RATP and sustainable development

UITP study tour in Europe

18 october 2006

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RATP : key figures

- 10 million journeys / day
- 18 lines, metro, RER, tramway
- 340 bus routes
- 4 000 buses, 4 600 metro and RER coaches
- 43 600 employees
- 2005 turnover : 3.3 billion €
- net profit : 50 million €
- investments : 786 million €

Ile de France : growing population

in million inhabitants

	1999	2015	1999 - 2015
Paris	2.12	2.15	+ 1.4 %
inner suburbs	4.04	4.17	+ 3.2 %
outer suburbs	4.79	5.48	+ 14.4 %
Ile de france	10.95	11.80	+ 7.8 %

a changing mobility market

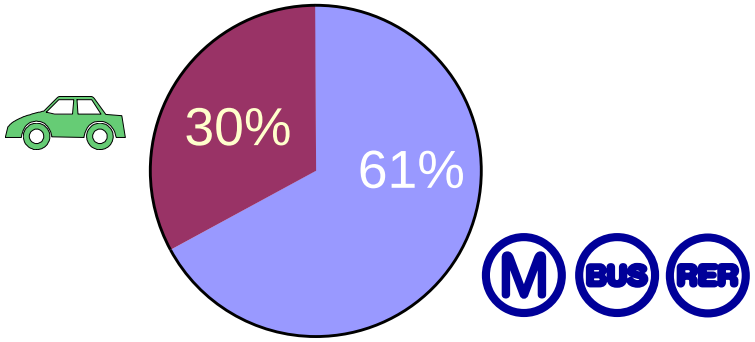
- population and employment growing on the outskirts of the city
- increase of suburb to suburb journeys
- increase of motorised journeys
- increase of journeys for leasure activities, shoping…
- individualization of behaviours

↳ **greater use of private vehicle**

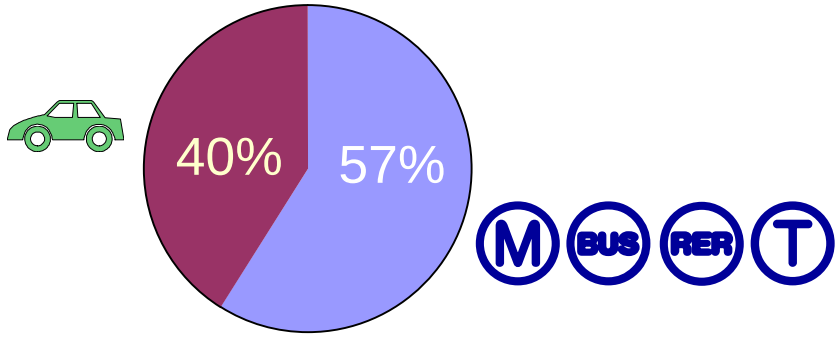
(+ 45% in 10 years)

