

André

Tom

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Keolis

Moving further together



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# Editorial



With the considerable media attention aroused by the release of Al Gore’s film, and the prominent role played by environmental themes in the French presidential-election campaign, sustainable development was at the heart of many people’s concerns in 2006. Keolis had already been fostering this reinforced awareness for several years. Our mission as a public transport operator serving local governments had quite naturally led to our focusing on this issue. In 2006, the Group continued and widened its efforts to cover the full range of sustainable-development issues.

Thus, although Keolis is proud of its development, with 9.3% turnover growth in 2006, our pride is all the greater since that growth went hand-in-hand with more than 3,900 new recruits throughout France. Keolis is thus making a practical contribution to employment policy across all regions. Our people are the greatest asset of our Group. Therefore we devote considerable resources to training for all our staff, from drivers to the senior managers of our subsidiaries. This is a prerequisite to providing our passengers with public transport professionals who are competent achievers and are in touch with the latest developments – the *sine qua non* for expanding passenger traffic on public transport!

Also during that period, Keolis group has stepped up its efforts to develop its environmental management system, make its premises and facilities compliant or introduce alternative energy sources: 2006 has been a year of practical achievements. Doubtless a year of challenges lie ahead, but the Group is firmly committed to leading by example, an approach shared by our people.

Rounding off our achievements in 2006 is the setting-up of our sustainable-development strategic committee, to which leading personalities are contributing. These people, by their experience and knowledge, will afford Keolis the insight and perspective to fuel our thinking, and hence spur our action, in the area of sustainable development.

The scale of these implications is huge, and public transport undoubtedly has a considerable role to play in achieving environmental policy objectives.

**Michel BLEITRACH**



# Sustainable mobility



## Commitment to sustainable mobility

Keolis is committed, usually under contract, to expanding the use of public transport. This will free young people from having to purchase a car or enable them to defer its purchase, as well as freeing car-owning households from having to acquire a second car, while also generally encouraging them to make less use of cars by bringing mobility solutions customised to their needs.



Keolis takes a global view of its commitment to sustainable development, which it conceives according to the following three dimensions:

### THE ECONOMIC DIMENSION

- Sustainable land development supported by high-quality public-transport services fostering travel for all and stimulating economic activity.
- A strong contribution to employment by local recruitment to jobs that are safe from relocation.

### THE SOCIAL DIMENSION

- Accessible public transport facilities, enabling populations isolated through age or handicap to resume travel to focal points of social life.
- Enabling people who have difficulty in finding work to find solutions for access to the different rehabilitation, job-seeking or training services, and to their new jobs once found.

### THE ENVIRONMENTAL DIMENSION

- Incentives to integrated transport use, harmoniously combining the different transport modes while limiting pollution.
- Appreciably lessening the environmental impacts of the public-transport network by optimised management of the vehicle fleet, the use of diversified energy resources and environmentally-friendly maintenance policies.



**KEOLIS IS A MEMBER OF THE UITP SUSTAINABLE-DEVELOPMENT COMMISSION**



Since 2005, the UITP created a Sustainable-Development Commission of which Keolis is a member. With membership from five countries, it meets twice a year and works on three main topics: climate change, diversity and development reporting indicators. In 2006, the UITP organised the first world conference on sustainable development in transport, at Bilbao. On this occasion, Cécile Bordier, 23 years old, representing the United Nations Youth Parliament for the Environment, gave a much-remarked address. Keolis asked her to join its sustainable-development strategic committee, on which personalities from the worlds of academe, politics and business meet three times a year. The first meeting was held in February 2007.



# Managing change

**Interview** Francis Beaucire,  
lecturer in geography at the Sorbonne



**In the present context of climate change, how can the citizen reduce his energy consumption without restricting his mobility?**

The roof over one's head and travel are among the largest consumers of fossil fuel and producers of greenhouse gases. This has implications for the mobility of individuals. Obviously, the simplest solution would be to restrict travel and choose the least-consuming methods of transport. This would

involve giving priority to travel on foot, cycling and public transport instead of the single-user private car. Mobility, however, is a key factor in accessibility. The preferred solution, accordingly, is to "de-correlate" mobility from energy consumption, without impairing mobility and the advances made in that area.

**How can a transport operator persuade a car user to leave his car behind and yet be more mobile?**

The "car system" is so efficient (with its immediate availability and high speed) that a spontaneous shift towards public transport can only be limited, and well below target, unless we reconfigure the transport supply offered in substitution. Moreover, the thought patterns and user habits of car users and public-transport passengers differ considerably. Thus, any change must go hand-in-hand with a shift in attitudes.

To avoid too great an upheaval, the fare structures, physical comfort, ease in finding one's way and interchange

times are challenges that must be met. The supply side must be of a scale that offsets the disincentives introduced to car users, and must provide even greater benefits, in line with the need, when changing people's habits, to make the new practice more attractive than the one it is designed to supersede.

This assumes major investment in travel ergonomics, particularly in making public transport reliable and frequent and, in the case of intermodal travel combining the car with public transport, the interchange must be practical, reliable and rapid.

*You will find the full text of the interview on our [www.keolis.com](http://www.keolis.com) website.*



# Keolis, working out tomorrow's transport

Keolis is constantly attuned to changes in lifestyles and travel behaviour patterns, seeking to design networks that keep pace with societal changes.



Today our society is in constant evolution and the pace is quickening. To be competitive, public transport must reflect these changes as much as possible.

