

## IRF World Congress\* A Road Manifesto



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*"The choice of Paris by the IRF is a great tribute to France's impact on the Road Industry".*

From 11 to 15 June 2001, Paris will be hosting the 14th World Congress of the International Road Federation (IRF). A century earlier in 1908, the very first World Road Congress, which marked the inception of PIARC, was also held in Paris, and today's choice of Paris by the IRF at the beginning of the 21st century, is a great tribute to France's impact on the Road Industry.

As a preview of the IRF Congress, the *Lettre de l'Isted* gives helpful insight into the key issue of financing road infrastructure and its maintenance, which is a matter of concern to public policy-makers with tight budgets. To meet requirements, various forms of partnership with the private sector are becoming increasingly common in most countries.

Road transport of people and goods has overtaken all the other modes. However, this unquestionable supremacy is criticized as regards aspects to which public opinion is particularly sensitive, such as road safety, vehicle pollution and the automobile's place in the city. These themes, which concern not only professionals and road users but the public at large, will be discussed during the Congress plenary sessions and workshops, with a view to determining trends and showing that satisfactory solutions exist.

As part of the Congress, the 1st World Conference on urban road tunnels, in partnership with PIARC and AITES, will focus on this new infrastructure, which is essential to the development of large cities.

The adoption of a "Road Manifesto" will be the major event in the closing ceremony of this Congress which will enable the participants to discover "Notre-Dame" for a concert and the "Louvre" for the gala dinner.

**Michel HENRY,**

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Chairman of the Scientific and Technical Committee,

IRF Paris 2001

"Transport" Vice-President, Isted

\* World Congress of the International Road Federation, 11-15 June 2001, Palais des Congrès de Paris.

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# Contractualization procedures

*In many parts of the world, significant changes are taking place in the way road maintenance work is carried out.*

*The share of force-account (direct labour) work and contractor work is no longer the same and new contractual relations are being established.*

*A debate on this subject during the last Congress on Road Maintenance<sup>1</sup>, provided an opportunity to share experiences in the contractualization of road maintenance in France and abroad.*

*This is also one of the items on the agenda of the 14<sup>th</sup> IRF World Road Congress<sup>2</sup>.*

For the past fifteen years, all countries have been tending towards contractualization and have been testing out different contracting methods – a transition from the public to the private sector which is justified by the need for open competition. Contracts are characterized by an obligation of results and not an obligation of means and by a series of quality level considerations. Performance contracts and multi-year maintenance contracts are becoming increasingly common.

These changes are causing the roles and responsibilities of the partners to be redefined. The new contracts also require guidelines to be drawn up for performance levels, results indicators and inspection procedures with contingent penalties. But in some countries, there are still problems, particularly as regards contractor companies, owing to inadequate numbers of local SMEs, lack of training and equipment or difficulty in attracting international companies for maintenance work.

Like other French road companies, the Colas group is testing out different road maintenance contractualization procedures. It is a familiar dimension for the company's work sector as two thirds to three quarters of its activities concern routine and periodic maintenance and rehabilitation. The group is also interested in this approach because of the enhanced visibility provided by the time-scales of the contracts and the technical work performance methods which are opening up to technical innovation. Colas is mainly implementing its contractualization experiences in the United Kingdom and countries of North America, particularly Canada (State of Alberta). Characteristics: the contracts are multiannual. They are performance contracts in technical terms and also as regards road operating and guarantees. And the company's methods of remuneration can be more or less on a lump sum basis depending on the more or less routine nature of the work and the element of risk borne by the company.

<sup>1</sup> Debate No. 11 "Road maintenance work: contractualization procedures – What trends in France and abroad?" - Moderator: Jean-Philippe Lanet, Head of the Isted "Roads" Department – 5th Congress of Road Maintenance, Paris-Le Bourget, 21-23 November 2000.

<sup>2</sup> 14th IRF World Road Congress (International Road Federation) – Paris, Palais des Congrès, 11-15 June 2001.

## A contract of objectives in Côte d'Or

The French *départements* (counties) have also opted for this approach, as shown by the signing of a contract of objectives between the *Direction Départementale de l'Équipement* (DDE – County Public Works Directorate) and the Côte d'Or General Council).