greater needs in the suburbs

number of journeys per day

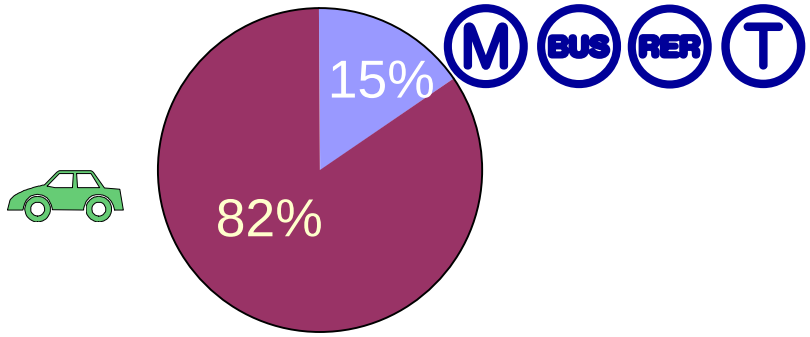


Paris ⇔ Paris
3.3 million



Paris ⇔ suburb
3.9 million

suburb ⇔ suburb
16.8 million



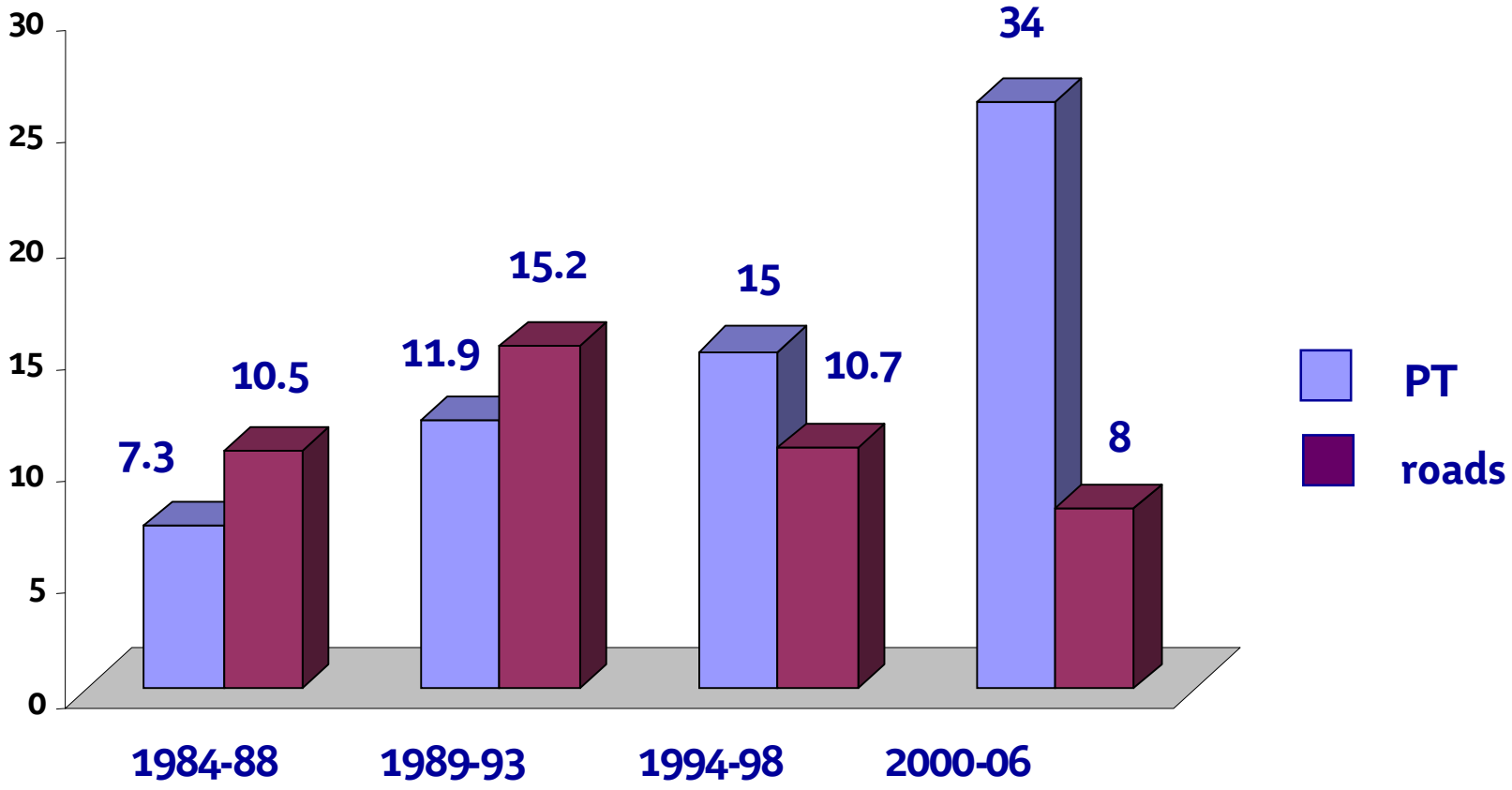
the answer SD : public transport

- environmental performances
  - energy efficiency : 3 times > car
  - 4 % of air pollution and 2 % of CO_2
  - little use of space
  - 5 % of noise related to transport
- social equity
- contribution to economy growth
  - choice criterion in the set up of families and companies
  - tourist vantage
  - savings for all the actors

cost PT / PV	***households :***	***1 to 10***
	companies :	***1 to 2***
	community :	***1.6 to 3.6 (work-home)***

an evolution of public policies

distribution of allocations that are increasingly pro to public transport (PT)