Part-time employees, flexitime workers, pensioners and jobseekers are an increasingly prevalent market segment: today our passengers travel everywhere at any time of day. Only 40% of the French working force start and end their working day during the rush hours.



Accordingly, Keolis is refocusing on the passenger, designing its offer around three key areas.

## NETWORKS ADAPTED TO THE NEW TIME PATTERNS

- Favouring continuity of service during school holidays.
- Ensuring permanent service offer at different times of day.
- Avoiding a break in service offer during the summer.
- Reinforcing evening services and night-time mobility.

## NETWORKS ADAPTED TO SERVING MULTI-MODAL COMMUNITIES

- Direct links between the major dwelling sectors and the recently-created balancing urban centres.
- Well thought out interchange facilities speed up journey times.

## SIMPLE, EASILY-UNDERSTOOD SERVICE OFFERS

- Consistently-identical services throughout the year on high-traffic routes.
- Regular, evenly-spaced service.
- Uncomplicated routes.

## THE NEW NETWORK AT DIJON

The development of peripheral urban areas, the appearance of new districts and new urban amenities, the extension of the conurbation, the decrease in time spent at work make Dijon a fast-changing city. To adapt its supply so as to reflect these trends, the transport network has been entirely recast around three major areas for improvement:

- Adapting the network to the new territorial configuration and to the inhabitants' present-day needs, providing services to new residential areas and the new urban amenities;
- Contributing to care for the environment, and relieving the city centre of bus traffic;
- Increasing passenger traffic and earnings, thereby decreasing the charge on the local authority.

Passenger traffic had been stagnating for some 10 years. Since the new network was set up, this trend has reversed.



# Integrated Transport in Actions

In the space of a few years, the passenger has become "hypermobile" and frequently today uses several transport modes for a given journey. To keep pace with this change, Keolis is committing itself to integration. Fare structures, automatic ticketing, online services, information, interchange service delivery all attest to concrete achievements designed to make life easy for the passenger.



# Quality day by day

In its offer, Keolis places the customer first. Accordingly, the Group has developed a range of contractual performance indicators, tailored to suit the circumstances of each Keolis subsidiary. These indicators are designed to guarantee optimum quality from the perspective of punctuality, the provision of information, comfort, cleanliness and security, among others, often involving the Group in financial responsibility for meeting the targets.



## GUARANTEED CONNECTIONS

Following an agreement between the Keolis subsidiary, Courriers d'Ile-de-France (CIF), and Transilien SNCF, passengers in the Seine-et-Marne department who take a connecting coach on leaving their train are finding it easier to make their connections. Both operators systematically coordinate the timing of the CIF lines to connect with train arrivals. They jointly ensure that over 90% of connections are made within 10 minutes between the train's arrival and the bus's departure (and vice versa), informing each other of any disruption to service. This service is assessed regularly, with precise measurement of interchange quality and the conducting of passenger satisfaction surveys.

## MOBIGO

Mobigo, the first intermodal passenger information Centre in France, facilitates travel in Burgundy (TER regional railway and Divia networks a French Keolis subsidiary). It encourages the use of several modes for a given journey and provides practical and concrete services: route and timetable information, the sending-out of subscriptions, fares, disrupted-traffic information, complaints management, etc. Today, Mobigo handles more than 200 calls per day of which 67% concern the Divia network, a French Keolis subsidiary.

## MULTIMODAL INTERCHANGE POINT

A pioneer site in integrated transport, the St-Malo (Brittany) interchange point brings information and multimodal distribution into the passenger's own space of the bus station. It offers passengers easier access to the locations they are heading for, and shared ticket offices.

## THE LAUNCH OF THE INTER'ACTIONS EIG IN 2006

The Economic Interest Group bringing together the SNCF national railway operator, Keolis and EFFIA aims to promote intermodality and to offer practical solutions catering for the requirements of the Public Transport Authorities. By encouraging collaboration among its three members, it seeks to promote initiatives on the networks and at stations, and to disseminate know-how among the different SNCF subsidiaries and activities. "Inter'Actions", through its projects and ambitions, marks a fresh stage in Keolis's intermodal ambitions.



## NF SERVICE CERTIFICATION

Awarded by Afaq-Afnor Certification, this certification guarantees to the customer that the services meet specified characteristics of quality, reliability and performance. Based on European standard EN 13816. In 2006, three new subsidiaries joined the 9 that had already been awarded or were re-awarded NF Service certification:

- The Garrel & Navarre coach operator: certification for the whole of the Vigneux sur Seine network.
- Keolis Brest for its sales office.
- The whole of the Arles urban network, the third subsidiary in France with La Roche-sur-Yon, which has had the whole of its network certified.

## A QUALITY MANAGEMENT SYSTEM

Numerous subsidiaries were awarded certification for their Quality Management System:

- Subsidiaries Airelle and Intrabus operating in airport environments opted for ISO 9001 certification in relation to their environment and in liaison with their respective principals.
- At Lille, the Transpole network has enjoyed ISO 9001 V 2000 certification for several years.

## KEOLIS LYON: OBJECTIVES FAR AND AWAY ACHIEVED

At Lyon, the 4 metro lines, 2 tramway lines, 2 funiculars and the 59 bus routes, together with the 9 sales offices were awarded and or retained NF Service certification. Close to 90% of Keolis Lyon customers are served by a certified network.

