Created in 1985, the French National Institute for Transport and Safety Research (INRETS) is a public scientific and technological organisation. Overseen jointly by the French Ministries in charge of Research and Transport, INRETS has the following tasks:
- to organize, execute and assess research, characterised by a comprehensive approach to transport systems,
- to carry out technological assessment and decision support,
- to promote technical developments, transfer of research results and to improve scientific information dissemination.

INRETS is structured in 18 research units located in four centres: in the Paris region, in the Rhône-Alpes region, in the North of France and in the South of France.

**RESOURCES**

Five hundred men and women are at the service of transport and safety research. Nearly half of them are scientists. Their qualifications cover engineering science, physical sciences, human and social sciences, and life sciences providing a diversity of backgrounds, which can be combined in many ways. About one hundred PhD students are present at the institute at any time.

The diversity of approach used to carry out the different research programmes gives a multidisciplinary characteristic to the INRETS research teams, which correspond to their methods.

The resources used by the researchers and technicians combine on-site analysis and observation techniques (various surveys, in situ observation equipment and even a mobile laboratory) with original and high-performance equipment. The main facilities concern laboratories of metrology, electro-techniques, simulation techniques and a laboratory for on-board recordings of physiological parameters. The scientific equipment includes also crash-tests-cataapults, driving simulator, roller test bench and engine test bench, test circuit, 13 metres diameter wheel (rolling tests). Specialised databases are maintained and implemented for the research unit needs.

The budget of INRETS for 2004 is 43 million euros. The Institute receives its revenue from two sources: subsidies from the Ministry in charge of Research (78% of its total revenue) and its own resources (22%).

**FOUR RESEARCH AREAS**

Four key issues are at the heart of INRETS’ research:
- **Road safety: research on accidents,** prevention and road user protection
  A major challenge for the years to come is to reduce road accidents. INRETS generates expertise, contributes to a better understanding of road risk and to more efficient public management. Research projects concern:
  - Analysis of the road system and its components (users, vehicles, infrastructures);
  - Factors and consequences of road accidents;
  - Biomechanics and road users’ protection;
  - Road safety policies: education, regulation, incentive strategies and penalties.
  - **Driving aids: information, assistance and automation**
  It is essential for the increasingly widespread use of electronics in vehicles to improve driving conditions without generating new risks. The most recent developments in the field of man-machine interaction contribute to this goal. Research projects concern:
  - Intelligent systems for driving aids and automated highways;
  - Analysis of driving situations by

Photo 1 Crash-tests-cataapult
modelling and simulation;
• Urban and inter-urban guided transport systems: safety, security, new networks;
• Telecommunications and new information technologies in transport.

- Transport networks and services: improving traffic management and inter-modal complementarities
The regular increase in traffic makes it essential to work in co-operation with transport operators in order to develop solutions for reducing congestion and improving complementary synergy between the different modes of transport. Research projects concern:
• Modelling and traffic management in transport networks;
• Inter-modal passenger and goods transport;
• Socio-economic assessment and evaluation of infrastructure and networks;
• The transport professionals.

- Transport and environmental protection: promoting sustainable mobility and limiting the environmental impact of transport
The growing public awareness of the environmental damage caused by transport and the elaboration of strategies for sustainable development, make it necessary to draw up an inventory as rigorous as possible in the fields such as pollution, greenhouse gas emissions, noise or alternative energies. INRETS is deeply involved in research on all these issues:
• Study of the environmental impact of transport (noise, air, pollution…);
• Sustainable mobility in urban area;
• Clean energy-efficient vehicles (hybrid vehicles, fuel cells…);
• The dynamics and diagnosis of guided systems.

INTERNATIONAL CO-OPERATION AND PARTNERSHIPS

INRETS has developed a far-reaching network of co-operation schemes specifically in Europe and OECD zone. On the European level, INRETS is fully involved in the research and development framework programmes, in COST and in bilateral programmes. Partnerships have been consolidated and developed in North American, Japan and Korea.

On the initiative of INRETS, directors or representatives of 15 institutes from the European Union member states and associated countries decided to set up the European Conference of surface Transport Research Institutes (ECTRI). Bringing together 1,300 researchers, ECTRI actively promote the cooperation of surface transport research and participate to the creation of the European Research Area.

SCIENTIFIC AND TECHNICAL INFORMATION

More than 400 research reports have been published in the “INRETS series”, the RTS journal, colloquia and seminars organised by the Institute: these are all priority vectors for the dissemination of scientific and technical information in the transport field. The libraries of the four INRETS centres provide an exceptional collection of books, journals and databases for researchers and transport professionals.