(MdF 2000)

ambitious objectives

- State-region contract scheme
  - 60 km, steel wheel or rubber tyre tramway
  - 22 km, segregated busways
  - 10 km of métro
  - 8 major multimodal interchange hubs
- Urban Travelling Plan
  - reduce private vehicle traffic: - 3 %
  - develop PT : + 2 %
  - develop light traveling means: bicycles x 2
  - increase walking by 10 % for journeys that are < 1 km
  - *(today representing 19 % of journeys in PV)*
  - encourage companies to render PT access easier to their employees

a comprehensive approach

with 2 indissociable orientations

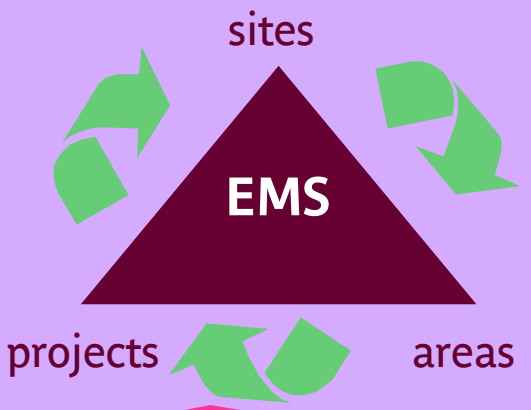
development

service
ecological advantages

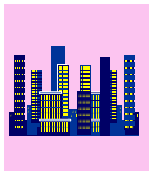
reduction of nuisances
incentive, attractiveness
- *reliability*
- *regularity*
- *rates*
- *comfort*
- *accessibility*
- *good service*

management

behaviours
results

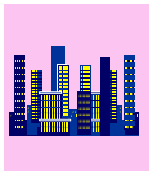


adapt the supply to the needs



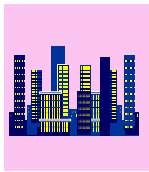
- Mobilien network
  - performance : speed and regularity
    - share the public road network, design crossroads
    - delivery and parking policy
  - service extension
    - extension of service until 12:30 p.m.,
    - frequency < 10' at peak hours
  - service quality
    - load < 4 passenger / m^2, accessibility, information
- Noctilien network
- reconsideration of metro's timetables
- local services

enhance attractiveness



- ensure security
- ensure service continuity
- offer a caring service
- increase comfort in vehicles and public areas
- multiply services
- improve accessibility
- adapt and simplify the fare system (smart ticketing)
- always be attentive to customer needs

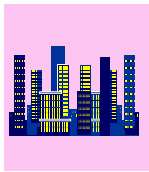
ensure the complementarity



- with private vehicles
  - partnership carte intégrale / Avis
  - thoughtful attention on carsharing

- with bicycles
  - bicycle parking areas
  - access to transport
  - bus / bicycle coexistence
  - service “Roue Libre”

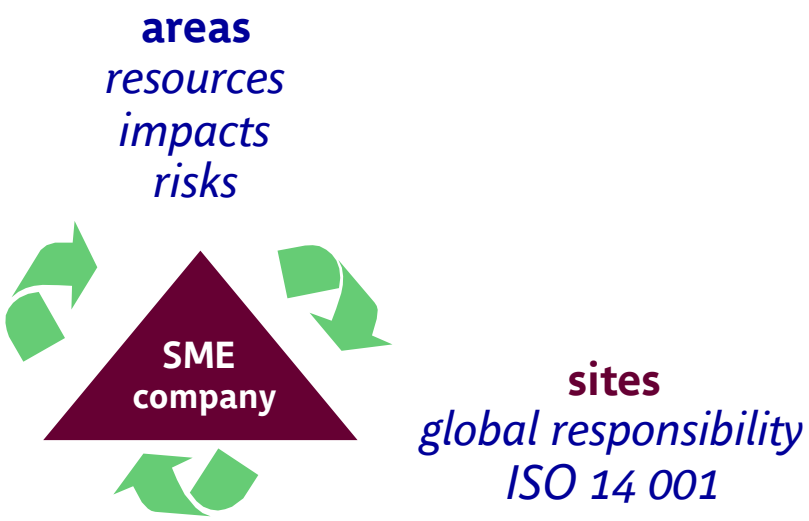
have an active role in territorial development