## EFQM: TOWARDS A COMPREHENSIVE, SUSTAINABLE PERFORMANCE APPROACH



In October 2006, Keolis became a member of the European Foundation for Quality Management (EFQM). With its a global performance model, EFQM interconnects the businesses' various cross-functional approaches in the fields of quality, the environment and management. The subsidiaries in Great Britain and Sweden are contractually committed to maintaining standards of excellence on EFQM lines.







# Human dimension



## Keolis, a major French employer

With more than 3,900 new recruits in 2006, and over 24,000 staff in France, Keolis is a leading employer, creating jobs which, in addition, protected against relocation.

A socially-responsible business, Keolis is also keen to ensure that its teams reflect the diversity of the communities they serve. Accordingly, the Group has signed the diversity charter, with a number of versions adopted at its subsidiaries in Lyon, Angers, etc., and has entered into a nationwide partnership with the ANPE State employment agency for its recruitment processes.

In 2007, Keolis is pursuing its socially-responsible initiatives, with a particular focus on helping people, young as well as old, to find their place in society. A further 3,500 new recruits are planned. The Group is also striving to prove the parity between men and women in a traditionally male-dominated sector. Thus, in 2006, 46% of the executives

recruited to the Group were women. The same thinking underpins driver employment policy, with actions specifically targeting the female population, as in Lyon or in the Paris area.

### Interview with Christian Charpy, Executive Director of France's ANPE national employment agency



Christian Charpy

#### What practical returns does ANPE expect from entering into a partnership with Keolis?

Our objective is to find placements for all job seekers without discrimination. We have developed tools to further this aim. The recruitment-simulation method exemplifies a way of recruiting someone on ability and not, as previously, on qualifications or professional experience alone. This widens recruitment to men and women with varied backgrounds and hence, meets the needs of businesses having difficulty

in recruiting while at the same time bringing back into employment people who had become remote from it. This is the direction taken in our partnership with Keolis.

#### What offers are available under this partnership agreement?

We are supplying to Keolis an "à la carte" service offer ranging up to the provision of professionally-realistic training, professional skill-training of candidates, or support and advice for a candidate joining the business.

#### A FEW SOCIAL-AUDIT FIGURES

- Today, women represent **18%** of the drivers on the payroll, and **24%** of executive and equivalent grades.
- **8%** of senior network managers are women.
- Women represented **20%** of the Keolis workforce in 2006. This is the first time that the **20%** threshold has been crossed.
- The absentee rate continued to fall, to below **6%**.
- The number of hours' training given increased **13%** in 2006 compared with 2005.



# Keolis acts to foster diversity



Keolis's recruitment policy in favour of visible minorities mainly concerns:

- The unqualified, whose numbers it is intended to expand within 3 years to 5% of the Group workforce in training contracts, as against 1.5% today.
- Persons in mid-career, seeking to change job, particularly in the 40- to 45-year age range.
- Women, with the ambition of achieving equality of all recruitments.

## KEOLIS, A DYNAMIC PARTNERSHIP WITH THE ANPE

The three-year agreement signed with the ANPE public employment service in April 2005 pursues a twofold aim:

- Fostering recruitment and the finding of first-time employment among job-seekers.
- Enjoying ANPE support for specialist recruitment.

The practical aims of the agreement are to:

- Renew one-third of the workforce within five years in order to replace drivers who are retiring.

- Ensure successful recruitment against a background of change in the transport business and in working patterns.
- Expanding equality of employment opportunity in the business by hiring more women (particularly for driver positions, in which they represent less than 20% of the workforce).

## AN INNOVATIVE METHOD OF RECRUITMENT

Following the purchase of 100 new buses, Transpole, Keolis's Lille subsidiary, is to recruit 200 persons by the end of 2007. In 2006, 700 candidates were identified by ANPE and invited to a briefing at which some drivers talked about their job with its advantages and constraints. This was followed by ANPE tests, interviews with operating staff and the selection of 47 persons, of whom 40 are currently under training financed by the Nord-Pas-de-Calais Regional Council, the DRTEFP vocational-training board and the ASSEDIC unemployment benefit board. This 12-week training course leads to engagement on a permanent contract.



**ABDESLAM HARI, A FUTURE MECHANIC**

I have always wanted to work on large vehicles, particularly public service vehicles.

So I quite naturally opted for this sandwich course, alternating practical experience at Keolis Bassin de Thau with theoretical training in the Ile de France. The advantage is that, when I have completed my training, the Keolis group will offer me a job in one of its subsidiaries, provided I complete the course successfully.



Under the agreement, Keolis circulates all its offers to ANPE, which in turn offers a recruitment service tailored to the needs of the Group and its subsidiaries.

In order to keep in the closest touch with the expectations of job-seekers, a steering committee, manned by representatives of Keolis and ANPE, meets once a year. This committee assesses the elapsed year, making changes to the agreement in keeping with new areas for development that it identifies.

## THE DIVERSITY CHARTER

With individual expressions in several subsidiaries such as those in Lyon, Angers, Dijon and Besançon, the Diversity Charter was signed by Keolis on 22 November 2006. Its chief aim is to embody Keolis's commitment to cultural, ethnic and social diversity.

To take an example, at Keolis Angers, this charter acknowledges long-standing efforts with visible minorities in a region with very little diversity. Accordingly, this subsidiary regularly engages drivers of foreign origin or from sensitive areas, women and also seniors.

## HELPING YOUNG, FIRST-TIME JOB-SEEKERS

Keolis, in partnership with AFT- IFTIM (Europe's leading transport logistics training organisation), has launched training of the first intake for the vehicle maintenance vocational baccalaureate, a new State-recognised school-leaving qualification.

