



House of Commons
Transport Committee

Galileo: Recent Developments

First Report of Session 2007–08



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Developments**

First Report of Session 2007–08

*Report, together with formal minutes, oral and
written evidence*

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The Transport Committee

The Transport Committee is appointed by the House of Commons to examine the expenditure, administration and policy of the Department for Transport and its associated public bodies.

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1 Introduction

What is Galileo?

1. Galileo is a Global Navigation Satellite System (GNSS) initiated by the European Commission in 1999 as an alternative to the American GPS and the Russian GLONASS systems.¹ Whereas GPS and GLONASS were both designed primarily as military systems Galileo will be funded and controlled by the civilian authorities of the European Union and the European Space Agency (ESA) alone, though this does not preclude the possibility that it might be used by the military. Although it is designed specifically for civilian applications, it is possible that the free applications of the system could be used for military purposes.

2. Galileo is based on a constellation of 30 satellites as well as ground stations. It has potential uses across many sectors, though transport applications such as road and rail traffic monitoring, road pricing systems, and air traffic control have been considered key areas of benefit.² Other applications include, for example search and rescue systems or navigation systems for leisure pursuits at sea or on land.

3. This is the Transport Committee's second report on Galileo. We first looked at this project in the autumn of 2004, when we recognised its potential benefits to the United Kingdom and Europe.³ We noted however, that at that stage, the costs and benefits of the project had not been properly assessed, and we urged the Government to ensure that further independent and comprehensive cost benefit analyses were carried out before the project was given the final go-ahead. We counselled against making an "irrevocable commitment" to Galileo until a final offer from the selected Public Private Partnership operator had been made. Following a crucial meeting of the Transport Council in December 2004, the Government reiterated its commitment to Galileo, and told us that, although the Council remained strongly in favour of the project, no irrevocable commitment had as yet been made to it. Indeed, if a PPP contract could not be successfully completed or if the negotiations over the Community budget were to conclude that future costs of Galileo could not be sustained, "member states have to undertake a complete reappraisal."⁴ This situation has now effectively arisen as the PPP negotiations have collapsed, and the Commission is requesting a further €2.4 billion to continue the project as a public procurement.

1 European Commission: *Galileo: Involving Europe in a New Generation of Satellite Navigation Services*, COM(1999) 54 Final, 10 February 1999, p 2

2 The European Commission recently estimated that 30% of the exploitation revenue from Galileo and EGNOS would come from road transport, with 5% from aviation.

3 Transport Committee, Eighteenth Report of Session 2003–04, *Galileo*, HC 1210

4 Transport Committee, Second Special Report of Session 2004–045 *Government Response to the Eighteenth Report of the Committee: Galileo*, HC 410

The story in brief

4. In March 1998, the Council of Transport Ministers asked the European Commission to make recommendations about the future European approach to global satellite navigation. The European Parliament subsequently called upon the Commission “to present as soon as possible a coherent strategy for the development of a Trans-European positioning and navigation network.”⁵ In February 1999, the Commission set out the rationale for a European Global Satellite Navigation System, as well as more substantial proposals for its development and operation. The Commission maintained that the benefits to Europe from having its own, civilian GNSS programme would be vast, and that they would be felt across many policy areas. The Commission argued that not developing such a system would

“[leave] Europe without adequate assurance that its political, strategic, economic, employment, industrial, security, space and, of course, transport and other interests [were] preserved.”⁶

5. The European Council of Heads of State and Government meeting in Nice in December 2000 paved the way for a formal Council resolution in April 2001 to launch the Galileo programme. It falls into four distinct phases from definition to commercial operations:⁷

- i. **The definition phase** (completed): the design of the system and service architecture. This phase was completed in 2001 at a cost of €133 million, shared equally between the EU budget and the European Space Agency (ESA).
- ii. **The development phase** (commenced, but not yet completed): originally meant to run from 2002 to 2005. Two experimental satellites were to be launched in this phase, followed in 2007 by the launch of a “mini-constellation” of four fully-fledged Galileo satellites, allowing in-orbit testing of the system. However, so far, only one of the two experimental satellites has been launched.⁸ The second is currently undergoing testing and its launch is expected to take place by the end of 2007.⁹
- iii. **The deployment phase** (not commenced): the building and launch of the remaining 26 satellites and the construction of ground-based units. This phase was originally intended to be completed by 2008, at a total estimated cost of €2.1 billion. It was the intention that a Public Private Partnership (PPP) would take forward the deployment and commercial operations phases, with the private sector contributing €1.4 billion against €700 million from the Community budget during the deployment phase. The collapse of the PPP negotiations earlier this year means that this model is no longer an option.

5 European Commission: Galileo: Involving Europe in a New Generation of Satellite Navigation Services, COM(1999) 54 Final, 10 February 1999, p 1

6 *Ibid*, p 8

7 Sometimes referred to as three phases, with the definition and development phases taken as one phase.

8 The first (and so far, only) satellite was launched in December 2005.

9 European Space Agency: <http://www.esa.int>

- iv. **The commercial operations phase** (not commenced): this phase was meant to have commenced in 2008, with the PPP operator (known as the *cessionnaire*) running the Galileo system, and bearing a significant proportion of the financial risks involved in the project. This phase is not now expected to start until 2013 or 2014.

6. Until Galileo becomes operational, Europe is largely reliant on the American GPS and the Russian GLONASS systems. A second strand of the EU GNSS strategy, EGNOS (the European Geostationary Navigation Overlay Service) is effectively a precursor to Galileo.¹⁰ EGNOS consists of three geostationary satellites and a network of ground stations which augment GPS and GLONASS signals. The augmentation of the signals from these two systems makes them suitable for safety-critical applications such as navigating in the air or in hazardous waterways. EGNOS will improve the accuracy of GPS and GLONASS signals to a two-metre radius, compared to the current accuracy of 20 metres.¹¹ EGNOS is now in its pre-operational phase, but it is expected that it will become fully operational, and certified for use in safety of life operations during 2008.

7. In June 2004, the EU and the United States signed an agreement to ensure compatibility between their respective satellite positioning systems. The deal determines how Galileo's frequencies should be structured, and will allow signals to be jammed in war zones if necessary. The agreement is intended to create a single international standard for satellite positioning signals, which means that users will be able to obtain information from both systems.

The Public Private Partnership

8. At the Nice European Council of Heads of State and Government in December 2000, it was agreed that the development phase of Galileo, by far the most expensive phase of the programme, should be carried out as a Public Private Partnership (PPP). The process to select a PPP *cessionnaire* culminated in the merger of the final two bidders into the, *Eurely/iNavSat* consortium. This consortium was subsequently selected as the *cessionnaire* in June 2005, but negotiations collapsed in the spring of 2007.

9. According to the European Commission, the PPP negotiations collapsed because the private sector consortium was unwilling to accept the transfer of risk at a cost which was, in turn, acceptable to the Commission.¹² When giving oral evidence to the Committee, the Minister of State for Transport, Rt Hon Rosie Winterton MP, supported this view, and revealed that risk transfer in the development and deployment of satellite navigation programmes was the exception rather than the norm:

“The industry was obviously concerned about risk. I think it is also worth remembering that in the US, in China, in Russia, these projects will all be initially

10 EGNOS is a joint project of the European Space Agency (ESA), the European Commission (EC) and Eurocontrol, the European Organisation for the Safety of Air Navigation.

11 European Space Agency: <http://www.esa.int>

12 European Commission: *Galileo at a cross-roads: the implementation of the European GNSS programmes*, COM(2007)261 final and SEC(2007)624 final, 16 May 2007

funded by government, and in a sense we know that the private sector would never be able by itself to manage a huge great system when we are talking about up to 30 satellites.”¹³

10. But the Minister also hinted that the reasons for the collapse of the negotiations may have been somewhat more complex than simply the price attached to risk. The lack of competition after the only two remaining bidders had been allowed to merge was one additional factor, internal disagreements and the prolonged absence of a chief executive at the bidding consortium was another.¹⁴

11. The June 2007 Transport Council confirmed that the PPP model had failed, but renewed its commitment to the Galileo programme itself. It was agreed that the Commission should put forward alternative options for delivering the programme with a view to the Council of Ministers and the European Parliament reaching a decision before the end of 2007. The UK and the Netherlands, with support from Slovakia and Cyprus, entered a “Minute Statement” into the conclusions of the meeting, setting out their particular concerns and views with regard to Galileo.¹⁵ The Minute Statement:

- i. stressed the Government's commitment to the PPP principle for major infrastructure projects, its concerns about the potential increased costs of public procurement, the need for a reassessment of the business case for Galileo, competitive procurement, better governance and sound risk management; and
- ii. required that any additional funding be found within the limits of the relevant ceiling of the Community's Financial Perspective; and
- iii. called for the cost-benefit analysis to be produced by the Commission to include a thorough comparison of different options, including a PPP option and the option of having an operating concession.¹⁶

12. The House of Commons European Scrutiny Committee subsequently expressed considerable concern about developments, arguing that no decision on the future of Galileo should be taken until a comprehensive and thorough business case and funding solution had been presented and explained by the Commission.¹⁷ The Committee subsequently secured a debate on the floor of the House in early July 2007, and published a further consideration of European Commission documents on Galileo on 24 October. The Committee did not clear the documents.¹⁸