- territorial development agencies
- mobility and companies travelling plans diagnosis
- participative approaches
- citizenship pedagogy
  - “My territory is my city”
  - company Foundation
- solidarity activities
  (social services centres, homeless people care…)

our environmental responsibility

- global approach applied to all activities and professions
- cross management policy based on three areas



- action principles :
  - *air pollutions and risk prevention*
  - *savings in resources*
  - *durability*
  - *"Best Available Technology"*

our environmental responsibility

areas
resources
impacts
risks

projets
ecoconception
life cycle

sites
global responsability
ISO 14 001

policies by area – air

- **fight against local pollution : bus fleet**

number of buses	4,000

  - 97 % clean, Europe's number one ecological fleet

➲ outlook : move from “clean” to “clean and economical” bus

- **underground air quality**

underground stations	285

  - reinforcement of study system, continuous measurement,
  - participation of outside groups of experts

- **control of industrial emissions**

registered industrial sites	51

  - self-inspection, treatment and filtration systems

policies by area – water

- **preservation of resources and treatment**

drinking water consumption	975,000 m^3
drained water (infiltrations)	7,000,000 m^3

- water plan :
  - reduce industrial and domestic consumption
  - treat industrial waste
  - reuse drainage water

➲ outlook 2007 - 10 % on consumption
100 % of emissions in conformity
35 % of drainage emissions in natural environment

policies by area – waste

- **reduction, sorting and reuse**

waste	20,000 tonnes
of which dangerous waste	3,500 tonnes
reuse rate	50 %
passengers' waste	7,000 tonnes

  - extending to all activities :
    - industrial waste
    - worksite waste
    - office waste
    - passengers' waste
  - an in-house entity dedicated to recycling and reuse

➲ outlook 2007 - 20 % on mixted waste
maintain reuse rate

policies by area – noise

- **reducing and processing sound nuisances of infrastructure and rolling stock**

lengths of tracks	300 km

- handling local people's complaints
- treatment of tracks
- vehicle specifications : metro and bus
- acoustic impact studies, particularly with locals
- R&D programmes

policies by area - purchasing

- **a cross-company purchasing policy to accompany the sustainable development strategy and environmental policies :**

  - taking into account sustainable development clauses in contracts, especially environmental specifications

  - optimising sustainable development and environmental performance of suppliers and service providers

policies by area – focus on energy

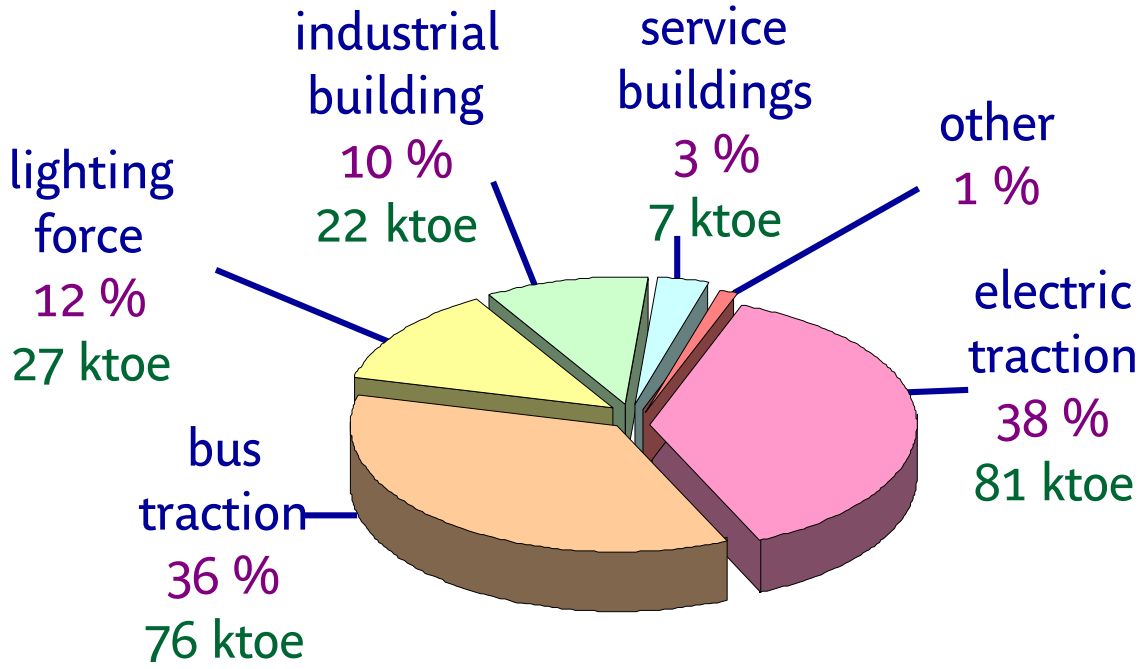
energy :