The first idea of the General Council was to partition the DDE, but in 1994-95, it reverted to a traditional system in which this Administration carries out assignments for its own account and on a secondment basis, consisting mainly of project engineering, management of the county road network and production management. At the same time as this traditional system, a contract of objectives was negotiated that met two strict county requirements. The General Council wishes to obtain guarantees firstly on the fact that the resources available in the DDE really are used for the County road network and secondly on the quality of the DDE services. This contract of objectives includes an annual additional clause and consequently an assessment that produces a momentum-building effect. It also includes a monitoring and control scheme to formalize the levels of service for each routine maintenance area, the field engineering assignments, the types of service and the lead times. This enables the owner to clarify the nature of its order and the level of service it expects of the road. The DDE capitalizes on the mobilizing effect of the contract and uses it to develop towards modernization.

An interesting example abroad is Chad, which is now in the process of contractualizing road activities. Road maintenance is traditionally based on work performance contracts – a constraining system for the Administration which has to draw up a work programme each year, continually supervise the work and ensure the result ●●●

### Management and roadworks

#### All possible contracts

Road maintenance tasks and responsibilities cover not only the project owner's functions (budget, level of service, road operations) but also two other types of activities: management, i.e. work programming, and the performance of work. Except for concessions, in which all functions are delegated, contractualization can thus cover two types of activities (management and work), in which different cases are possible. It is also necessary to differentiate between work on pavements or engineering structures (major repairs) and routine maintenance.

#### Management and work by the Administration.

This is, or used to be, the general rule, particularly with the equipment pools and for routine maintenance.

**Management by the owner and custom work.** This has long been the most usual case for major repairs in developed and developing countries and those in transition. The trend, particularly in Europe, is to have performance specifications that refer to performance standards. In some cases, such as that of a French motorway company, the contracts include special multi-year (5-year) guarantees (mainly on surface characteristics). For routine maintenance, the contracts tend to be range contracts with a price schedule, without performance specifications, but with lead time constraints. In several countries such as France and Brazil, specifications have been introduced for the periodicity or the level of service (condition of the facilities).

**Management and work by a contractor company or a motorway operating company.** This is a strong tendency at present. Contracts can cover management and work separately – the case of maintenance contracts in the United Kingdom and the United States (projects also exist in many other countries). Or contracts can be integrated – the case of the motorway operating company working under a concession (toll or shadow toll) or the World Bank "Crema" projects in South America. These "performance-based" contracts, which usually extend over five years, include routine maintenance and major repairs, above a certain size or cost threshold (see box on pilot experiences in Latin America).

(Source: Gilbert Caroff, Manager of the Pavement and Road Maintenance Department, Scetauroute)

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The key issue of financing road infrastructure and its maintenance is on the agenda of the 14th IRF Road Congress.

●●● is accomplished as regards quantities and compliance with standards. The company, remunerated on the basis of the work actually performed, merely carries out a programme as received, but takes no initiative that might produce a better result. All these constraints have led the World Bank to suggest that road maintenance should be contractualized, and to place emphasis on the level of service. Contracts thus refer to four quality thresholds for user comfort, practicability, transit conditions and road sustainability. The contract is signed with the successful contractor after an international call for tenders. The contractor incurs greater responsibility than previously because penalties are required for non-compliance with levels of service throughout the period of the contract. The pilot maintenance project covers a 433-kilometre portion of road. It will be extended to the entire road network if it is successful.

### The case of a public works company in Slovenia

In Slovenia, maintenance of State-managed roads is carried out by nine companies in all, which have now been

privatized. The State recently launched a project with the help of the European Bank for Reconstruction and Development (EBRD). The aim is to rebuild part of the road network and to improve its quality level. The State wishes to give twenty-year concessions to the companies.

Successful maintenance tenderers must invest heavily in road maintenance in the first five years, and the invested amount is then refunded by the Slovenian State. The difficulty is thus to find companies with enough funds to make the investments.

At present in Slovenia, contractors only perform routine maintenance work. With the concession system, they will also be responsible for maintaining a high level of road service and performing rehabilitation work to this effect. This type of structure is also found in countries of Latin America (see box), such as Brazil and Argentina, where road regrading and maintenance concessions have been drawn up.