13 Q91

14 Q85 and Q90

15 Ev 18

16 Department for Transport: *Explanatory Memorandum on European Community Document: COMMUNICATION from the Commission to the European Parliament and the Council – Progressing Galileo: Reprofitting the European GNSS Programmes*; COMMISSION STAFF WORKING DOCUMENT – accompanying document to the Communication from the Commission to the European Parliament and the Council – Progressing Galileo: Reprofitting the European GNSS Programmes 13112/07, 13112/07ADD1 COM (2007) 534, SEC (2007) 1210, 17 October 2007, footnote 1

17 European Scrutiny Committee, Twenty-Third Report of Session 2006–07, HC 41-xxiii, paras 2.24–2.27; see also: European Scrutiny Committee, Twenty-Sixth Report of Session 2006–07, HC 41-xxvi

18 HC Deb, 2 July 2007, col 763; European Scrutiny Committee, Thirty-eighth Report of Session 2006–07, HC 41-xxxvi

13. The UK Government now acknowledges that, although it favours the PPP arrangement, this option is no longer on the table for the deployment and operational phases in their entirety. However, Ministers continue to push for other types of private sector involvement including other, smaller, PPP schemes. This policy is motivated by the belief that the private sector has a better record in financial discipline, on-time delivery and risk management.¹⁹

Transport and Ecofin Councils in October 2007

14. Transport Ministers discussed the future of Galileo once again at the Transport, Telecommunications and Energy Council on 1–2 October 2007. Documents published by the European Commission on 19 September, as requested at the June Council, were discussed, but any real decisions were postponed to the Council meeting scheduled for the end of November. The Council did, however, reiterate its commitment to the continuation of the Galileo project and confirm the intention to take “an integrated decision on the European GNSS” before the end of 2007.²⁰

15. The Economic and Financial Affairs Council (EcoFin) met on 9 October, and there was “an exchange of views on proposals from the Commission for the additional public financing of Galileo.” EcoFin also reaffirmed the importance of the Galileo programme, but noted several countries’ opposition to Commission proposals that the Financial Perspective be re-opened in order to re-allocate funds from other headings to the Galileo programme. It was agreed that funding arrangements would be discussed at a future meeting (on an, as yet unspecified date).²¹

16. We are most grateful to our colleagues on the House of Commons European Scrutiny Committee and the House of Lords Select Committee on the European Union for their continuous and diligent scrutiny of the Galileo project at key points of its history.²² Thanks to the commendable efforts of the European Scrutiny Committee, for example, Galileo has been debated on the floor of the House of Commons and in European Standing Committees on a number of occasions. We hope both Scrutiny Committees will continue to take a close interest in this important subject, as will we.

19 Qq 87–89; see also Department for Transport: *Explanatory Memorandum on European Community Document: COMMUNICATION from the Commission to the European Parliament and the Council – Progressing Galileo: Reprofitting the European GNSS Programmes; COMMISSION STAFF WORKING DOCUMENT – accompanying document to the Communication from the Commission to the European Parliament and the Council – Progressing Galileo: Reprofitting the European GNSS Programmes* 13112/07, 13112/07ADD1 COM (2007) 534, SEC (2007) 1210, 17 October 2007, p 1

20 Council of the European Union – Press Release: *Council Conclusions on the European Galileo and EGNOS satellite-navigation programmes: 2821st Transport, Telecommunications and Energy Council meeting*, Luxembourg, 1–2 October 2007

21 Council of the European Union: Press Release: *2822nd Council meeting: Economic and Financial Affairs*, Luxembourg, 9 October 2007, 13571/07 (Presse 217)

22 A summary of UK Parliamentary Scrutiny of all aspects of the Galileo programme are set out in Annex A of: Department for Transport: *Explanatory Memorandum on European Community Document: COMMUNICATION from the Commission to the European Parliament and the Council – Progressing Galileo: Reprofitting the European GNSS Programmes; COMMISSION STAFF WORKING DOCUMENT – accompanying document to the Communication from the Commission to the European Parliament and the Council – Progressing Galileo: Reprofitting the European GNSS Programmes* 13112/07, 13112/07ADD1 COM (2007) 534, SEC (2007) 1210 17 October 2007

2 Costs, funding and value for money

Costs

17. The current estimated costs for the Galileo programme in its entirety are less transparent than might be wished for. On the basis of figures published by the European Commission and the Government respectively, a rough estimated cost of at least €6 billion (£4.2 billion)²³ to build and launch the system emerges. A further €7.96 billion (£5.5 billion) is likely to be required in order to operate Galileo during the first 20 years, bringing costs to a grand total of €14 billion, or £9.7 billion (see Table 1 below). To put this figure into context, Crossrail is expected to cost £16 billion, and the modernisation of the West Coast Main Line cost an estimated £8.6 billion.²⁴

18. The cost of the Galileo programme has escalated steadily since its inception. Table 1 provides rough estimates of the cost over-runs for the three pre-operational phases. In oral evidence, the Minister indicated that to date,²⁵ the outturn costs for Galileo had over-run original estimates by some 47%, meaning that £1.1 billion had so far been invested as opposed to an original budget of £750 million.²⁶

19. Phase 3 of the project, the deployment phase, has yet to begin. This is by far the most costly pre-operational phase, and yet projected costs have already risen significantly. When we produced our last report on Galileo in 2004, the total cost of Phase 3 was estimated to be €2.1 billion, of which the PPP *concessionaire* was supposed to pay €1.4 billion and the European Union would have paid €700m.²⁷ The current cost estimate for phase 3 is €3.4 billion – an increase of some 60% in three years. Apart from the increase in overall costs, the collapse of the PPP means that European tax payers are likely to end up financing the project in its entirety, facing an effective cost increase of 385% to the taxpayer.²⁸ This means an increased commitment from the public purse of at least €2.4 billion²⁹ from now on, just to get the system into orbit. To this should be added an estimated £5.5 billion over 20 years to operate the Galileo system – an estimated £275 million per year.³⁰

23 Exchange rate used: Interbank rate on 10 October 2007: 1 Euro = 0.69114 British Pounds.

24 National Audit Office, *The Modernisation of the West Coast Main Line*, HC 22 Session 2006–2007, 22 November 2006. This figure does not include additional £590 million subsidy paid to Virgin West Coast during the 2002–2006 period.

25 With phase two partially completed.

26 Q11

27 Transport Committee, Eighteenth Report of Session 2003–04, Galileo, HC 1210, para 7

28 Department for Transport: *Explanatory Memorandum on European Community Document: COMMUNICATION from the Commission to the European Parliament and the Council – Progressing Galileo: Reprofitting the European GNSS Programmes*; COMMISSION STAFF WORKING DOCUMENT – accompanying document to the Communication from the Commission to the European Parliament and the Council – Progressing Galileo: Reprofitting the European GNSS Programmes 13112/07, 13112/07ADD1 COM (2007) 534, SEC (2007) 1210 17 October 2007

29 €2.4 billion is the additional funding sought for Galileo by the Commission by re-allocation from other headings in the 2007–13 Financial Perspective.

30 Q13

Table 1: Estimated cost of the build and launch of Galileo

Item	Cost ³¹ in Euro (£) ³²	Cost over-run to date (€)	Percentage over-run
Phase 1 ³³ (Definition – complete)	€0.133 billion (£0.09 billion)	€53 million	66%
Phase 2 ³⁴ (Development and validation – commenced, but not completed)	€1.502 billion (£1.04 billion)	€ 402 million	37%
Phase 3 (Deployment – not commenced)	€3.405 billion ³⁵ (£3.04 billion)	Approx. ³⁶ €1.305 billion ³⁷	Approx. 62% ³⁸
EGNOS costs to date	€0.520 billion ³⁹ (£0.36 billion)	–	–
Funding for Galileo related research through Framework programmes FP5 – FP7	€0.48 billion ⁴⁰ (£0.33 billion)	–	–
Current estimated total <u>build and launch</u> costs (excluding post-launch running costs)	€6.04 billion (£4.17 billion)	–	–
Phase 4 (Operations (<u>cost over 20 years</u>) – not commenced)	€7.96 billion ⁴¹ £5.5 billion ⁴²	–	–
TOTAL Current estimated total <u>build, launch, and running</u> costs Over 25 years from 2008	€14.00 billion (£9.68 billion)	–	–

Sources: UK Government and European Commission – see individual footnotes

31 The costs listed here are very rough estimates and should be treated with caution. The estimates are calculated on different bases (in some cases a 1998 cost base, and in others a 2007 cost base. The figures are also taken from several different sources, and it is therefore possible that some figures will contain small overlaps, i.e. where a cost is included in more than one cost estimate.

32 Exchange rate used: Interbank rate on 10 October 2007: 1 Euro = 0.69114 British Pounds

33 Outturn – 1998 prices – Ev 14

34 Current estimate – 2001 prices – Ev 14

35 Current estimate – data from the European Commission's latest estimate, published on 19 September 2007. See European Commission: *Communication from the Commission to the European Parliament and the Council: Progressing Galileo: Re-Profiling the European GNSS Programmes*, COM (2007) 534 final

36 The figures for the cost increases in phase 3 are likely to be somewhat overstated as the original estimates are stated in 2004 figures. It is assumed that the Commission's latest estimates are in 2007 figures, though this is not explicitly stated.

37 UK Government and European Commission estimates – August / September 07. See: Ev 14 and European Commission: *Communication from the Commission to the European Parliament and the Council: Progressing Galileo: Re-Profiling the European GNSS Programmes*, COM (2007) 534 final, 19 September 2007.