This two-year sandwich course provides each young trainee with theoretical training and the opportunity of hands-on work experience in a Keolis subsidiary. Each young person is supported and advised by a referee during the 18 months' training. The first intake is of 11 young people from all over France. On completion of training, they will be offered permanent contracts on the maintenance side of the business.



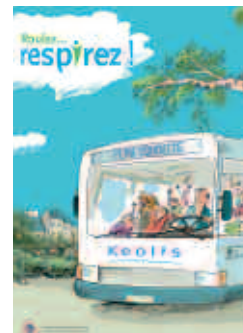
**FABIEN MATEO, WORKSHOP MANAGER KEOLIS BASSIN DE THAU**

In our activity, we have a lot of trouble recruiting good mechanics. I'm delighted to be able to train a motivated young person. This kind of training is thoroughly worthwhile, since the young trainee learns on the job and takes in the working methods of the business from the word go.



# Training: a key priority for Keolis

Keolis devotes continued efforts to ensuring that staff dealing with its customers are competent, motivated and available. To this aim, it invests considerable resources to training in all its business lines and skills: in 2006, 18.5 million has been invested in training. Training given is tailored to the expectations of its staff, and geared to the environment and to technological advances. From drivers to managers of subsidiaries, training on offer addresses every level.



## DRIVERS

Whether we are talking of diesel fuel, ethanol or biogas, the most environment-friendly propellant is the one that is not consumed. Accordingly, training drivers in responsible driving is of the utmost importance.

Whether we call it responsible, adaptable or clean, this driving style has the same goals in view:

- Contributing to environmental protection by using the most suitable quantity of energy.
- Ensuring passenger security and comfort.
- Reducing operating costs and lengthening the vehicles' working life.

In the subsidiaries where it is implemented, this driving style achieves diesel-fuel savings of at least 5%. In all, 1,862 drivers were trained in 2006, accounting for 11% of the entire Keolis workforce.

At Keolis Besançon (France), the 2006 training objective was 25%, targeting 96 drivers. This goal was exceeded, with 129 drivers trained, more than 33%. Today, the fuel-consumption saving is 5%, and energy savings are included in incentive-bonus calculations. In this, the business, drivers, passengers and the environment are all winners.

## TRAINING MANAGERS IN MEETING THE GROUP'S NEW CHALLENGES

Because of the relentless pace of change in the local-government services sector and the ever-shifting pattern of passenger needs, Keolis wished its managers to be trained in the best practices prevailing in Europe. In partnership with EM Lyon business school, the Group has set up a dedicated management school for its operating managers: the Keolis Academy based on four principles:

- Enshrining training among the Group's strategic goals.
- Developing the role and function of operating managers.
- Instituting a personal and professional development process.
- Networking the Academy's graduates and fostering exchanges of best practices.

All Group managers will have been trained under the scheme by 2009.



# A more environmentally friendly mobility

Today, the cost of fuel, the doubts over the planet's oil reserves and the concern to combat global warming are driving experiments in so-called alternative energies.

France's pioneer in this field, Keolis uses all the available energy sources, the ways of developing them and today, has acquired sufficient experience to offer tailored solutions.



# Protecting the environment, the natural course

Keolis is faced with a whole array of environmental challenges: air quality, noise pollution, greenhouse-gas emissions, pollution prevention, water and energy consumption, among other issues. The chief focus of its environmental policy is on two impact areas: its sites, and the vehicles.

**Did you know?**  
It takes 400 litres of water to clean a bus.

Running vehicles while caring for the environment is the core business concern of a public-transport operator. While most pollutant emissions arise during vehicle travel, other related activities are also potentially hazardous to the environment: fuel storage, elimination of wastes (drained engine oil, grease, paint residues, etc.).

In response, Keolis created the Green Label in the year 2000: this is an environmental management system based on the methodology set out in the ISO 14001 international standard. The Label is awarded by an external agency for a renewable one-year term, in recognition of a continual striving for improvement. Under this scheme, a small number of subsidiaries had their green label suspended in 2006, pending their alignment with corrective actions.

Allowing for external factors (mergers and other changes in corporate scope) the number of Green Label applications remained stable, with 27 label awards at end 2006 compared with 28 in 2005. At the same time, however, numerous subsidiaries made great strides forward in the Green Label approach, and should be awarded the Label in 2007. All the ISO 14001 labelled sites had their certification renewed.

Another development in 2006, in response to an incident in 2005 affecting a fuel storage tank, was the conducting of an audit covering all the Group sites. As a result, a nationwide plan of action was launched, with its own special budget, to ensure that all sites are compliant with standards. The actions advocated have already been undertaken to a very large extent.



**A GLOBAL APPROACH FOR TAE**  
In November 2006, the Green Label was awarded to the Brittany subsidiary, TAE, for its Chantepie depot housing 290 vehicles. Over and above the efforts of the 18 workshop operatives, the award recognises the commitment of the business as a whole: the recycling of 80% of vehicle washing water, retention tanks, waste sorting for salvage or environmentally-conscious actions in the offices (radiant heating, low-wattage light bulbs, recycled ink cartridges, etc.).



# Climatic disturbance and greenhouse gases

**Interview** with **Dominique Dron**, Professor at l'École des Mines, Paris, and former Chair of the MIES (French Interministerial Mission on Greenhouse Gases)



Dominique Dron

**In your opinion, climatic disturbance: threat or reality?**

Since the last 2007 GIEC climatologists report, we currently acknowledge a rapid global warming. Pushed by anthropogenic greenhouses gases, we have a short period of time to contain it between viable limits: no more than 2°C of temperature raising when we have already reached since the 19th century +0.7°C.