Risk management and the provision of risk management tools are permanent features of this type of contract. A good contract is one in which the risk is measured, which is why it is essential to have tools to control this risk. In

### Road Maintenance Fund: Africa moves on to the 2nd generation

In many Sub-Saharan African countries, the efficiency of the road maintenance system is not, or is no longer, adequate to preserve the network and provide users with a durable, appropriate level of service. Road projects are all too frequently condemned to inadequate or non-existent maintenance, which means that they are reduced to nothing long before they have generated the anticipated economic return.

In response to these concerns, most countries have undertaken to create "2nd Generation" Road Maintenance Funds (RMF). Their aim is to ensure steady, regular financing of paved and unpaved road maintenance work and to provide better conditions for implementing maintenance programmes.

The general principle is that of "commercialization" of road maintenance, which means considering it as a commercial service, funded not from a State budget but from road utilization fees to be paid directly by road users and administered under their own control. Road maintenance is thus non-budgetary and organized as a public service, rather like water distribution or the electricity supply.

The experiences of countries that have accomplished this reform shows that a RMF must be based on the following principles:

- It is a road maintenance financing mechanism handled by a managing body, the RMF.
- The managing body of the fund is autonomous. It associates road users and the Administrations in charge of the network.
- This fund does not receive budget appropriations. It has its own resources collected from road users according to the cost allocation principle.
- Its resources are calculated for maintenance requirements, which they must cover entirely in due time.
- These revenues are paid into a bank account in the name of the RMF, that cannot be confused with tax circuits.
- The RMF thus acts as a local donor. It distributes its resources among the authorities in charge of road network

management, checks that they are properly used and monitors performance.

- It does not replace central or other authorities (general road policies) or network managers (work programme administration).



Considering road maintenance as a commercial service.

The introduction of this type of reform on a national scale requires an extensive consultation process firstly before selecting the appropriate legislative system, and again when setting up the operational tools. This frequently involves organizing an information workshop for future co-managers of the RMF and other parties involved in road maintenance.

The Road Maintenance Initiative (RMI) has therefore developed an intensive pedagogical information module for this type of situation, in the form of 3 to 4 full days of group training instruction.

The core element is an interactive game module, "**Tariff & Traffic**" (cf. page 6), where short teaching summaries are added to each sequence, reflecting situations encountered by the players. These summaries, echoing with the game situations, are based on actual experience in African countries.

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*A good contract is one in which the risk is measured.*

France, the Central Road Research Laboratory (LCPC) is developing these tools under performance contracts in which the targeted results are more important than the targeted means.

The many experiences throughout the world also

show that further study must be given to defining levels of service and the means used to check performance.

Despite the diversity of situations due to the legal contexts of each country and to all their local specificities, the contractualization concept seems inevitable. It requires balance between the contracting partners to avoid abuse of authority on both sides. The owner must use a mature, balanced approach so that replies to calls for tenders from private contractors will be economically viable for them, under acceptable competitive conditions. Contractors must be careful not to adopt an "over-imperialistic" attitude. And public authorities must also be able to derive long-term benefits. In the end, there will be many different

solutions but they must be phased in slowly if they are to be meaningful. This diversity enables consultants to position themselves at different levels: as assistants to the owner for implementing the contracts, as consultant service providers for maintenance management or as partners of the contractor for work management and performance. Even more than the public/private debate, the technical problems and relational systems are of the greatest importance. ●

*(Source: Jean-Philippe Lanet, Head of Isted "Roads" Department)*

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**Performance-related road maintenance contracts  
Pilot experiences in Latin America**

Colombia, Brazil, Guatemala and Uruguay have recently initiated a pilot programme "Performance-related road maintenance contracts" with technical assistance from the International Road Federation (IRF) and the German Technical Cooperation Agency (GTZ).

These contracts, most of which have been operating for more than one year, cover routine and periodic maintenance and, in some cases, road rehabilitation as well. Extension of the road network, road surfaces and conditions, and the time period vary from one project to another.

Each performance-specified contract defines the minimum conditions of roads, bridges and road signs that the contractor must meet.