38 The impact of this increase could be much higher for European public finances because the PPP *Concessionaire* was meant to pay two thirds of this sum. Under the current Commission proposal, the entire cost has to be borne by public budgets.

39 Various bases (not indicated) – data provided by the DfT.

40 Outturn and current estimate – data provided by the DfT.

41 Figure converted from Sterling to Euros at Interbank rate on 10 October 2007: 1 Euro = 0.69114 British Pounds.

42 Q13 and Q72; see also Ev 14

20. Table 2 sets out the breakdown of the European Commission’s current estimates of the cost for phase 3 of the Galileo programme, that is the vast majority of the infrastructure which has yet to be procured (26 satellites and ground stations) as well as the cost of running EGNOS—a cost which would have been borne by the PPP *concessionaire* under the original plans.⁴³

Table 2: Current cost estimates for phase 3

Item	Estimated costs in million Euros
Galileo FOC	
Satellites + launchers	1,600 (£1,106 million)
Ground control infrastructure	400 (£276 million)
Operations	275 (£190 million)
Systems Engineering	150 (£104 million)
Procurement Agent management costs	195 (£135 million)
EGNOS	
Exploitation and operations (2008–13)	330 (£228 million)
Support to the Commission	
Project management support and advisory services	27 (£19 million)
Contingencies⁴⁴	428 (£296 million)
Grand Total	3,405 (£2,353 million)

Source: European Commission

21. The Government has expressed concern about several aspects of the Commission’s most recent cost estimates, including the estimated cost of moving from the development phase to an operational system. Experience from EGNOS has demonstrated the range of potential challenges likely to materialise in this transition phase, and the Government expresses doubts whether the Commission has made sufficient allowances for the costs and risks of the transition.⁴⁵

43 European Commission: *Communication from the Commission to the European Parliament and the Council: Progressing Galileo: Re-Profiling the European GNSS Programmes*, COM (2007) 534 final, 19 September 2007, {Sec(2007) 1210}, p 3

44 The Commission states that: “Possible cost overruns of the IOV phase will be covered by the current financial arrangements and/or the Contingencies Reserve.” See *Communication from the Commission to the European Parliament and the Council: Progressing Galileo: Re-Profiling the European GNSS Programmes*, COM(2007) 534 final, 19 September 2007, {Sec(2007) 1210}

45 Department for Transport: *Explanatory Memorandum on European Community Document: COMMUNICATION from the Commission to the European Parliament and the Council – Progressing Galileo: Reprofile the European GNSS Programmes; COMMISSION STAFF WORKING DOCUMENT – accompanying document to the Communication from the Commission to the European Parliament and the Council – Progressing Galileo: Reprofile the European GNSS Programmes 13112/07, 13112/07ADD1 COM (2007) 534, SEC (2007) 1210 17 October 2007, para 32*

22. The estimated and outturn costs of the Galileo programme have increased at every stage of its history. We have no reason to believe that even the very substantial costs now estimated for the total programme bear any significant relationship to the likely outturn. The Government has pinpointed specific areas of concern in the current cost estimates, and it is essential that any under-estimates are rectified before a decision is taken on the future of Galileo. Otherwise, it will be impossible to carry out a proper cost-benefit analysis, and it is in turn impossible to reach any kind of rational and informed decision. It is therefore imperative that the Commission carry out further work to verify the cost-estimates for the remaining phases of the Galileo programme, as requested by the UK Government and others.

23. Comprehensive, rigorous and realistic information is in short supply across many crucial aspects of the Galileo programme, leaving no sound basis on which to make very important and extremely costly decisions. As we go through the different dimensions of the programme in this report, the lack of information and analyses is something to which we will return repeatedly. It is a point which the UK Government has made to European partners on many occasions, and one which we raised ourselves three years ago. It would appear that it has fallen on deaf ears in Brussels.

Benefits

24. The European Commission and the Government alike have always maintained that the benefits of the Galileo programme would outweigh its costs. When giving evidence to the Committee, the Minister pointed to the wide-ranging benefits which were expected to follow once the Galileo system was fully operational:

- a) complementary with GPS, it had the ability to stimulate the market in satellite navigation applications which could bring quite substantial benefits to the European and UK economies;
- b) operating alongside GPS, it would roughly double the number of satellites, bringing improved terms of signal availability, particularly in urban areas;
- c) it would also add resilience, enabling a broader range of commercial applications to be developed; and
- d) because it would be a civil system under civilian control it would be possible to use it for commercial applications in a way that was not true of GPS.

Based on these characteristics, the Minister predicted that Galileo had the potential to stimulate further an expanding market, which by some forecasts is predicted to grow from £13 billion in 2007 to around £300 billion by 2025. She also pointed to the direct benefit to UK companies of the procurement programme itself and to Cardiff's bid to host the Galileo supervisory authority.⁴⁶

46 Q1; see also Qq 42–46

25. The DfT's Director of Maritime and Dangerous Goods, Ian Woodman, also explained that Galileo is meant to provide a commercial package to, for example, for industrial users or utilities positioning oil rigs or managing electricity grids which need services accurate down to one centimetre. Galileo would be able to offer this service commercially as one package, whereas GPS users would have to purchase an ancillary augmentation service from a secondary supplier. Mr Woodman did admit that the convenience of one supplier might only be the decisive factor for customers if Galileo's pricing was competitive.⁴⁷

26. Estimates of the direct and indirect benefits of the programme have varied over time, but the Commission's latest calculations indicate that the direct exploitation revenues from EGNOS and Galileo combined over a 20-year period would amount to some €9.1 billion (£6.28 billion).⁴⁸ Furthermore, the Commission's most recent "exploratory" estimates suggest that, over a 20-year period to 2027, the additional value to the EU of Galileo would fall in the range of €50–60 billion. These benefits include benefits to European users in the form of new services, increased performance and innovation (€15–20 billion) and benefits to the private sector through increased market share in GNSS products and services as a direct result of access to Galileo know-how (€35–40 billion).⁴⁹

27. These figures give rise to some concern. For example, the Commission's direct revenue projections are based on 29% of revenue—some €2.6 billion over 20 years—coming from the Public Regulated Service (PRS). These are secure services for the use by police, customs, immigration and other public services. In 2004, our predecessor Committee expressed concern that the likely take-up of PRS by public services was unclear. At that time, there was little apparent interest from the Home Office, for example.⁵⁰ It would appear that the projected revenues from different types of services such as PRS have not been updated since 2006 or earlier, and some of the figures are derived from information from PPP bids.⁵¹ However, it is worth bearing in mind that one of the reasons for the collapse in the PPP negotiations was that the private sector operators were concerned about the level of risk attached to the revenue projections at that time.

28. According to Elizabeth Duthie, the DfT's Divisional Manager for the Galileo Programme, the Commission has been keen to suggest that Galileo would be essential for certain uses such as road tolling. Given the clear resistance of the UK Government to such a move,⁵² it is not unreasonable to suppose that some of the other 26 EU Governments

47 Q44

48 Taking the uncertainty and risks relating to the revenue projection into consideration, the Commission has calculated that the actual revenue is likely to fall within the range of €4.6 billion and €11.7 billion over 20 years. This should be seen in the context of projected operating costs (as opposed to capital expenditure) of €5.5 billion over the same period.

49 European Commission: *Commission Staff Working Document: Accompanying document to the Communication from the Commission to the European Parliament and the Council: Progressing Galileo: Re-Profiling the European GNSS Programmes*, COM(2007) 534 final, 19 September 2007, {Sec(2007) 1210}, p 8

50 Transport Committee, Eighteenth Report of Session 2003–04, Galileo, HC 1210, paras 41–45

51 European Commission: *Commission Staff Working Document: Accompanying document to the Communication from the Commission to the European Parliament and the Council: Progressing Galileo: Re-Profiling the European GNSS Programmes*, COM(2007) 534 final, 19 September 2007, {Sec(2007) 1210}, p 10

52 Qq 38–39

might take a similar position.⁵³ It is crucial that such ‘compulsory’ uses of the Galileo system are excluded from any calculation of potential or likely revenues from Galileo.

29. Long-term projections of direct benefit from major public procurement projects are notoriously difficult to establish with any reasonable degree of certainty, and these difficulties are only amplified in a fast-moving, high-tech sector such as satellite navigation. Indirect benefits are no easier to determine, but the Commission has a history of being bold in its attempts to do just that. For example, in 1999, the Commission estimated that a fully operational European GNSS programme would support a total of 100,000 jobs by 2008, if both direct and indirect employment is included.⁵⁴ Although no equivalent estimate of indirect employment benefits appears in the Commission’s most recent analyses, the 1999 estimates are instructive.

30. We have no reason to doubt that the Galileo project, if completed, could produce a wide array of benefits, both direct and indirect. We also acknowledge the difficulty associated with estimating such benefits ten or twenty years into the future. This is all the more reason to exercise caution. In our view, the benefit projections put forward by the European Commission throughout the life-time of the Galileo project appear fanciful. These figures have generally been put forward explicitly to assist decision-making in the Council and European Parliament, and yet the supporting evidence has rarely amounted to more than the most basic collation of data. We urge the Government to continue to stand its ground in insisting that up-to-date evaluations of benefits must be produced.