**Does using public transport help combat climate change?**

If transport permits 20% of CO<sub>2</sub> world-wide, the figure is nearly one third in France\*. A journey by bus, tram or coach emits far less CO<sub>2</sub> than travelling the same distance by car; this is all the more true when all part of that journey can be travelled actively, on foot or by

bicycle! In Europe, 20% of urban dwellers who use their own vehicle could resort to other solutions. The remainder, however, have to organise collectively either with the company they work for (business-wide travel plans) or with the municipality or voluntary associations (car-sharing or car-pooling schemes, etc.).

**On what main environmental area, in your view, should public transport focus its resources?**

Reducing emissions of energy-related greenhouse gases by buses and coaches. First, though, they must attract more customers!

\* France emits less CO<sub>2</sub> from electricity production than other countries on account of nuclear energy; this explains the larger share attributable to transport.

Go to our [www.keolis.com](http://www.keolis.com) website for the remainder of the interview.

On the basis of this finding, Keolis has launched a vast programme to develop the use of alternative fuels. Here are a few examples:

- The number of vehicles of the fleet running on diester (decreasing by 20% emissions of carbon dioxide, the main greenhouse gas) was increased fivefold between 2005 and 2006. The mileage travelled increased by three and a half between 2005 and 2006. It should increase in the same proportion in 2007 compare to 2006.
- In Sweden, the County of Stockholm has resolved on making the city of Stockholm totally carbon-neutral by 2050. On the urban-travel front, all public transport vehicles (namely 284 buses) operated by Keolis via its Busslink subsidiary and travelling intra muros are run exclusively on ethanol or biogas.





# Making vehicles “cleaner”

In many people's minds, diesel is still associated with black exhaust fumes.

This image no longer corresponds to reality. Much progress has been made in developing efficient post-treatment systems, achieving pollutant discharges well below the emission limits.

Keolis sets out here a comprehensive assessment of actions in this area.

## THE EURO STANDARDS

In addition to causing greenhouse gas emissions, running diesel fuel in engines discharges a number of pollutants into the atmosphere. Regulations cover the four main pollutants:

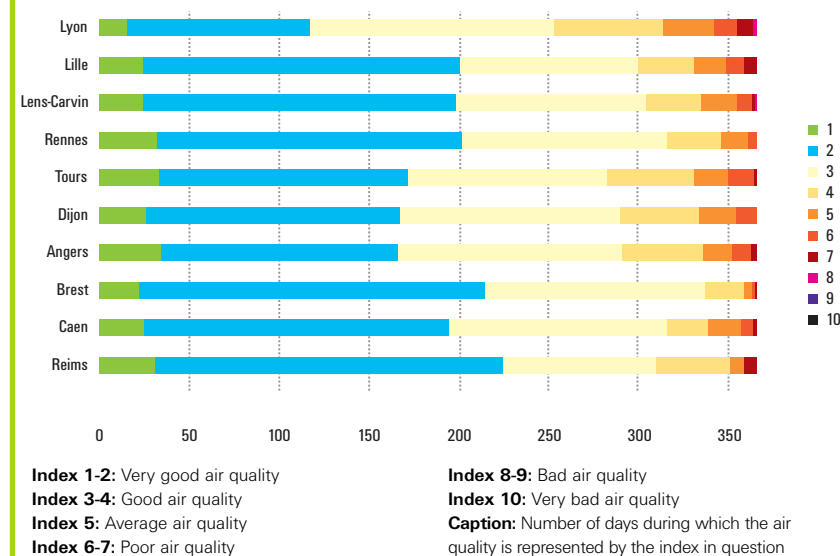
- Nitrogen oxides (NOx).
- Hydrocarbons (HC), actually diesel fuel that is not completely burned in the combustion chamber.
- Carbon monoxide.
- Particles.

For these pollutants, Europe-wide emission limits have been set. In line with progress by engine manufacturers and increasingly stringent environmental requirements, authorised discharges have fallen noticeably. Today, a Euro 3 vehicle (registered from 2001 onwards) is approximately 10 times less polluting than a Euro 0 (registered in the early 1990s).

## Did you know?

**At high altitude, ozone has the vital role of filtering ultraviolet radiation, thus making life possible on earth:** this is “good” ozone. At ground level however, the pollutants emitted by motor vehicle traffic and industry are acted-on by the sun, producing oxidising photochemical pollution. Harmful for human health and the environment, this is “bad” ozone.

## AIR QUALITY IN THE 10 LARGEST NETWORKS OPERATED BY KEOLIS IN 2006



## REDUCE NITROGEN OXIDES EMISSIONS

Since 2006 year-end, all new vehicles must follow Euro 4 and 5 standards. Those standards involve a decrease of particles and nitrogen oxides emissions.

2 post-treatment systems achieve the reduction of pollutant discharges:

- The Exhaust Gas Recirculation (EGR).
- The selective Catalytic Reduction (SCR) with the assistance of an injected additive into the exhaust gases (AdBlue). In this case, the ammonia contained in AdBlue can recombine nitrogen oxides with the hydrogen to release water and nitrogen.

Numerous Group subsidiaries have already acquired Euro 4 and Euro 5 vehicles.