Defining these standards is challenging (Table 2). The aim is to minimize the total cost, including the long-term cost of preserving the roads as well as the cost to the road user. To avoid ambiguity, performance standards have to be clearly defined and objectively measurable. Typical performance standards are:

- The International Roughness Index to measure the roughness of the road surface with a view to determining vehicle operating costs.
- The absence of potholes and the control of cracks and rutting.
- The minimum amount of friction between the tyres and the road surface for safety reasons.
- Cleanness of the drainage system.
- Maintenance of road signs and markings.
- The control of vegetation close to the roadway.

To ensure the standards stipulated in the contract are met, control procedures are set up. In Chile there are four types of inspections:

- Monthly inspections cover 10% of the roads under contract to determine the basis for payment. Selection of stretches of 1 km each is based on a random sample, defined in each contract;
- Weekly inspections cover 5% of randomly selected roads;
- Non-programmed inspections respond to complaints by road users;
- Follow-up inspections verify that appropriate action has been taken by the contractor to rectify non-compliance.

Payments to the contractor are based on the results of the monthly inspections. Full payment will only be made on 100% compliance. During the first year of operation, compliance is around 95%. Penalties are applied if the contractor does not rectify established deficiencies within a certain time limit.

The contractor must have a proper quality management and control system in place to meet the requirements of the contract and for the road administration to monitor the contract. One of the obligations of the contractor is to keep records of its inspections, quality control procedures and works undertaken. This is especially important to monitor and adjust the pilot projects.

With regard to disputes between the contracting parties, systematic non-performance, or even bankruptcy of the contractor, the same procedures apply as in "traditional" contracts.

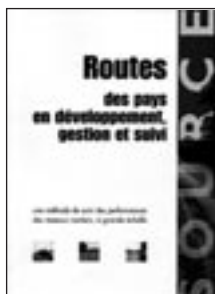
So far, none of the pilot projects has failed. Road conditions in the pilot areas have improved notably and maintenance costs have either stayed the same or been reduced.

*(Source: Gunter Zietlow – <http://www.zietlow.com>)*

# Information

## News

### "SOURCE" TOOLS



The "SOURCE" (Standard Overall Ultralite Road Care Estimate) operator's handbook, brochure and

CD-ROM are now available. This method is part of the World Bank project to define a comprehensive indicator of the level of service of main road networks in Africa. It is based on standardized measurements of common traffic speeds and traffic levels and provides a quick, overall assessment of the preservation of road networks. The handbook, brochure and CD-Rom are published further to field experimentation programs in Cameroon, Ghana, Guinea and Madagascar.

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### "TARIFF AND TRAFFIC"



"Tariff and Traffic" is a teaching game on financing and organizing road maintenance in Sub-Saharan Africa. It covers the setting up of road maintenance funds (co-managed by public authorities and users) and enables road maintenance strategies to be tested out. This

group training module, available on CD-Rom, has been developed by the Road Maintenance Initiative – RMI\*. It is designed as interactive role play to which teaching summaries are added, echoing actual situations. Isted is involved in the trainer training process for the workshops and can help countries wishing to organize this type of workshop.

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\* The RMI is a core component of the Sub-Saharan Africa Transport Programme (SSATP). It was launched jointly by the World Bank and the United Nations Economic Commission for Africa.

### ADAR GENERAL MEETING

The next General Meeting of the Association of African Road Directors (ADAR) will be held in N'Djamena (Chad) at the beginning of October 2001. At the same time, a seminar is planned on road maintenance management by service levels – Chad is advanced in this field.

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## Events

### EIGHTH ITS WORLD CONGRESS



The Eighth Congress on Intelligent Transport Systems will take place from 30 September to 4 October 2001, in Sydney (Australia). The congress programme includes meetings with decision-makers and a full series of specialized sessions. At the same time, a vast exhibition will present the most recent technologies and systems and provide opportunities to try them out. They will cover: driving assistance systems, advanced traffic management, vehicle fleets and goods management, public transport, electric vehicles, telecommunications, electronic toll collection, driverless vehicles, navigation systems and parking equipment.

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## INTERNATIONAL WINTER ROAD CONGRESS



From 28 to 31 January 2002, the International Winter Road Congress, organized by the World Road Association (PIARC), will take place in Sapporo (Japan) on the subject "New challenges for Winter Road Service". Alongside the congress, a vast exhibition will cover all winter service subjects such as: snow removal, de-icing techniques, measures to control snowdrifts, road safety, environment and ITS (Intelligent Transport Systems). Isted is planning to coordinate a French pavilion grouping French companies around the technical departments of the Ministry of Public Works.

