



**A28 Rouen – Alençon motorway  
Built with innovative financing in record time**

On October 21st 2005, the French Prime Minister Dominique de Villepin, accompanied by Dominique Perben, Minister for Transportation, Capital Works, Tourism and Maritime Affairs, officially inaugurated the 125 km section of the A 28 motorway linking Rouen and Alençon.

The A28 motorway provides a direct link to Spain and Portugal for the countries situated northwest of France (Belgium, Denmark, Germany, Netherlands), circumventing the Paris region.

The project was built to extremely tight deadlines and financed through an innovative package.

**The concession was awarded in April 2001**

The A28 motorway concession (design, build, finance and operate) was awarded to **Alis** in April 2001. It was the first motorway concession to be awarded after a tender process. Egis (8%) is a shareholder of Alis, together with CDC Ixis\* (26%), Bouygues Construction (33.15%), Bank of Scotland (13.16%), Sanef (11.69%) and SAPN (8%).

The motorway is operated under a 62-year contract by **Routalis**, whose shareholders are Transroute International (an Egis Group subsidiary), 70% and Société des Autoroutes Paris-Normandie-SAPN, 30%.

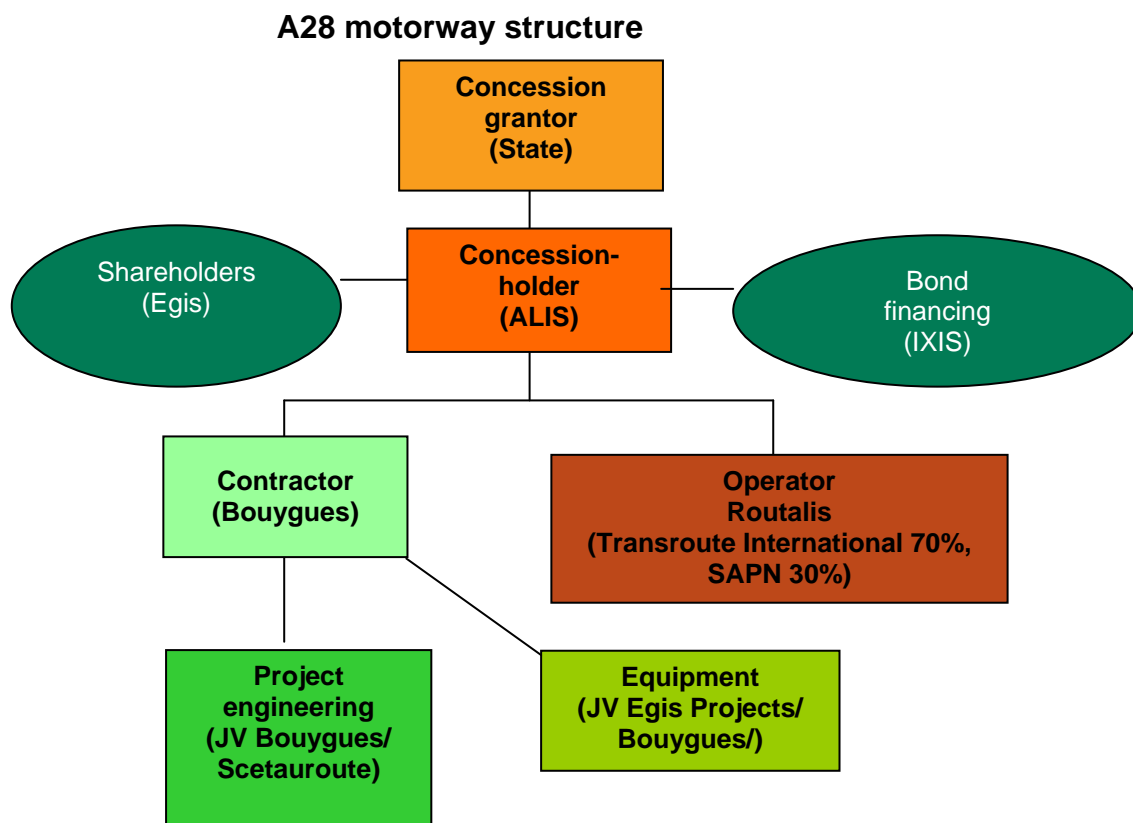
The total building cost of the A28 amounted to €917 million and was financed by the concession holder (60 % equity and loans) and by subsidies provided by the Central government (20 %) and Normandy local authorities (20 %).

**Project financing hailed in London in 2002**

The magazine Project Finance, specialized in public private financing packages worldwide, named the A28 toll motorway project financing “European Transport Deal of the Year 2002”.