The consequences of delays to the programme

31. In 1999, the Commission urged the Council to commit to the Galileo programme with a degree of urgency because:

“a deferred decision will [...] mean that US dominance will be further consolidated, so Europe will find it considerably more difficult, and probably impossible, to enter the market, and will essentially have to accept the standards set by the US.”⁵⁵

In 2000, the Commission’s assumption was that the deployment of Galileo would take place in 2006–07, and the system would be fully operational in 2008.⁵⁶

32. The Commission’s sense of urgency back in 1999–2000 was not misplaced. GNSS technology and services were, and are, a fast-moving sector, and the American GPS satellite navigation system had already then been operational for several years. GPS is currently in the process of being upgraded, and GPS III is expected to be fully functional by 2013. Furthermore, it was announced within the past few months that new GPS satellites

53 See also Qq 92–94

54 European Commission: *Galileo: Involving Europe in a New Generation of Satellite Navigation Services*, COM(1999) 54 Final, 10 February 1999, pp 4–10

55 *Ibid*, p iv and p 5

56 European Commission: *Commission Communication to the European Parliament and the Council On GALILEO*, COM(2000) 750 final, 22 November 2000, p 3

will not have the Selective Availability facility used to scramble the signal for non-military users in the past.⁵⁷ The use of Selective Availability was one of the original concerns about European reliance on GPS.⁵⁸

33. Clearly, the five-year delay that is now expected has implications for the benefits and value for money of the Galileo programme. Five years is a very long time in a fast-moving industry, and the landscape for GNSS will undoubtedly be quite different in 2013 as compared to 2008, the completion date for Galileo originally anticipated. And it is not only GPS that is changing. Other countries are also entering the market with global or regional systems. For example, the Chinese Beidou-II system⁵⁹ is expected to have full global coverage, and both India and Japan are planning their own regional systems.⁶⁰ Some commentators suggested that the Chinese system already had the potential to undermine the economic rationale underpinning the Galileo programme, even before the full extent of Galileo delays and cost over-runs had become clear.⁶¹ If such concerns were justified in 2006, they can only be more serious now.

34. The increased competition in the provision of GNSS services is likely to give many types of users a choice of provider, and this will almost inevitably affect the price of services, and therefore the revenues of GNSS programmes such as Galileo. Although a number of countries have signed,⁶² or are in the process of signing, co-operation agreements with the Galileo programme, it is by no means certain that they will all remain loyal to it in light of long Galileo delays and a proliferation of service providers.

35. The Minister assured us that the latest evaluation of the potential costs and benefits of Galileo take these factors into account, emphasising also that Galileo will have capabilities over and beyond those of GPS III. The implication of this would be that increased competition from, for example, GPS III would not pose a risk for Galileo revenue projections. However, many of the 'special benefits' listed as particular to Galileo are in reality derived simply from having more satellites in orbit, complementing and acting as a back-up for each others' information.⁶³ These satellites do not have to be Galileo satellites, they could equally well be from other systems, such as Beidou or GLONASS in conjunction with GPS, provided that they all operate to the same standard.

57 The scrambled signal is still adequate for most non-military applications but could not be used, for example, to target long-range weapons.

58 The facility to introduce errors into the signal received by non-military users is called Selective Availability. Until recently, the signals transmitted by GPS satellites to any non-US military receivers had small, deliberately introduced errors in order to prevent the signal from being used for military or other security-related purposes. See Royal Institute of Chartered Surveyors (RICS) web-site: *No Selective Availability on GPS III*, 9 October 2007, <http://www.rics.org/>

59 The Beidou system currently has four satellites, but the plan is to expand this to 35, providing a full global GNSS service for both civil and military use.

60 The Japanese system, QZSS (Quasi-Zenith Satellite System) is expected to have three satellites and the first is likely to be launched in 2008. The Indian Government gave the green light to the IRNSS system which will have seven satellites in 2006. It is expected that the system will be operation in 5-6 years. See: Indian Space Research Organisation web-site: <http://www.isro.org>

61 Paul Marks: *China's satellite navigation plans threaten Galileo* in *New Scientist*, 8 November 2006. The magazine quoted sources "close to" the Galileo project. See: <http://www.newscientist.com>

62 The countries that have already signed co-operation agreements with Galileo include China, Israel, Argentina, and the Ukraine.

63 Q42

36. We see little evidence in the Commission's most recent revenue projections that the very different, and possibly very competitive, climate for GNSS services in 2013–14 has been taken adequately into account. The revenue projections put forward are primarily derived from material produced by PPP bidders and other analyses undertaken before the five-year delay and the collapse of the PPP.⁶⁴

37. We are deeply concerned that the consequences of the five-year delay to the Galileo programme have not been taken into consideration in the Commission's calculations of revenues. Even if there are no further delays, and Galileo becomes operational by the end of 2013, the market context is likely to be very different and much more competitive than the one on which current revenue projections seem to be based. It would therefore appear likely that there are very significant risks associated with the data which is being used to underpin the decision to proceed with the Galileo programme.

Cost-benefit analysis and value for money

38. In 2004, our predecessors acknowledged the many potential advantages of the European GNSS programme, but also expressed concern that the costs and benefits had not been properly assessed. The Committee urged the Government not to proceed with the programme until a rigorous independent cost-benefit analysis had been undertaken.⁶⁵ Considering the evidence and analyses produced by the Commission over the past six months, we sadly have a sense of déjà vu.

39. Two documents published by the Commission in September 2007 are explicitly drafted as the basis upon which the Council and Parliament will make two very major decisions:

- i. whether to proceed with Galileo as a fully funded public project, and if so,
- ii. whether to re-open the Financial Perspective 2007–13 in order to fund it.

40. The Commission documents provide a limited analysis of the costs, benefits and risks of the Galileo project as it currently stands, and seek to demonstrate that its benefits still outweigh its costs. However, the analysis is brief, and skates all too lightly over key risks. Although some unspecified part of the evidence used by the Commission is independently verified,⁶⁶ the Commission has apparently not invested in a comprehensive, external and independent cost-benefit analysis of the Galileo project since the start of the project. The report produced by Price Waterhouse Coopers in November 2001 concluded that, at that stage, a positive cost-benefit ratio 4.6:1 was expected.⁶⁷ As demonstrated above, since then, costs have escalated significantly, the project has been delayed by five years, and the nature

64 European Commission: Communication from the Commission to the European Parliament and the Council: Progressing Galileo: Re-Profiling the European GNSS Programmes, COM (2007) 534 final, 19 September 2007, {Sec(2007) 1210}, p 6

65 Transport Committee, Eighteenth Report of Session 2003–04, *Galileo*, HC 1210, para 24

66 European Commission: *Communication from the Commission to the European Parliament and the Council: Progressing Galileo: Re-Profiling the European GNSS Programmes*, COM (2007) 534 final, 19 September 2007, {Sec(2007) 1210}, p 6

67 HC Deb, 18 June 2007, col 1455W

of the project has changed such that that the public sector alone will fund it. All three factors will impinge crucially and negatively on the balance of the costs and benefits of the Galileo project. **The Galileo project is at a crossroads. The option of reducing its scope or dropping the project altogether cannot and should not be ruled out unless a balanced and comprehensive cost-benefit analysis, which includes an assessment of the marginal benefit of Galileo over GPS III, is on the table.**

41. The Minister told us that the UK Government did not support “Galileo at any price”,

“It must offer value for money for the Community and there has to be a sensible balance between the costs and benefits that Galileo will deliver. That is why we have been pushing [...] for greater clarity over the costs and benefits from the project. The latest communication we have had from the Commission gives us more information on the costs but we still have strong reservations about the robustness of the estimates and particularly about whether sufficient allowance has been made for risks, so we will be continuing to press on those points to get clarity on the likely costs of the programme.”⁶⁸

42. **It would be entirely unacceptable to proceed with the Galileo project at this stage without fresh, independent and rigorous evaluations of the balance between costs and benefits. We simply cannot expect Ministers to commit the sums required to the Galileo project and the re-opening of the financial perspective 2007–13 without proper cost benefit analysis. We support the Government wholeheartedly in its calls for the Commission to produce this analysis.**

43. **The possibility that the project no longer offers value for money cannot be excluded on the basis of the figures currently available. If, as a result of the delay along with the cost over-run and the collapse of the PPP, the benefits no longer outweigh the costs, the project must be dropped. The new cost-benefit analysis should include a comparative evaluation of the “zero-option” of scrapping the project altogether. It is imperative that the Government have the political courage to bring reason and cold economic prudence to the table in Brussels—even if that means advocating that a flagship programme such as Galileo be scrapped. To do otherwise risks throwing very significant amounts of good money after bad.**

44. The Minister indicated that a series of working groups involving Member State representatives as well as the Commission had been established. These groups were proceeding with much of the work requested, including cost-benefit analyses. There were indications that the groups were productive, and progress was being made.⁶⁹ This is encouraging news.

45. The Minister and her officials kindly agreed to let us have sight of the UK-specific cost-benefit analyses that the Department has commissioned and expects to receive mid-November.⁷⁰ We look forward to scrutinising these documents even though they will arrive

68 Q1

69 Q28 and Q36

70 Qq 26, 28 and 53

after this report goes to print. We shall be keeping a close eye on developments on the Galileo project over the next few months, and we will not hesitate to return to this inquiry if we feel it is necessary.

Funding

46. The original funding structure for the Galileo programme involved the European Commission and the European Space Agency (ESA) splitting the costs of the initial definition, development and validation phases. Member States, including the UK, have made additional payments to ESA to fund ESA's involvement in the Galileo and EGNOS programmes. The deployment and commercial operation phases of the programme were supposed to have been funded in significant part by the Public Private Partnership (PPP). The PPP would have borne at least two thirds of the total costs of these phases.