- Keolis Angers with 11 vehicles to Euro 4 standard equipped with EGR system.
- At Keolis Cherbourg, the Zephir Bus network has purchased 2 Heuliez meeting the Euro 5 standard.
- Some 30 vehicles equipped with the SCR system were put into service end of 2006 as at Tours (7 CITARO vehicles at end December 2006).

Similar developments took place at the Keolis operations in Besançon, La Roche-sur-Yon, Lorraine, etc.

Using a post-treatment system returns engine operation to optimum conditions, and can be expected to reduce the consumption of fuel.

## DECREASE OLD VEHICLES IMPACT: PARTICLE FILTERS

We usually operate Public Transport vehicle for 18 years. To decrease pollutant discharges from the oldest vehicles, those can be equipped with particle filters. These are trapped using ceramic filters. When a sufficiently high temperature is reached, the particles are burned and the filter is regenerated. The filter cartridges are changed regularly, and regenerated by the supplier.

Keolis Angers also addressed the problem of emissions from the older buses, instituting a plan for fitting particle filters, with which 80 older buses are now fitted. Thus, 85% of the distances travelled will be clean from the end of the first quarter in 2007.



**DOCTEUR  
FABIEN SQUINAZI,  
DIRECTOR OF THE CITY  
OF PARIS PUBLIC  
HEALTH LABORATORY**

The urban traveller using public transport is two to five times less exposed to exhaust gases than a traveller using his car. Moreover, atmospheric pollutant emissions per traveller carried are far lower for public transport than for private vehicles. To be more attractive than cars, public transport must use quality of service as an argument (reliability, safety and cleanliness).

You will find the full text of the interview on our [www.keolis.com](http://www.keolis.com) website.





# GECAM O# and GNV: two non-biomass alternative fuels



## Did you know?

**Biogas generated from composting organic wastes.**

This fermentable waste recycling centre has an unusual facility: a biomethanisation plant. This unit, besides producing compost, recovers the fermentation gases by letting the waste decompose in an enclosure deprived of oxygen. The methane gas recovered is then converted into fuel that can power the urban buses.

## GECAM

GECAM O# is of water-diesel emulsion containing 89% diesel fuel. The 9% of water present in this fuel decreases the temperature in the combustion chamber, and hence, nitrogen oxide emissions. Particle emissions are also decreased.

Following experimentation in the Interhôte Alpes subsidiary, GECAM O# was recognised as an alternative fuel, and is used by 13 subsidiaries, accounting for more than 30 million kilometres travelled in 2006 and more than 1,000 vehicles. The fuel supplier monitors the vehicles under contract, to ensure that the promised ecological performances are achieved.

## GNV

Natural Gas for Vehicles is none other than natural gas of the kind used for heating or cooking. Its benefit is in generating less CO<sub>2</sub> than diesel fuel for the same quantity of energy consumed. Moreover, the simplicity of the methane molecule (CH<sub>4</sub>) means that a number of pollutants are not emitted when using natural gas. A further point is that it is supplied through the natural

gas distribution network, so supply is not a worry. However, a number of alterations are needed to use this gas, and it involves training technicians in the servicing and maintenance of vehicles, that are more expensive than diesel vehicles.

Today, Keolis runs vehicles on NGV over six networks, for fleets between 16 and 194 vehicles in size, consuming a total of more than 12 million cubic metres in 2006.

The Lille Urban Community's joint transport board chose gas and today operates 194 vehicles, with the aim of operating some 400 by 2015. The Lille Urban Community has set itself the goal of improving the ecological impact of that fuel by using biogas produced from composting waste processed at the Séquedin Organic Waste Reprocessing centre. The decision to change to natural gas was taken after experiments in 1993 – 1994 on a dozen gas-powered bus prototypes, powered using biogas generated at a sewage works.

# Alternatives to combustion engines



## THE CUTE PROJECT

In the fuel cells domain, Keolis took part in the pioneering CUTE fuel-cell project (Clean Urban Transport for Europe), via its Swedish subsidiary, Busslink. In the city of Stockholm, three standard diesel-fuel buses were adapted to operate using a fuel cell. The hydrogen carried aboard was generated at the Busslink site from an electrolytic plant splitting water (H<sub>2</sub>O) to separate hydrogen (H<sub>2</sub>) from oxygen (O). This electrolytic unit operated on electricity generated from renewable resources. The ecological balance was therefore among the best that can be envisaged, since the operation of these vehicles emitted no CO<sub>2</sub>.



All the parties involved regarded the experiment as highly positive, since the vehicles were very reliable, generating no pollutants. The final cost, however, remains high with a per-vehicle investment cost six times higher than for a standard bus, and sizeable infrastructure costs. This experiment was not continued in its existing form.

## ELECTRIC SHUTTLES

Keolis also operates a several electric or hybrid diesel-electric vehicles: city-centre shuttles as at Tarbes, Laval, Dijon, Tours or Nîmes. The operating range and price of this type of vehicle remain a deterrent to its operation on a standard line, and manufacturers do not yet offer a high-capacity vehicle.

## GREEN ELECTRICITY

Electricity on its own is also used to propel vehicles in the light-rail and overhead-wire modes: Keolis uses this energy to operate over 90 km of underground railways and tramways at Lyon, Lille, Rennes and Caen. The choice of the network's electricity supplier influences the ecological balance



of these modes of transport. In 2006, the electricity was purchased from the Compagnie Nationale du Rhône with 25% of renewables energies.

In Lyon, 70% of journeys are made using electric-traction modes: 52% by metro, 9% by tramway and 9% by trolleybus.