*The investment bank CDC Ixis\* changed its name to IXIS in 2004. The Caisse d'Epargne took control of the CDC subsidiary in 2004.*

The original feature of the financing lies in the nature of the senior debt. Financial advisors opted to issue inflation-indexed bonds repayable in a single instalment at maturity. It was the first index-linked bond issue in the Euro zone by a non-sovereign entity. The bonds are guaranteed by Financial Security Assurance Ltd (FSA) and have been therefore rated AAA by Standard & Poor's and Moody's. They offered a coupon of 3.99% to 4.30%. CDC Ixis was the lead manager for the issue, which was mainly subscribed by French institutional investors.



### **One year and two months saved on the design and construction of the A28 motorway**

The construction of the A28 project was a model of its kind, being built to an exceptionally tight schedule.

It took less than 4 years from signature of the concession agreement to its entry into service. The design and construction of the motorway took only 46 months instead of the customary 60 months.

A year and a half sufficed to complete the various stages separating the commencement of preliminary design work to the start-up of construction, versus two and a half years for a conventional project.

Construction work began in April 2003, with the motorway scheduled to enter into service in December 2005, which means yet another two months have been saved off the initial timetable.

## **Integrated project engineering**

A key factor in the project on-time delivery was the highly responsive, dynamic approach to design and construction with a total synergy between design and construction teams (Egis and Bouygues).

Ensuring the success of this design & build project, Egis and Bouygues:

- pooled their resources to perform project studies and integrated their project management functions in the construction phase.
- drew on their complementary design and construction skills from the outset of the initial design stage.
- employed concurrent project engineering methods, performing several project stages concurrently instead of sequentially.
- operated from a single "platform", with joint teams working in a single place to optimize their activities, which notably facilitated communication between them.

In the space of 18 months Scetauroute produced around 20 initial projects and nearly 13,000 production drawings.

## **A28: an exemplary project on account of the complexity of the construction project**

The project was exemplary too on account of the construction complex phasing, due in particular to the number of crossings and environmental constraints (2 viaducts, 3 railway lines, protected waterways and several major trunk roads). Building the 125 km motorway in 29 months was a major engineering feat. Nor was that all: the project had to protect 27 archaeological sites, as well as crossing 117 water lines, 103 ordinary bridges and other civil engineering structures, 65 side roads, 70 km of restored roads and 20 marl pits, making an average of one obstacle every 190 m.

The scale of the resources deployed to meet the deadline, given the project complexity, are further evidence of its exemplary nature: more than 1,000 people were involved, including 100 managerial and supervisory personnel, 500 earthmoving and drainage workers, 50 project managers for the earthmoving works and 270 form setters for the civil engineering structures, ... not to mention one thousand roadbuilding machines. The method employed to manage linear excavation works played a key role, enabling major and simultaneous deployments of human and material resources from year 1, all along the 125 km length.

Above all, the A28 motorway will stand as a symbol of the Groupe Egis companies' capacity to respond to a major challenge for local authorities:

**Egis SA** is a shareholder of Alis, the concession holder.

**Transroute International**, together with SAPN, is involved in the motorway's operation through the operating company Routalis.

**Scetauroute**, jointly with Bouygues, performed project engineering and project management.

**JMI** prepared the initial designs and signed off on production drawings for the Bec and Risles viaducts.

**Egis Projects** supplied operating equipment on a turnkey basis.

**BCEOM** oversaw hydraulic engineering issues.

**ISIS** was in charge of traffic surveys and forecasts, electrical engineering and signalling.

**This type of partnership was a genuine novelty in 2001. Today, however, it is becoming increasingly commonplace in France and elsewhere in Europe, as indebted governments transfer part of the burden of funding the construction and maintenance of transport infrastructures to private investors. Even so, the French government's contribution, representing 20% at the project outset, was a serious boost to the project and acted as a spur to the A28 construction in near record time.**

**Through its commitment, innovative capabilities and 15 years' international experience with Public Private Partnerships, Groupe Egis is deploying its know-how in the service of France.**

*Groupe Egis is a subsidiary of the Caisse des Dépôts Group, with €442 million of output in 2004 and 4000 employees worldwide. It is one of the world's leading companies in transport infrastructure engineering, providing full service solutions comprising engineering, major project development and the operating of motorway concessions. At the end of 2004, its 13 operating companies (8 in Europe, 3 in Australia, 2 in Asia) had nearly 1000 km of motorways under contract, 700 km of which are already in service. In France, Transroute International operates the North Lyon ringroad (10 km) and the A 28 motorway.*

For more news, see [www.groupegis.com](http://www.groupegis.com)

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