

Measure 76: Galileo programme

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<p><i>Policy Package:</i> B: Investment and Technologies</p>
<p><i>Measure 76:</i> Galileo programme: in 2008 develop for EU a satellite navigation system (Galileo)</p>
<p><i>What is the problem being addressed ?</i> The White Paper Part 4 "Managing the Globalisation of Traffic" indicates that the Galileo program (and system to be) constitutes a key need for global programming of transport and for disenfranchising European reliance on the advantages of satellite navigation from the GPS (US) and the GLONASS (Russia) systems. The design of Galileo is aimed at ensuring interoperability with said two systems, but also provides for the independence of the system, in the sense that it will not be subjected to any adverse influence of limitations introduced in the other 2 systems because of military considerations.</p>
<p><i>Measure's costs and benefits:</i> The cost of Galileo's initial phase to be concluded in 2005 with the launching of the first experimental satellite (to be followed by the launch of a second one) is foreseen in 1.1 G€ split halfway between the EC and the European Space Agency. In October 2003 an agreement was reached with China to the effect that the People's Republic will participate in the effort with technical support and a contribution of 200 M€; a Co-operation Centre EU-China will be established (see below under <i>Legislative implementation</i>) The total investment will be determined as and when a European Union Company will take charge of the operation, with ESA overseeing operations. An evaluation of business linked to Galileo technology was provided in COM(2004)112 Final from the EC to the European Parliament and Council. Present market level of said business reported to be in 2003 of 10 G€, growing at a rate of 25%/year and so expected to reach 300 G€ by 2020. About 100,000 jobs are expected to be created.</p>
<p><i>Legislative implementation at the EU level:</i> - Council Regulation (EC) No 876/2002 of 21 May 2002 setting up the Galileo Joint Undertaking - COM (2003) 471 Proposal for a Council Regulation on the establishment of structures for the management of the European satellite radionavigation programme - COM (2003) 578 Proposal for a Council Decision on the signing of the Cooperation Agreement on a Civil Global Navigation Satellite System (GNSS) - GALILEO between the European Community and its Member States and the People's Republic of China. Apart from the Directives and Proposals listed above, which have led to Galileo taking off, a number of issues (especially concerned with security, safety and corresponding responsibilities) entail consideration of legal regimes at national, European and global levels. The Galileo institutional framework consists of the GALILEO SUPERVISORY AUTHORITY (a public monitoring entity) and of the "Galileo Operating Company " (a private operator). The two are linked by a Concession Contract to regulate relationships of value added service providers and users. The general situation is in a state of flux. It is expected that the Galileo Operating Company will arrange contracts to regulate and manage payments for services and, on the other hand: guarantees of level of service offered, security, integrity, safety and corresponding liabilities A legal team within the project is currently analysing these issues.</p>
<p><i>What are the objectives ?</i> The design stages and milestones like the creation of the Galileo Joint Undertaking have been accomplished timely as initially foreseen. Calls for tender for the initial experimental implementation were published in 2003. The program appears to be headed to a timely unfettered success.</p>

Interactions with other WP measures:

The Galileo system will provide a robust basis for supporting Intelligent Traffic Systems providing navigational functions, real time information to users and optimised control to urban and interurban transportation, as illustrated in Measure 64.

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Output indicators:

The output of this measure can be monitored using the following indicators:

- Award of concession to competing operators (there were 3 in Feb.2004)
- Agreements with non-EU countries (e.g. concluded with Israel in March 2004)
- Calls for tender published: (e.g.: 67 M€ calls in June 2004 for R&D and demonstration).
- Pilot projects started: e.g.; GADEROS (rail operation), GALLANT and INSTANT (safety), NAUPLIOS (safety at sea), POLARIS (performance analysis)
- Completion of studies and projects, among which: GALA (architecture definition); GEMINUS (service definition), INTEG (integration with EGNOS, European Geostationary, Overlay Service system, SAGA (standardisation), GUST (receivers specifications and certification), SARGAL (Search And Rescue applications)

Outcome indicators: intermediate impacts on transport markets

An evaluation of business linked to Galileo technology (as provided in COM(2004)112 Final) will have to be monitored continuously and the quality of data will have to be assessed.

Besides the direct business impacts, other indirect impacts on conventional services can be revolutionary. One example may be the insurance sector, where the possibility given by Galileo of tracking stolen vehicles may change radically road insurance contract clauses and prices.

Outcome indicators: final impacts on transport users and non users

Positive impacts of the navigational and informational services provided on transportation outcomes are to be expected as: decreased travel times, increased capacity of links and increased safety. More accurate and efficient systems will be made available to motorists and the authorities in the following areas:

- navigation and guidance systems based on digital mapping enhanced by safety information transmitted to drivers on static hazards (black spots etc.) and dynamic hazards (black ice, dense traffic etc.) that they are likely to encounter;
- traffic information which can be filtered so as to respond precisely to the needs and situation of drivers;
- accident alert system for the automatic transmission of essential information to the nearest emergency service unit
- “tracking”, eg. monitoring vehicles used for the carriage of hazardous goods, stolen vehicles or vehicles used for criminal activities.

In order to identify said impacts in a quantitative way, the real time data collecting capabilities of ITS systems will have to be exploited and a timely recording of time series will have to be ensured.