a strategic issue

- to be monitored over time
- requiring mobilisation from everyone
- and strong management involvement

substantial consumption

	1999	2004	
total energy consumption *(in ktoe)*	193	215	+ 11 %
traffic *(passengers x km, in millions)*	12,122	14,246	+ 17 %



improving efficiency

- decreasing consumption per passenger x km

unit consumption *(in goe / pass x km)*	**16**	**15**	**- 5.3 %**

- rising consumption by seat-kilometre offered (PKO)

service *(PKO, billions)*	52	57	**+ 9 %**
consumption by PKO *(goe / PKO)*	3.71	3.77	**+ 1.6 %**

variable results by network

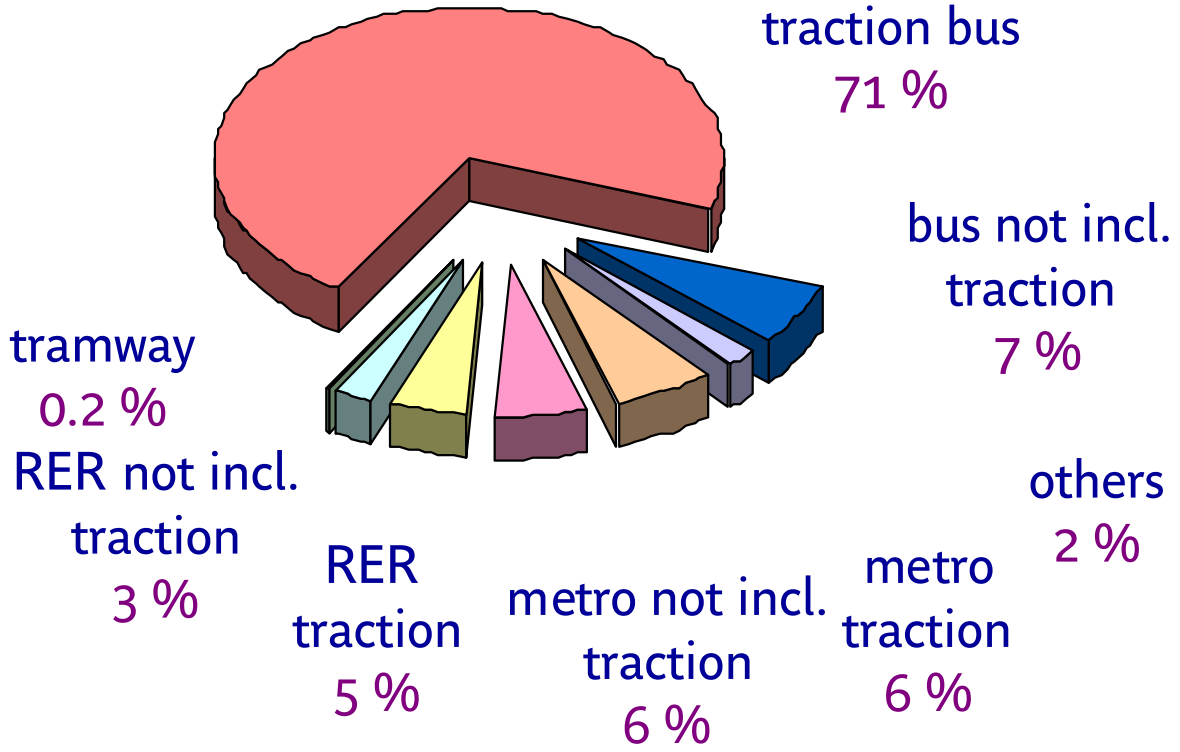
	goe / PKO	goe / km x pass
metro	+ 1 %	- 8 %
RER	- 4 %	- 13 %
bus	+ 6 %	+ 6.5 %

greenhouse gases : challenge for years ahead

since 1999 :