# Biofuel

Beyond merely reducing greenhouse gas emissions, biofuels derived from agricultural crops have other benefits. They diversify fuel supply sources, partially offsetting the need for petroleum product imports.



In Sweden, the Government has resolved to phase out petroleum-based fuels altogether within 20 years. The buses operated by Keolis Swedish subsidiary, Busslink, run in part on ethanol, and have travelled more than 138 million km since 1990.

For 15 years, Keolis has been operating buses running on Diester, with the Alençon Community Authority having chosen to run its entire fleet using this fuel since 1992. Numerous other networks have followed suit, such as Keolis Quimper which operates 29 buses at Quimper, or TAE at Rennes, which has been running 50 coaches on diester since late 2006.

## Did you know?

**Can biofuels solve the problem of scarcer oil, forecast in the next 20 years?**

Not quite... Take the example of colza: one hectare of colza crop yields 1.4 ton of oil; however, France's cultivated area is 18,360,000 hectares. Therefore, even if the whole area of France were covered with colza, this could not cover the requirements of all the country's vehicles.

## Did you know?

**What about Pure Vegetable Oils?**

Pure Vegetable Oils have been authorised since January 2006 for agricultural machinery. However, large-scale European experimentation has shown engine breakdown risks to be very high, particularly in the more recent engines. The Ministry of Industry has therefore banned the use of pure vegetable oils in Public Transport.

Numerous local authorities are considering changing to Diester in the next few months. Keolis is supporting and advising them in their deliberations by studying with the network the fleet vehicle profile, the fuel delivery possibilities and new maintenance procedures.



“ **ETIENNE POITRAT, ADEME, BIOFUELS ENGINEER**

Biofuels mark an advance on oil, which is polluting and cannot be regarded as a sustainable resource. Biofuels, too, have positive aspects, which should be discussed. Biofuels are of recent development, and are bound to improve in the future, driven by economic forces.”

*You will find the full text of the interview on our [www.keolis.com](http://www.keolis.com) website.*

## Did you know?

**There are two types of liquid biofuels: biodiesel and ethanol.**

Biodiesel is composed of ethyl esters of rapeseed oil, sunflower, soya or palm oil. It is mixed in variable proportions with diesel fuel. In case of captive fleet, it is usual to refer to B30 (a mixture of 70% diesel fuel and 30% of ester, expressed on the basis of the Net Calorific Value (NHV)), better known as Diester®.

## KEOLIS TAKES A DECISIVE STEP

Keolis has decided to support research in this area by promoting a research programme in the LUTB (Lyon Urban Trucks and Bus) competitiveness cluster into the use of pure vegetable esters.

Within the framework of this competitiveness cluster, Keolis will also be involved in experimenting a 100% synthetic fuel known as BTL.

Keolis is committed to a diversification and innovation drive with its running its buses on biogas at Lille and Stockholm. Biogas is the best fuel from the standpoint of the global ecological balance. It is emitted when organic substances decay in the absence of oxygen, through the composting of green waste (lawn clippings, brushwood, etc.) or of fermentable wastes (such as fruit or vegetable peelings, food scraps, etc.), and also when sewage sludge decomposes.



This is of ecological value in two ways:

- This resource is fully renewable.
- Recovering and burning biogas, emitted in any case, diminishes the climatic impact of methane, which is 21 times more powerful than CO<sub>2</sub> in its effect on global warming.

## Did you know?

**Two forms of ethanol are used in fuels:**

-Mixed in petrol in variable proportion, the most famous example is E85

-Transformed, ETBE which is incorporated up to 15% in volume in petrol.

The petrol is necessary to improve cold starting.

Ethanol is produced by fermenting and distilling fermentable plants (sugar, amylaceous).

In 2006, the French Government decided to support ethanol production. However, unlike diester, this fuel cannot be implemented in existing public-transport vehicles.





# Keolis indicators

SUSTAINABLE MOBILITY	2004	2005	2006
Number of urban supply km for the year	-	1.74%	2.13%
Number of journeys during the year	-	1.85%	3.41%
Percentage of networks having integrated fare structure with SNCF	40%	43%	46%
Number of vehicles dedicated to carrying mobility-impaired passengers	166	166	177
QUALITY			
Percentage of subsidiaries under contracts setting Quality targets	55%	57%	58%
Percentage of subsidiaries committed to a Quality approach	29%	38%	39%
Number of persons who are in contact with customers and who completed training less than 3 years ago	4,277	4,460	4,821
Percentage of networks having carried out a user-satisfaction survey	43%	48%	48%
HUMAN RESOURCES			
Absentee rate (sickness, accidents at work and occupational illnesses)	6.35%	6.12%	5.79%
Percentage of recruitments on first-time employment contracts (professional-skill acquisition contracts, sandwich courses or apprenticeship)	15.0%	12.3%	13.0%
Proportion of women in the Group workforce	19.4%	19.8%	20.6%
of which, proportion of women vehicle drivers	16.7%	17.2%	18.1%
of which, proportion of women executives and equivalent grades	23.1%	23.4%	24.5%
Proportion of handicapped persons in the workforce	2.7%	2.9%	2.4%
Total No. of hours' training provided	330,671	288,707	326,964
Percentage of employees under an incentive contract	20%	20%	26%
Percentage of payroll devoted to training	3.06%	2.85%	3.06%