47. Following the collapse of the PPP negotiations in the spring of 2007, the Transport Council now appears to have agreed that the project as a whole cannot be subject to a PPP arrangement,⁷¹ although the British and Dutch Governments remain committed to the view that PPPs should form part of the funding structure for the project in as far as at all possible.⁷² Without any involvement of PPP *cessionnaires*, the Galileo project in its entirety has to be funded either through contributions directly from Member States or through the European Union Budget.

48. The option of Member States making direct contributions to Galileo through ESA has been rejected by several Governments, including the UK.⁷³ The European Parliament has also adopted a resolution opposing such an inter-governmental funding model.⁷⁴ The alternative is that the entire project be funded through the EU budget, and this is the option favoured by the Commission, the European Parliament and many Member States. With this model, the European Union would assume responsibility for the entire outstanding cost of Galileo. In other words, the EU budget would foot the bill for the cost increases already noted as well as the costs originally expected to be borne by the PPP *cessionnaire*.

Re-opening the 2007–13 Financial Perspective

49. European Union annual budgets are set within a seven-year framework settlement, a 'Financial Perspective'. Financial Perspectives set budget ceilings to broad budget priority

71 Q88

72 See footnote 1 of: Department for Transport: *Explanatory Memorandum on European Community Document: COMMUNICATION from the Commission to the European Parliament and the Council – Progressing Galileo: Refiling the European GNSS Programmes*; COMMISSION STAFF WORKING DOCUMENT – accompanying document to the Communication from the Commission to the European Parliament and the Council – Progressing Galileo: Refiling the European GNSS Programmes 13112/07, 13112/07ADD1 COM (2007) 534, SEC (2007) 1210 17 October 2007

73 Ev 18

74 HM Treasury: *Explanatory Memorandum on European Community Legislation: Commission Proposal for a decision of the European Parliament and the Council on amending the interinstitutional agreement of 17 May 2006 on budgetary discipline and sound financial management as regards the multi-annual financial framework, Council number 13237/07 COM(2007) 549 Final*, p 2

areas which are agreed jointly by the European Parliament and the 27 Member States.⁷⁵ The current Financial Perspective, governing the allocation of funds for the 2007–13 period, took many months of difficult negotiations between Member States, and was finally agreed by Heads of State and Government only at an all night meeting in December 2005.⁷⁶ Once the Financial Perspective has been agreed, decisions to move significant funds from one budget heading to another require the agreement of the Council of Economic and Finance Ministers. If the sum of funds to be moved is below 0.03% of EU GNI, only a qualified majority is required in Council. Otherwise the decision has to be made by unanimity.⁷⁷

50. The Galileo programme is part of the budget heading ‘Competitiveness, Growth and Employment’, which has a high priority in the EU’s current objectives. This area is often referred to as the ‘Lisbon priorities’. The European Commission has proposed that in order to fill the €2.4 billion funding gap in the Galileo programme,⁷⁸ funds should be transferred from the agriculture and administration budgets rather than re-allocating money from other projects within the Competitiveness, Growth and Employment area.⁷⁹ €2.4 billion is less than 0.03% of EU GNI,⁸⁰ and the Council of Economic and Finance Ministers could therefore agree this change through a Qualified Majority Vote (QMV).⁸¹

51. The British Government has asserted that if the budget for Galileo has to be increased, “the only budget-disciplined approach” would be to re-allocate money from other projects within the overall budget for ‘Competitiveness, Growth and Employment.’⁸² The Government acknowledges that such a re-allocation of funds would impact negatively on projects such as the Trans-European Networks (TENS) as well as research and

75 The Member States decide by unanimity. See for example the European Union web-site: <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/04/30&format=HTML&aged=0&language=EN&guiLanguage=en>

76 See for example EurActiv: <http://www.euractiv.com>

77 Letter from the Secretary of State for Transport, Rt Hon Ruth Kelly MP (not yet published)

78 The Commission proposes that €2.1 billion of ‘non-exploitable margins’ should be transferred from budget heading 2 (Preservation and Management of Natural Resources) and heading 5, (Administration) to Galileo. See: *European Commission: Communication from the Commission to the European Parliament and the Council: Progressing Galileo: Re-Profiling the European GNSS Programmes, COM(2007) 534 final*, 19 September 2007, {Sec(2007) 1210}.

The remaining €300 million ‘gap’ in the Galileo budget will be drawn down through Framework Programme 7 Research budget. See: HM Treasury: *Explanatory Memorandum on European Community Legislation: Commission Proposal for a decision of the European Parliament and the Council on amending the interinstitutional agreement of 17 May 2006 on budgetary discipline and sound financial management as regards the multi-annual financial framework, Council number 13237/07 COM(2007) 549 Final*, pp 3–4.

79 Heading 1a of the Financial Perspective (Competitiveness, Growth and Employment) has a total budget of €74.1 billion whilst heading 2 (Preservation and Management of Natural Resources) has €371.3 billion over the 2007–13 period. See: HM Treasury: *European Community Finances: Statement of the 2007 EC Budget and measures to counter fraud and financial mismanagement*, CM7090, May 2007, para 2.6.

80 HM Treasury: *Explanatory Memorandum on European Community Legislation: Commission Proposal for a decision of the European Parliament and the Council on amending the interinstitutional agreement of 17 May 2006 on budgetary discipline and sound financial management as regards the multi-annual financial framework, Council number 13237/07 COM(2007) 549 Final*

81 In a letter dated 6 November 2007, the Secretary of State for Transport, Rt Hon Ruth Kelly MP confirms that the additional sum requested by the Commission on for Galileo (€2.4 billion) amounts to 0.02% of EU GNI.

82 Q81 and Ev 18 ; see also HM Treasury: *Explanatory Memorandum on European Community Legislation: Commission Proposal for a decision of the European Parliament and the Council on amending the interinstitutional agreement of 17 May 2006 on budgetary discipline and sound financial management as regards the multi-annual financial framework, Council number 13237/07 COM(2007) 549 Final*, p 6

development projects.⁸³ But the Minister told us that “if there is a budget set we have to stick to it; we cannot start going back for more.”⁸⁴

52. This view appears to fly in the face of the Commission’s assertion that re-deployment within the budget for Competitiveness for Growth and Employment “at the beginning of the programming period” would not be appropriate.⁸⁵ It is somewhat unclear why this should be the case.⁸⁶

53. We agree entirely with the Government that a re-opening of the Financial Perspective 2007–2013 in order to fund Galileo makes a mockery of the complex process of negotiations and compromises which form the basis for the Financial Perspective. Budgetary priorities agreed unanimously in the European Council should not subsequently be re-visited through a qualified majority. Otherwise, the Commission would have no incentive to be realistic, disciplined and prudent in its financial projections and management. Some Member States could seek to re-introduce changes which had been rejected under unanimity in the European Council. This is a slippery slope that must be avoided at all costs.

54. A re-prioritisation of funds within heading 1a of the Financial Perspective is, of course, not an ideal solution because other measures to strengthen competitiveness, growth and employment would receive fewer funds as a result. But an ideal solution to the fine mess in which the Galileo programme is currently mired does not exist, and it is vital that elementary and important principles of budget discipline are not wantonly abandoned in a scramble to save this one flagship project.

The UK share of costs

55. In June 2007 the then Minister of State for Transport, Dr Stephen Ladyman, explained that UK contributions to the EU budget were not item-specific. He estimated the UK contribution to the total EU budget in 2007 to be approximately 17.1%, although this proportion is somewhat lower in reality because it does not take account of the UK’s abatement.⁸⁷ The current Minister, Rt Hon Rosie Winterton MP, told us that the UK has so far contributed approximately £96.7 million through ESA and the European Commission costs have been £546 million, of which the UK will have contributed approximately 17%.⁸⁸ The Minister also confirmed that contributions made to the EU budget are not item-specific, and that it was impossible for Member States to withhold funds for a specific

83 Ev 18

84 Q1

85 European Commission: *Communication from the Commission to the European Parliament and the Council: Progressing Galileo: Re-Profiles the European GNSS Programmes, COM(2007) 534 final, 19 September 2007, {Sec(2007) 1210}*

86 Letter from the Secretary of State for Transport, Rt Hon Ruth Kelly MP (not yet published)

87 The European Council of Heads of State in December 2005 agreed that the UK abatement would remain in place, but that as of 2009, the basis on which it is calculated would change, progressively reducing the value of the rebate. The actual UK proportion of the EU will therefore decrease after 2009. See: HM Treasury: *European Community Finances: Statement of the 2007 EC Budget and measures to counter fraud and financial mismanagement, CM7090, May 2007.*

88 Q14

project.⁸⁹ Up to May 2007, the value of Galileo-related contracts awarded to UK companies was calculated to €212.7 million⁹⁰ (approximately £147 million). The Government has commissioned an update of analyses from 2001 and 2005, evaluating the probable cost-benefit ratio of the Galileo programme to the UK economy. It is expected that the report will be completed in mid-November 2007, and the Government has undertaken to let the Committee scrutinise it.⁹¹

56. Building and running Galileo over 25 years is estimated to cost almost £10 billion. To put it into perspective, that is almost two-thirds of the cost of the entire Crossrail project. British tax-payers could end up paying 17% of these costs, and we believe they are entitled to demand that such expenditure is not incurred without a clear demonstration of how they will benefit from it. We recommend that the Government produce a rigorous cost-benefit analysis, demonstrating how UK taxpayers will benefit from the substantial sum of money they are contributing to the Galileo programme.

