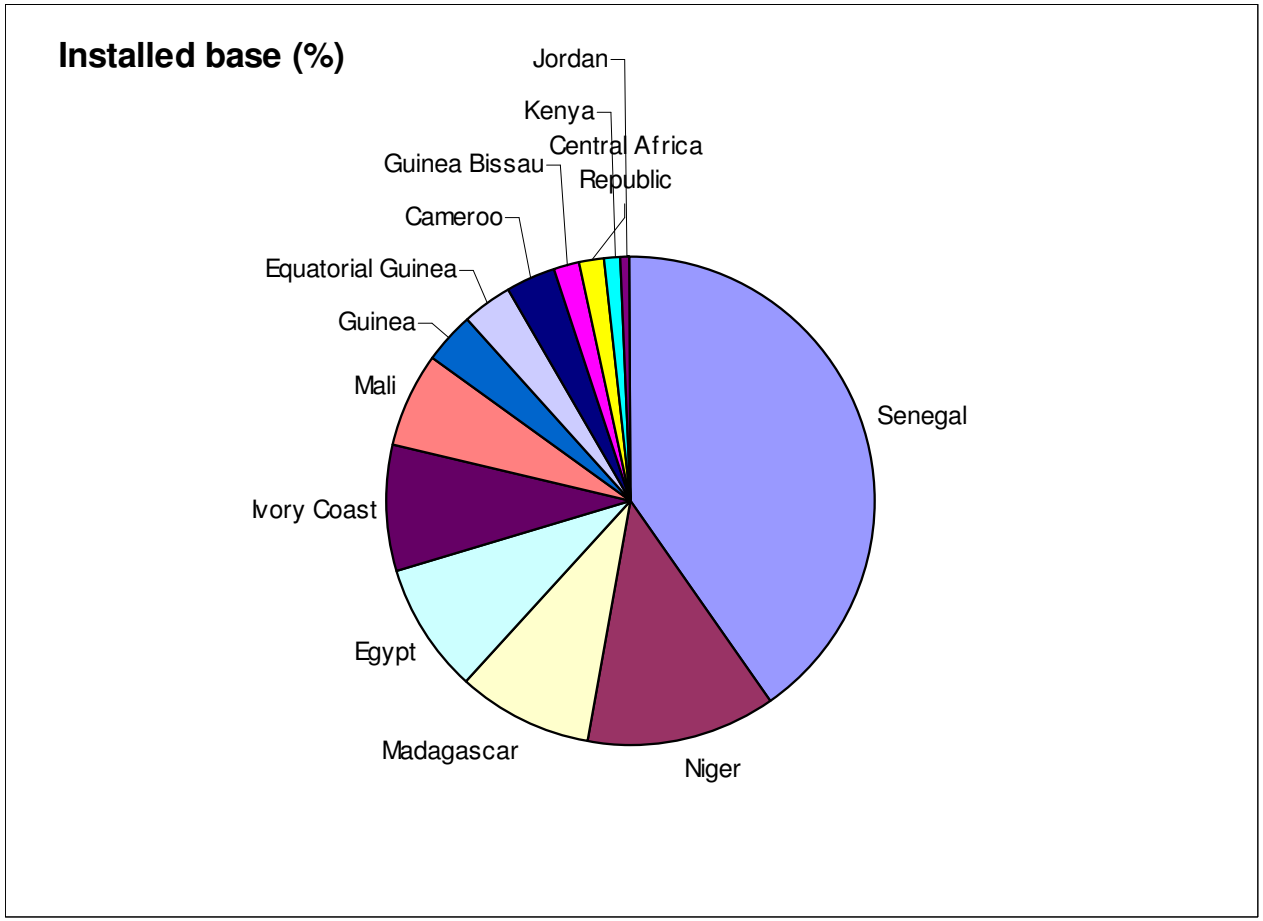
# Conclusion

- The solar base station development programme reinforces and delivers on Orange values
  - > Simplicity in technical solution, deployment and maintenance
  - > Agility to target new markets
  - > Responsibility towards our global community by contributing to environmental protection and digital inclusion

- It is the most iconic part of a wider green strategy committed to achieving 20% reduction of our CO2 emissions by 2020 and 15% reduction of our energy consumption.
  - > The Universal Charger for mobile phone
  - > Eco rating for mobile phone
  - > “Mini Sim” card…


thank you
Together we can do more !
orange™

# Annex


Installed base (%)
Jordan
Kenya
Central Africa Republic
Guinea Bissau
Cameroo
Equatorial Guinea
Guinea
Mali
Ivory Coast
Egypt
Madagascar
Niger
Senegal