+ 6 % total CO_2 emissions

- 6 % CO_2 emissions per passenger



rapidly evolving context

- increasing gap between supply and demand
- sustained increase in costs
- more and more demanding regulations
- liberalised markets

challenges, stakes, levers

- **production costs** (+ 50M€)
  - energy sobriety
  - purchase contracts
  - choice of bus fuels
- **revenue**

  State-Region Plan Contract
  - projects to increase service quality and attractiveness
    - ➲ +1% traffic = + 10 M€
- **securing sourcing**
  - reducing peak electrical consumption
  - diversifying fuels, biofuels
  - purchase contracts
    - ➲ 120 ktoe electricity > 76 ktoe for fuels

challenges, stakes, levers

- **compliance with Euro norms**
  - new equipment
  - choice of fuels
    - ➲ 4,050 buses
- **greenhouse gas emissions**
  - carbon audit
  - energy sobriety
  - choice of bus fuels
  - State-Region Plan Contract
  - any project for shift from thermal to electrical energy
  - research, innovation
    - ➲ 369,000 tonnes CO_2 equivalent

energy policy

- quantitative goal for reduction of CO_2 emissions
- redefining R & I contribution for 2005-2010
- accentuating modal transfer
- reinforcing economic calculations for energy
  - internalising use of CO_2 emissions *(technical solutions, evaluation of projects, purchases, maintenance and operating policies)*
  - price and CO_2 value hypotheses to take into account for investments
- factor 4 looking ahead to 2050
- Energy : key factor in company communication
  (in-house, commercial and institutional)

operational plans of action

- **rail transport**
  - optimising train operation
  - optimising tramway signal light cycles
  - new rolling stock
  - optimising line gradients to save energy

- **bus transport**
  - “comfortable” driving
  - assigning economical buses to high-consumption lines
  - fuel diversification
  - objective “zero petrol”

operational plans of action

- **rail areas**
  - managing lighting for passenger areas and operational areas
  - generalising the use of electronic ballasts
  - light-emitting diodes

- **buildings**
  - accelerating boiler replacement
  - regulation and recommandations on ventilation and heating systems
  - replacing light sources
  - turning off lights at night and on weekends and computer equipment when not in use
  - diversifying choices of energy and production of hot water
  - optimising building occupation rate

cross-company plans of action

- adapting project management in terms of the environmental quality initiative
- generating economic value from CO_2 emissions produced or avoided in economic calculations
- implementing a company transportation plan
- communication based on energy sobriety
- reinforcing research and innovation
- deploying tools and methods :

  carbon count, energy certificates, factor 4, etc.

energy sobriety : results expected

in 2010	gain in toe	gain in CO_2
rail	4,000	1,200
bus	3,700	14,000
spaces	1,300	800
facilities	3,000	5,000
total	**12,000**	**21,000**