Risk Management – governance and procurement strategy

57. The governance structure for Galileo is complex, and with the failure of the PPP negotiations, the structure will almost certainly change again. The British Government has indicated that it favours a clearer governance structure which allows full transparency to Member States and the budgetary authorities.⁹² The Government noted that the key features of changes in the governance structure “could include a reduction of the ‘distance’ between the GSA and Commission” as well as a unification of the member state oversight groups.⁹³

58. Commenting on Commission proposals on the table back in August 2007, the Government noted that their “ability to deliver the project depends on a number of key factors”:

- i. “the ability to have genuine and ongoing robust competition in all elements of the supply chain. To the extent that single or non-competitive supply for any material part of the programme is the only option then this would present huge obstacles to the viability of the approach proposed that it may not be possible to overcome;
- ii. “the ability to incentivise ESA to act as efficient procurement agent when it has no obvious ability to take and manage risk, and
- iii. “the need for a very strong client function in the Commission/GSA to oversee the process, in particular to ensure that the costs are being controlled properly and

89 Qq 75–77

90 HC Deb, 18 June 2007, col 1456W

91 Q28 and Q53

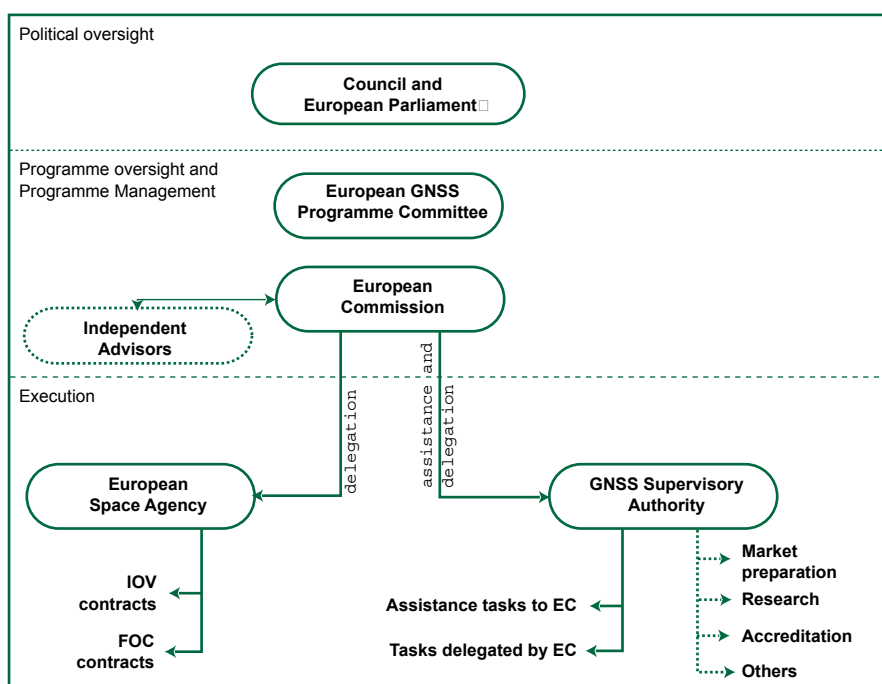
92 Ev 18

93 Ev 17

design is optimised in terms of value for money and compliance with the high level requirements.”⁹⁴

59. Following the disappearance of the PPP element from the governance model, the European Commission document published on 19 September 2007 contained a revised and simplified governance model. In this proposal, programme oversight and programme management roles are separated (see Figure 1 below). However, the ESA retained its role as the procurement body, contrary to the Government’s wishes. The Government believes that the GNSS Supervisory Authority (GSA) would be better placed to undertake procurement. However, if ESA does end up with procurement responsibilities, the Government emphasises the need for a strong and clear contractual relationship between ESA and the Commission, which would allow the Commission to be an “intelligent client.”⁹⁵ It would be crucial also that the Commission had the appropriate expertise to manage the contract.⁹⁶

Figure 1: European Commission proposal: Governance structure for the Galileo programme



Source: European Commission

60. Flowing from its concerns about governance, the UK Government also argues that a clear procurement strategy must be developed before the Galileo project gets its go-ahead. In her letter to the Committee in August, the Minister stated that:

“the more we reflect on this matter, the greater the need that we perceive for a clear and detailed procurement strategy to be set out in advance of any further decision.

94 Ev 17

95 Q54

96 Q57

As has been seen in the past this aspect has the ability to both drive increases in cost through inefficiency and introduce delay for non-project reasons.”⁹⁷

61. The Minister subsequently elaborated the point in oral evidence, explaining that ESA was very good on the technical front, but better project management was required.⁹⁸ Precise and well drawn contracts would be key to the success or failure of the programme if ESA was to manage procurement.⁹⁹

62. We support the UK Government in pushing hard for sound governance structures and procurement strategies on the Galileo programme. Flawed governance or procurement strategies could be a source of further, disastrous delays and cost over-runs. We recommend that the Government stick to its position that if the European Space Agency (ESA) is to manage procurement, a strong contractual relationship between ESA and the Commission needs to be established right from the beginning. We also recommend that the Government ensures that there is no retreat from the position that competition is vital in the procurement process at all contract levels.

All or nothing?

63. We have already discussed the possibility that the project might be scrapped entirely but it might be that, even if the project as a whole were not economically-viable, a smaller-scale system could represent good value for money. Ms Duthie explained that a smaller number of satellites, perhaps 12–16, could make a significant impact and achieve some of the projected economic benefits, particularly at consumer level.¹⁰⁰ The Galileo-specific services such as the Public Regulated Service (PRS), and the ‘special use’ services may well offer further additional benefits, but it is not at all clear whether the additional investment to provide them will provide good value for money, particularly given a context of much greater market maturity and increased competition in GNSS services by the time Galileo becomes operational – at least five years down the line.

64. After the collapse of the PPP negotiations, the Commission asked the European Parliament and Council to reaffirm the strategic importance of Galileo. The Commission reminded Council and Parliament that:

“Galileo has become a flagship project for both its strategic value and its important contribution to the Lisbon strategy, and incarnating the political, economic, and technological dimensions of the European Union. This has been emphasised on several occasions by the European Council [...]”¹⁰¹

97 Ev 17

98 Q58

99 *Ibid.*

100 Q65

101 European Commission: *Communication from the Commission to the European Parliament and the Council: Galileo at a Cross-Road: the Implementation of the European GNSS Programmes {Sec(2007)624}, COM(2007)261 final*, 16 May 2007, p6; see also: Vice-President of the European Commission and Commissioner for Transport, Jacques Barrot quoted in the Financial Times, *Galileo Off Course*, 16 May 2007

It further noted that Galileo was a pillar of “the emerging European Space policy, and signifies Europe’s ambitions in space [...]” Abandoning the project would increase dependency on US, Russian and Chinese systems, and it would put European industry at a disadvantage when it comes to reaping the benefits from downstream applications.¹⁰² The subsequent document issued in September stated that failing to proceed with Galileo as soon as possible would lead to “a major loss of macro-economic opportunities for European manufacturing and service companies.”¹⁰³

65. The ‘middle option’ of having a reduced system instead of the full 30 satellite programme received short shrift from the European Commission. It stated simply that further delay and additional costs would result if the system had to be re-specified and if development contracts had to be changed or re-tendered. The Commission argued that:

“Such a scenario incites a combined effect of a loss of the investment made so far in the project and a very late entry-to-market of a system with degraded performances and an undoubtedly low resistance in competition against new systems like GPS-III. The forecast economic profitability of such a scenario is very low.”¹⁰⁴

66. We have not so far seen hard evidence and analyses of any rigour to support such conclusions. Indeed, the House of Commons European Scrutiny Committee concluded that the documentation produced by the European Commission as a basis for Council decision-making in June constituted a “carefully constructed series of statements which, albeit largely not properly substantiated, the Commission wishes the Council to endorse so as to underpin an immediate decision on its preferred option of public procurement of all 30 satellites.”¹⁰⁵

67. The Council of Transport Ministers re-affirmed the value of Galileo as a key project of the European Union on the basis of the Commission’s paper.¹⁰⁶ Neither the European Parliament nor the Council of Ministers has pressed for a comprehensive re-assessment of the full range of options and their costs or benefits. The Transport Council did press for a cost-benefit analysis, but did not request that it include the ‘zero-option as well as the option of reducing the scope of Galileo programme. In reflection of a strong Dutch and UK preference for renewed efforts to establish a PPP, the UK and the Netherlands put down a Minute Statement at the June Transport Council, urging that cost-benefit

102 European Commission: *Communication from the Commission to the European Parliament and the Council: Galileo at a Cross-Road: the Implementation of the European GNSS Programmes* {Sec(2007)624}, COM(2007)261 final, 16 May 2007, p7; see also Q65; Comments made by Kyösti Virrankoski, European Parliament Rapporteur on the Budgets Committee in Committee on Budgets: Report on the draft general budget of the European Union for the financial year 2008 (C6-0287/2007 – 2007/2019(BUD)) and Letter of amendment No 1/2008 (13659/2007 – C6-0341/2007) to the draft general budget of the European Union for the financial year 2008, para 20, p 79; Jacques Barrot quoted in the Economist: *Struggling Galileo*, 22 May 2007

103 European Commission: *Commission Staff Working Document: Accompanying document to the Communication from the Commission to the European Parliament and the Council: Progressing Galileo: Re-Profiling the European GNSS Programmes*, COM(2007) 534 final, 19 September 2007, {Sec(2007) 1210}, p3

104 European Commission: *Communication from the Commission to the European Parliament and the Council: Galileo at a Cross-Road: the Implementation of the European GNSS Programmes* {Sec(2007)624}, COM(2007)261 final, 16 May 2007, p8

105 European Scrutiny Committee, Twenty-Third Report of Session 2006–07, HC 41-xxiii, para 2.24

106 Council of the European Union: *Council resolution on GALILEO*: 2805th Transport, Telecommunications and Energy Council meeting Luxembourg, 6–8 June 2007

comparisons of PPP, public procurement and operating concession solutions should be undertaken, and that they should be based on truly comparable data.