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## INTERTRAFFIC 2002



Intertraffic, the international professional exhibition of development, management and

maintenance of traffic and communications infrastructure, will be held from 15 to 18 April 2002 in Amsterdam (Netherlands). The exhibition programme will include: traffic management and road signs, road marking, traffic and urban planning, equipment and control systems, detection, roadbuilding, road maintenance, street furniture, infrastructure management, automation, winter service, parking, communication, emergency call-out, public transport, car pooling, research and regulations, and public lighting. Like the previous events, Isted is planning to coordinate a French pavilion at Intertraffic 2002.

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## Training

## INTERNATIONAL CONTINUOUS TRAINING PROGRAMMES



The new edition of the catalogue of international continuous training

programmes is now available. This brochure presents all the courses proposed in 2001 by the École Nationale des Ponts et Chaussées (ENPC) on the following subjects: management, environment, urban management, housing, infrastructure, transport, partnerships and networks, customized projects. Courses include "Cesroute" and "Development and control of port concessions" jointly organized with Isted.

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## Publications

## HABITAT II+5



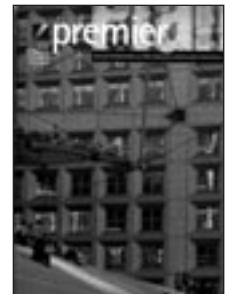
The last issue of *Villes en Développement* concerns the June session of the United Nations General Assembly which will make its first review and appraisal of the Istanbul Summit. The Habitat II national coordinator, Georges Cavallier, has

written the editorial. Contents: From consultation to governance; Why use new words in international cooperation?; What can we expect from Habitat II+5?; What do cities and local authorities expect of Habitat II+5? This issue and previous issues are available on the Isted website.

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## PREMIER PLAN



For its fourth issue, *Premier plan* – the Urban Planning, Building and Architecture (PUCA) news bulletin, proposes a panorama on the "Puca two-day seminar" held on 9 and 10 November 2000. It also contains many articles including the formulation of urban and architectural orders, urban renewal in Europe and the European programme "European", etc. Practical information is given in the sections "Zoom on", "Publications", "Agenda", "Puca Consultations" and "Competitions".

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EMTA News is the newsletter from the Association of Authorities in charge of transport in European metropolises. This quarterly bulletin gives up-to-date European News on public transport, the activities of EMTA and those of its members.

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A new monthly newsletter on motorways and global transport systems has just been published. It is intended for "all those who contribute to the construction and operation of large-scale road infrastructure, and for all French and European actors who manage and use rail, maritime, inland waterway and air transport modes, which are essential complements to road

transport". This publication aims to offer an accurate, well-documented, well-grounded source of information and gives importance to discussions and exchanges of ideas.

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ICTAAL - Instruction sur les conditions techniques d'aménagement des autoroutes de liaison – is a national reference document on technical design requirements for rural motorways – dual carriageways with at least two lanes in the link section, isolated from their surroundings and with grade separated junctions. It gives the general principles to be taken into account when designing new infrastructure projects or making improvements to the existing network and sets out the basic technical rules for defining the geometric elements of the planned infrastructure. The document is published by the Roads and Motorways Engineering Department (Setra).

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Sales price: FRF 120 F / € 18.29



**30 French experiences**

Good governance of cities and metropolises involves implementing collective projects that mobilise various players, and the larger the conurbation, the higher the number of players. That is why IAURIF (Île-de-France Planning & Development Institute – Greater Paris Region) has decided to devote this volume, in partnership with CNIG (Conseil national de l'information géographique – National Council for Geographic Information) and Isted, to the French approach to geographic information systems (GISs). It constitutes a collection of practical and successful partnership experiences implemented by French local authorities of all sizes.

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Isted, a non-profit organization, is a platform for study and debate, information and action, at the service of its public and private members in the public works, transport, planning and environment sectors. It facilitates their international activities, optimizes the use of French knowhow throughout the world and helps to implement international programmes with third country leaders.

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