SOCIAL RESPONSIBILITY	2004	2005	2006
No. of incidents involving staff assault	2,787	2,995	2,616
No. of incidents involving work stoppage	187	195	237
No. of school classes visited by employees, or visiting the business, during the year	1,393	1,731	2,097
No. of socially-responsible projects supported by subsidiaries (time, resources, financial support, etc.)	214	237	230
No. of accidents per vehicle (bodily injuries and damage to property, regardless of liability)	0.78	0.73	0.72
ENVIRONMENT			
% contribution by Green Label sites (or ISO 14001 sites) to annual revenue for France	31%	34%	32%
-	-	-	2,400 kg
Average water consumption for a subsidiary running 100 vehicles	3,575 m³	3,123 m³	2,920 m³
Average energy consumption of plant, for a subsidiary running 100 vehicles			
Electricity (kWh)	201,300	199,800	203,100
Gas (kWh)	445,000	443,000	484,000
Fuel oil (m³)	17	22	18
Proportion of subsidiaries having trained drivers in defensive-driving or rational-driving techniques in the last 3 years	77%	70%	70%
Breakdown of kms travelled using			
diesel fuel	95.8%	90.7%	83.4%
Gas	3.1 %	3.6%	5.7%
alternative fuels	1.1%	5.7%	11.4%
Proportion of vehicle fleet at EURO 3 minimum standard	21%	26%	31%





# Indicators: scope and consolidation

This third report incorporates most of the indicators tracked in the previous report, although with some modifications.

The data covers 83 French subsidiaries, accounting for € 1.328 bn in turnover, equivalent to 88% of the turnover for France. Accordingly, since the scope differs from that of the previous year, the Sustainable Mobility, Quality, Social Responsibility and Environment indicators were entirely recalculated for the years 2004 to 2006.

The Human Resources figures were consolidated by the Human Resources Department, as in previous years, in a constant manner (French subsidiaries and Head Office – Group Social Audit). Figures for staff assaults, with or without loss of working time were drawn from the 15 largest French subsidiaries. Figures quoted for lost Time Accidents cover all French subsidiaries.

For most of the Green Label sites, the recalculation was performed taking into account the turnover realised by the subsidiary and the number of vehicles per depot. This was done in order to give weightings according to site, and accounts for the fact that the percentage is not comparable with the figure in the previous report.

For water consumption, the data relates to 47 subsidiaries, accounting for 70% of French revenue and representing 6,500 vehicles. For electricity, the data covers 42 subsidiaries, accounting for 54% of French revenue and representing over 5,500 vehicles.

For domestic fuel oil, the data relate to 9 subsidiaries, accounting for 40% of French revenue and representing over 2, 550 vehicles. For natural gas (excluding Vehicle Natural Gas), the data relate to 32 subsidiaries, accounting for 65% of French revenue and representing over 5, 550 vehicles.

For natural gas (excluding Vehicle Natural Gas), the data concerned 32 subsidiaries, covering 65% of French turnover, and representing more than 5,550 vehicles.

Absolute consumptions of water and energy have remained stable overall since 2004. The most significant change is in natural-gas consumption, which fell 6% from 2005 to 2006.

For hazardous waste, consolidation spanned approximately 20 subsidiaries, totalling 3,075 vehicles and accounting for € 484 million in turnover.

The percentage of vehicles at the minimum Euro 3 standard relates to all French subsidiaries (sources: indicators from the Operations, Projects and Innovation division).

# For Keolis, each passenger is someone that matters



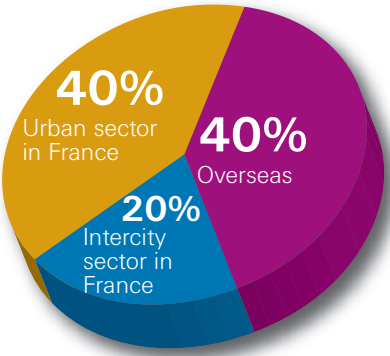
Providing mobility solutions corresponding to each passenger's requirements, so as to offer public transport that is modern, efficient and user-friendly are the aims that Keolis teams strive on a daily basis to fulfil.

Over 33,500 employees in seven European countries and in Canada make Keolis a major public-transport operator, ranking first in France, and the world leader in automatic metro systems. Each year, over 1.8 billion passengers choose us and with us, choose a more environmentally-caring, socially-responsible lifestyle.

## 2006 TURNOVER

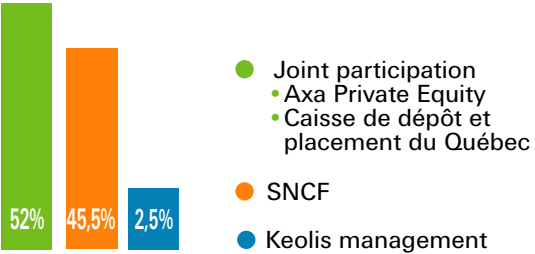
**2.6 billion euros,**  
an increase of **9,3%**  
as compared with 2005

## TURNOVER BREAKDOWN



Each year, over 1.8 billion passengers use our services, opting for a more environmentally-friendly, socially-responsible way of living. With local government and major private-sector financial backing, Keolis designs transport solutions appropriate to the local environment. Keolis strives to provide public transport that allies a spirit of service with innovation and efficiency. With its impassioned dedication, the Keolis group delivers on the promise of "going further together".

## SHAREHOLDING STRUCTURE



## HUMAN RESOURCES

**33,500 employees**  
of whom **24,000** are drivers

**3,900**  
new recruits  
to the Keolis team  
each year







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