our environmental responsibility

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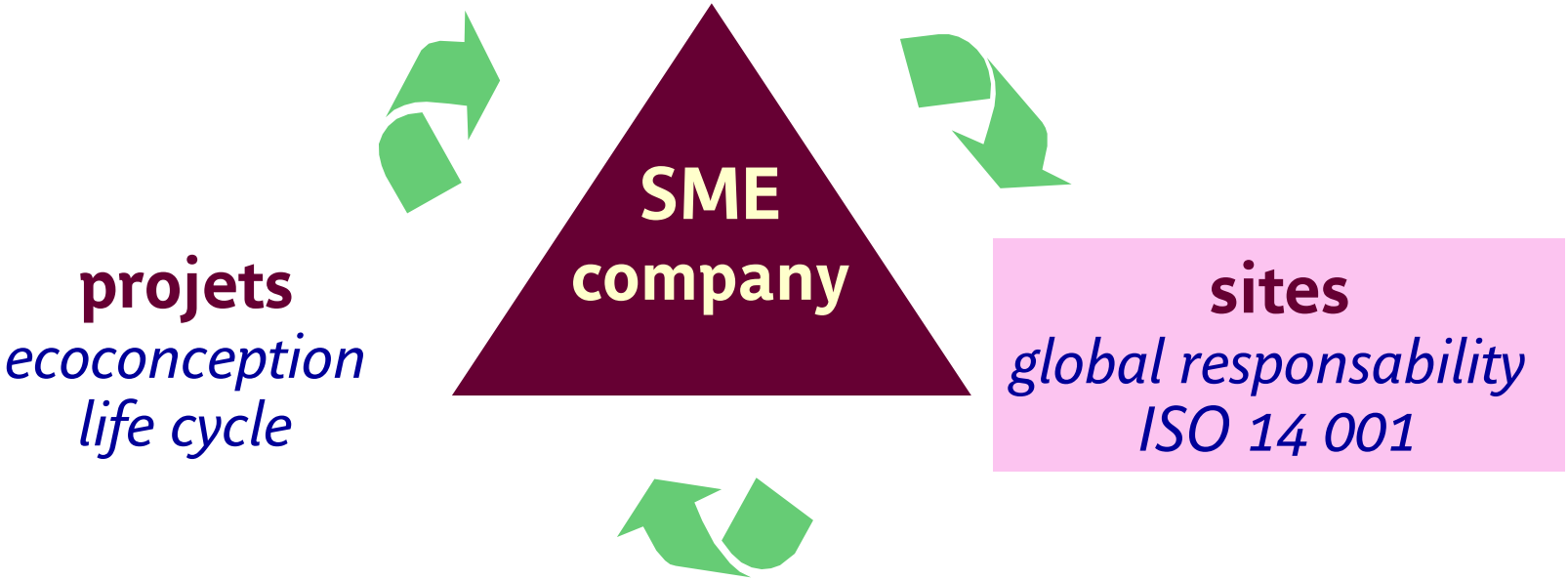

projets
ecoconception
life cycle

sites
global responsability
ISO 14 001

site policies : the local EMS

ISO 14001 certified sites :	18
employees involved in the initiative :	about 10,000

- **on-going presence in dense areas**
- **limitating risks**
- **decentralising the sense of responsibility**
- **integrating environment in overall performance**
  - local EMS : real management tool
  - ISO 14001 : international reference system compatible with quality initiatives
  - major principles: continuous improvement, evaluation of results and integration with ISO 9001

➲ 2010 objective : 100 % of main sites certified

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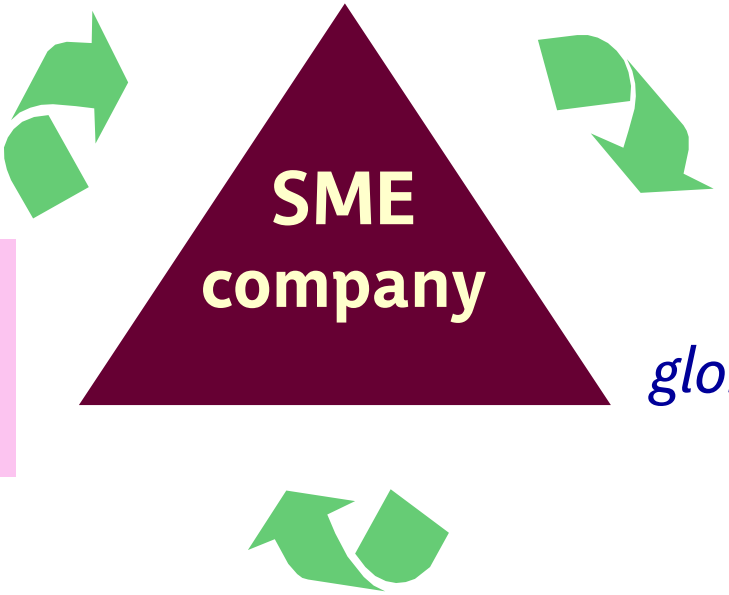

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projects – ecodesign

- **reduce the environmental impact associated with equipment manufacture and operation**

Examples :