68. There is an alarming absence of rigorous and unprejudiced appraisal of the costs and benefits of different options for Galileo. Cost-benefit analyses undertaken years ago, based on assumptions which no longer hold true, cannot be relied upon to justify or rule out any particular course of action in 2007 or 2008. It is entirely conceivable that the best cost-benefit solution at this stage might be to scrap the programme entirely, and the Government should not resile from that conclusion, if it is where the evidence leads. It might be, however, that a smaller-scale project of some kind, such as one with fewer satellites, offers the best way forward. We recommend that the UK Government press for the necessary work to provide the information needed to make sound judgements now to be undertaken urgently. In any case, neither the project as originally conceived, nor any smaller-scale variants should be proceeded with in the absence of a compelling cost-benefit case.

69. We fear that Galileo's status as a flagship *grand projet* is clouding the judgement of some in relation to its true, realistic and proven merits. An atmosphere that does not allow the continued rationale for the full Galileo programme to be questioned appears to have enveloped Brussels. But no amount of perceived prestige and status derived from competing in a civilian space race and no amount of vague but euphoric anticipation of enormous economic and employment benefits can make up for rigorous and balanced analysis of costs and benefit. None of the three key EU institutions has seen fit to cool the overheated atmosphere by ensuring that proper comprehensive analyses and cost-benefit evaluations are undertaken before any further decisions are made. We recommend that the UK Government do all it can to ensure that the decision is approached in a dispassionate and unprejudiced way.

3 EU decision-making processes – effects on the Galileo outcome

The pressure on Council for fast decisions

70. The Minister told the Committee that the documents intended to form the basis of discussion and possible decisions at the Transport Council on 1&2 October were published only on 19 September. This was too late for substantive discussion at the Council and, also too late for the UK to agree to a way forward on the basis of that communication without breaching the Scrutiny Reserve Resolutions.¹⁰⁷

71. However, under pressure from the European Commission, which has stated repeatedly that a decision needs to be made before the end of 2007, and with the added pressure of the 2008 budget conciliation procedure with Parliament rumbling along in the background (see below), the Transport Council did agree that an integrated decision on the future of the project and its finance should be taken before the end of the year.¹⁰⁸

72. The sense of urgency is perhaps understandable, but given the amount of work that the Commission and the working groups now set up by Council to work with the Commission on cost benefit analyses and risks have to do,¹⁰⁹ this time frame looks unrealistic. **The chances of Galileo successfully achieving the sorts of benefits that the European Commission expects continue to decline with every passing month. However, the Commission has failed to match its own language of urgency with urgent action. The failure to produce a solid analysis, including a robust and independent cost-benefit analysis in time for Ministers to make well-founded decisions within the deadlines set by the Commission itself is frankly negligent.**

73. **The Government must work hard to ensure that no decision on the future of the Galileo programme or on its funding is made before all the options have been properly appraised. The United Kingdom, and the European Union, would be better served by delaying the decision on the future of Galileo until such a time as the Commission is able to put rigorous and comprehensive evidence and analyses on cost and benefits before Council and the Parliament. A further delay would clearly be preferable to a hasty decision based on unfounded speculation and wishful thinking.**

Council decisions by QMV

74. The Government does not have the possibility of delaying or vetoing the Galileo programme on its own. In the Council of Transport Ministers, the decision to proceed will be taken by Qualified Majority Voting (QMV).¹¹⁰ The EcoFin Council of Economic and

107 Q1; The text of the Commons Scrutiny Reserve Resolution of 17th November 1998 is published with the Standing Orders in the Public Business, HC 405 of Session 2006–07, p. 163.

108 Q1 and Q17

109 Q26 and Q28

110 Q3

Finance Ministers will also decide by Qualified Majority whether or not to allow the Financial Perspective to be re-opened so as to re-allocate funds from the agriculture and administration budgets to Galileo in the manner proposed by the Commission.¹¹¹ The Government indicated to us that, at the Transport Council in early October, several other Member States had expressed serious concerns about the re-opening of the Financial Perspective. At that time, this group of countries numbered sufficient Member States to form a blocking majority.¹¹² However, given that many countries in this group oppose the principle of re-opening the Financial Perspective, but not the sum of money requested, or the continuation of the Galileo project, a blocking majority may not necessarily remain if compromise proposals come on the table.¹¹³

75. The EcoFin Council of Economic and Finance Ministers can decide about re-allocations between headings within the Financial Perspective as long as the total sum does not exceed 0.03% of EU Gross National Income (GNI) by a Qualified Majority of Members States.¹¹⁴ Given the past pattern of Galileo cost increases, it is not inconceivable that, even with the vast injection of funding currently proposed, Galileo might hit the financial buffers on one or more future occasions before becoming fully operational. It is not clear that there are safeguards to prevent the Commission from coming back repeatedly to ask for more money to be transferred to Galileo from other budget headings whenever financial collapse beckons. There appears to be a very real risk that multiple QMV decisions to transfer money to Galileo could result in transfers to Galileo totalling more than the 0.03% of EU GNI, the threshold which would trigger unanimity decision-making in Council. It should also be borne in mind that, seen from the Commission's perspective, a quick decision that allows the Galileo programme to proceed into the production phase might be much preferable to a long drawn-out battle to get a bigger budget in one go. Whilst we have no evidence that this has happened so far, the temptation for the Commission to submit unrealistically low cost estimates in order to get a quick positive decision under QMV could pose a remote but serious risk to the integrity, validity and prudence of decisions made.

76. Given the uncertainty surrounding the likely final cost of the project, the fact that the budget increase required on this occasion has fallen short of the 0.03% threshold which would trigger the unanimity procedure might be viewed with a degree of scepticism. We recommend that the UK Government strongly resist any attempt to smuggle major budget increases through as a series of incremental changes taken under QMV.

77. The Minister noted the likelihood that the decision on the future of Galileo may end up on the agenda for the European Council of Heads of State and Government in

111 HM Treasury: *Explanatory Memorandum on European Community Legislation: Commission Proposal for a decision of the European Parliament and the Council on amending the interinstitutional agreement of 17 May 2006 on budgetary discipline and sound financial management as regards the multi-annual financial framework*, Council number 13237/07 COM(2007) 549 Final, pp 1 and 5

112 Qq 3–4

113 Qq 79–80

114 Qq 5–7; See also: Letter from the Secretary of State for Transport, Rt Hon Ruth Kelly MP (not yet published)

December.¹¹⁵ We recommend that the Government push for any decision on the future of Galileo to be made unanimously by Heads of State and Government at a European Council. It is neither reasonable nor democratic for decisions of such magnitude and cost to be taken by QMV in individual Councils of Ministers. Furthermore, a very important principle is at stake when deciding whether or not to re-open the Financial Perspective. This decision in itself could have very significant consequences for the Community, and therefore merits unanimity.

The role of the European Parliament

78. The decision on Galileo and the re-opening of the Financial Perspective does not fall to Council alone. Transport policy is subject to co-decision whereby Parliament and Council are equal partners in the decision-making process. The Budgetary Authority of the European Union is also made up of the Council and the European Parliament jointly. In some policy areas, the two institutions have equal say on budget provisions, whilst Council has the final say on funds in other areas.¹¹⁶ The budget heading to which Galileo belongs is decided equally by Council and the European Parliament, but the Council has the final say in decisions under the Agriculture heading,¹¹⁷ because this is categorised as compulsory expenditure. This point is important because the Commission proposal would see funds transferred from the agriculture budget to the Galileo programme.

79. On 25 October 2007, the European Parliament voted to give the draft general budget of the European Union for 2008 its First Reading. The Parliament amended the 2008 budget, increasing the 2008 funding for Galileo from €151 million to €890 million in commitments, contingent on the relevant change in the Financial Perspective being made.¹¹⁸ The increase voted through by the Parliament falls €50 million short of the full amount for 2008 requested by the Commission in its proposal to re-open the Financial Perspective 2007–13.¹¹⁹ After the vote, a press release from the European Parliament stated that:

“The [European Parliament] wants Galileo to be funded wholly by the Community and upholds the Commission's proposal requesting a revision of the financial perspective to provide adequate financing for Galileo [...] over the 2007–2013 period. The Galileo project could fail unless sufficient funding is provided. The funding level proposed by the Council in its first reading (€151m in commitments), is regarded as utterly inadequate by both MEPs and the Commission (which in

115 Q1 and Q4

116 European Parliament web-site: section on Powers <http://www.europarl.europa.eu>

117 Heading II in the Financial Perspective “Preservation and Management of Natural Resources” (effectively agriculture) is categorised as “compulsory expenditure” which means that the Council has the final say on the budget for the area.