Rolling stock MF 2000

noise : reduction of interior sound level

energy : limited traction consumption

material : decrease in quantity and separation of dangerous and non-dangerous wastes

bus stops

material : decrease in quantity used

energy : reduction consumption manufacturing process, introduction of solar energy

projects – environmental quality

- **reduce the environmental impact associated with manufacturing processes and use of buildings and infrastructure**
  - consumption of resources : energy, water, materials
  - climatic impact
- **reduce operating costs**
- **consolidate engineering expertise**
  - pilot projects : CVV tramway, workshops, bus centres, etc.
  - develop a reference system and user guide specific to RATP projects by a cross-company working group

social management fitted to objectives

- **employment and qualification contribution**
  - 2nd employer in the Ile de France
  - community assignments for employment partnerships
  - training contracts
- **responsibility awareness via a social contract**
  - labor alarm to avoid conflicts
  - decentralised labor discussions
  - profit-sharing scheme
  - labor barometer and surveys at regular intervals
  - upward mobility
- **risk prevention policy and health**
  - preventive training (conflicts, stress..)
  - assistance to staff having suffered a trauma
  - sanitary mapping: epidemiology watch, assessment of sanitary risks...

an in house charter

- **on an economic basis**
  - anticipate changes, innovate, long term vision
  - increase performance and competitivity (dévelopment / economy of resources)
  - remain open, insist on the austerity of practices
- **on a social and societal basis**
  - make the best of leadership with all the stakeholders
  - rally all the associates
  - show efficiency, be reactive, and anticipate
  - be coherent in actions and policies as regard solidarity and civic engagement
- **on an environmental basis**
  - enlarge environmental conformity to an integrated view of risk in time and space

an institutional commitment

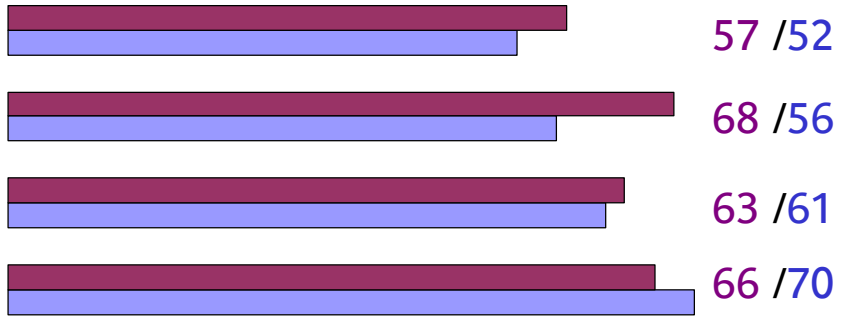
- **France : Public company charter for SD**
  - develop skills
  - mobilize the workforce
  - technological assessment
  - research
  - territorial anchorage

- **UITP's Sustainable development charter**
  - with the decision-makers promote PT for a lasting city
  - commitment of operators to be active in terms of SD on their own performances

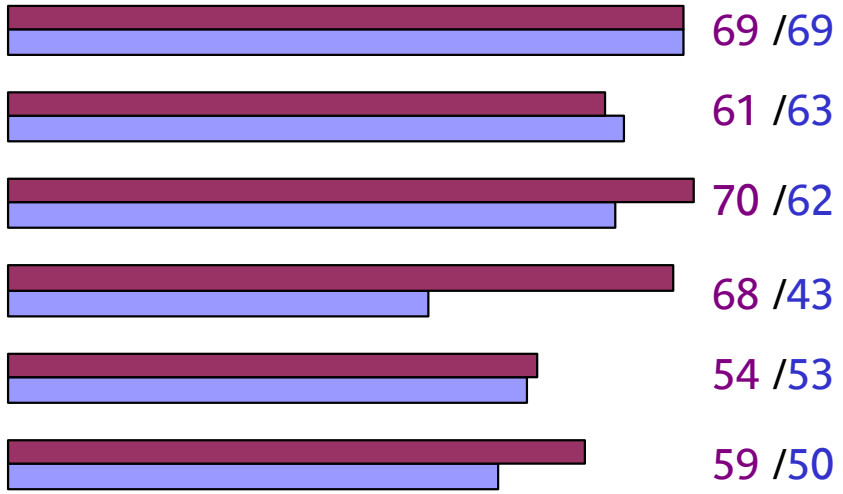
- **United Nation's Global Compact**
  - respect of human rights
  - respect of social rights
  - respect of the environment

performance assessment

- **by area**



- **by principle**



score 2005 : BBB+ score 2003 : BB+