118 European Parliament resolution of 25 October 2007 on the draft general budget of the European Union for the financial year 2008, Section III – Commission (C6-0287/2007 – 2007/2019(BUD)) and Letter of amendment No 1/2008 (13659/2007 – C6-0341/2007) to the draft general budget of the European Union for the financial year 2008, section 5

119 HM Treasury: *Explanatory Memorandum on European Community Legislation: Commission Proposal for a decision of the European Parliament and the Council on amending the interinstitutional agreement of 17 May 2006 on budgetary discipline and sound financial management as regards the multi-annual financial framework, Council number 13237/07 COM(2007) 549 Final*, p 3

September put forward a new funding plan). [...] By their vote, MEPs clearly affirmed their request for a revision of the medium-term financial planning.”¹²⁰

80. The European Parliament acknowledged that differences of opinion exist between itself and the Council on the financing of Galileo, and notes that these differences will be the subject of conciliation negotiations on 23 November 2007. The 2008 EU budget needs to be approved and signed in Strasbourg in December.¹²¹ The Parliament’s position on the 2008 budget adds significant pressure to the process of deciding the future of the Galileo project. The fact that Galileo funding is part of the (urgent) process to finalise the 2008 EU budget, along with the European Parliament’s position on it greatly increases the pressure on the Council of Ministers to reach a decision on Galileo fast. Given the affection with which many Member State Governments view the Galileo programme, and the general willingness to increase the funding for it, it appears unlikely that a qualified majority of Member States would risk bringing the 2008 EU budget into jeopardy in order to uphold financial discipline and prudence on the Galileo project.

81. Furthermore, the sheer complexity of a process whereby the decision on Galileo has to be reached not only through negotiation between 27 Member States, but also through conciliation and compromise between Council and the European Parliament increases the risk that Galileo will simply become part of the gigantic web of ‘give and take’ between different countries and different EU bodies. The real danger is that no person or body will take the ultimate responsibility for such a momentous decision and spending commitment.

82. The process for reaching a decision on the future of Galileo and its funding is impenetrably complex. We fear that this complexity, along with the fact that the Galileo decision is now caught up in the negotiations on the 2008 EU budget, is creating an unstoppable momentum for a very expensive decision that is not supported by any robust evidence. We are deeply concerned that, with no one individual or body taking ultimate responsibility for a decision of this magnitude, a path of least resistance will simply be taken. This path is rapidly becoming a decision to proceed with and fund Galileo in the manner proposed by the European Commission in September. The Galileo train appears to have left the station without a qualified driver or anyone to apply the brakes. It would be a shameful indictment of EU decision-making if our worst fears were vindicated.

¹²⁰ European Parliament press release: *European Parliament completed its first-reading vote on the 2008 draft budget – 25 October 2007* See: http://www.europarl.europa.eu/news/expert/infopress_page/034-12046-295-10-43-905-20071019IPR11938-22-10-2007-2007-false/default_en.htm

¹²¹ *Ibid.*

4 Conclusion – the Government's options

83. The British Government does not have many options at its disposal. It is entirely possible that a qualified majority of transport ministers and economics and finance ministers respectively will decide to go ahead with Galileo in the manner proposed by the Commission, and with funding being re-allocated from other headings within the Financial Perspective.¹²² In the worst case scenario, we may therefore end up with a solution that our Government finds unacceptable, forced through with unseemly haste and poor justification, but which British tax-payers nonetheless have to fund to the tune of several hundred million pounds. The Minister acknowledged that opting out of the project unilaterally is not even a viable proposition, as we could not withhold the UK share of the funding for the project.¹²³

84. We believe it would be very unwise indeed to discuss, let alone agree, a financial settlement for Galileo before it has been possible to make a proper, evidence-based decision on the future of the programme as well as on the nature and level of involvement by the private sector. Given the state of the cost-benefit evidence base on Galileo, we therefore believe that it would be unrealistic to schedule any further discussion of Galileo in EcoFin this year. In the event that such discussions did go ahead, we welcome the Minister's belief that a blocking majority may oppose the proposal to re-open the Financial Perspective.¹²⁴ Having said that, the pressures we have outlined in this report should not be underestimated, and we fear that minor modifications and bargains behind the scenes could result in an unacceptable finance proposal nonetheless being adopted.

85. As for the decision on whether or not to proceed with the project, and if so in what form, it is imperative that the evidence base for the decision should be improved before the questions are put to the vote. Unfortunately, it seems likely that a qualified majority may vote to allow the programme to proceed, and the Government's only option to prevent this, is to try to build alliances with other Member States, and perhaps with Members of the European Parliament also. Other options open to the Government are to seek a debate among Heads of State and Government at a European Council, and as a final, hard-ball tactic, to seek to make progress in negotiations and discussions in other policy areas contingent on a degree of progress on Galileo.

86. The jury is out on the continued rationale for Galileo. There is insufficient reliable and robust information about projected costs, relative to the benefits, for us to be able to judge whether scrapping or proceeding with the programme offers the better value for money for taxpayers. Neither are we able to judge which system configuration, and

122 Qq 83–84 ; see also HM Treasury: *Explanatory Memorandum on European Community Legislation: Commission Proposal for a decision of the European Parliament and the Council on amending the interinstitutional agreement of 17 May 2006 on budgetary discipline and sound financial management as regards the multi-annual financial framework, Council number 13237/07 COM(2007) 549 Final*, p5; Department for Transport: *Explanatory Memorandum on European Community Legislation: Amended proposal for a regulation of the European Parliament and of the Council on the further implementation of the European Satellite radio navigation programmes (EGNOS and Galileo)*, 13113/07, COM (2007) 535, para 17

123 Q25; Qq 69–71

124 Q21

what level of involvement by the private sector, would provide the best cost-benefit ratio, in the event that we proceed with the programme. More worrying still, neither the European Commission, nor any Member State, is in any better position to make these judgements. The evidence and analysis provided by the Commission is scant, and gives no real thought to crucial risks and alternative options. On this basis, Governments find themselves pressurised to make snap decisions costing billions of pounds of taxpayers' money. The Government must do everything within its power to prevent any decision on Galileo from being made until independent and robust analyses of the costs and benefits of all the options are on the table.

87. We note that the Government on its own does not have the power to stop, or to impose changes on the Galileo project. However, the Government must nonetheless consider seriously what the true price of complacency on Galileo could turn out to be. In the worst case scenario, this matter is serious enough that the UK might have to make progress in negotiations in other EU policy areas contingent on a reasonable and well-informed decision-making process on the Galileo programme.

88. We are not opposed to the Galileo project *per se*, but we see no choice but to recommend that the British Government seek a debate on the future of Galileo at a European Council of Heads of State and Government. We also recommend that the Prime Minister discuss with other Heads of State and Government how to ensure that decisions of this magnitude will never again be pressed through in this unacceptable manner, or on the basis of such poor evidence and analyses as has happened in the case of Galileo.

89. The history of the Galileo programme provides a textbook example of how not to run large-scale infrastructure projects. Many of the problems encountered by the project are not peculiar to the EU and can be observed across a wide range of projects carried out by Member States. However, the processes and institutions of the European Union are in danger of falling into disrepute if Galileo is allowed to continue in its present form. The Government must work to ensure that common sense and good governance are reinstated. The time has come for the Government to initiate a reappraisal of other large EU projects to ensure that the Galileo fiasco is not repeated elsewhere, outside the limelight.

90. We believe it is essential that the UK Parliament is given the opportunity to debate developments in the Galileo programme once again before any decision is made on the project. British tax-payers will be paying around 17% of the cost of Galileo—hundreds of millions of pounds at the very least—and they have a right to expect that this expenditure will be adequately scrutinised by their elected representatives. If no time is found for an urgent debate, we shall seek an Estimates Day Debate at the earliest opportunity. We therefore recommend that the Government schedule a debate on the floor of the House of Commons as soon as possible, and certainly before the next meeting of the Transport Council on 29 November 2007.

Conclusions and recommendations

Costs, funding and value for money

Costs

1. The estimated and outturn costs of the Galileo programme have increased at every stage of its history. We have no reason to believe that even the very substantial costs now estimated for the total programme bear any significant relationship to the likely outturn. The Government has pinpointed specific areas of concern in the current cost estimates, and it is essential that any under-estimates are rectified before a decision is taken on the future of Galileo. Otherwise, it will be impossible to carry out a proper cost-benefit analysis, and it is in turn impossible to reach any kind of rational and informed decision. It is therefore imperative that the Commission carry out further work to verify the cost-estimates for the remaining phases of the Galileo programme, as requested by the UK Government and others. (Paragraph 22)
2. Comprehensive, rigorous and realistic information is in short supply across many crucial aspects of the Galileo programme, leaving no sound basis on which to make very important and extremely costly decisions. As we go through the different dimensions of the programme in this report, the lack of information and analyses is something to which we will return repeatedly. It is a point which the UK Government has made to European partners on many occasions, and one which we raised ourselves three years ago. It would appear that it has fallen on deaf ears in Brussels. (Paragraph 23)

Benefits

3. We have no reason to doubt that the Galileo project, if completed, could produce a wide array of benefits, both direct and indirect. We also acknowledge the difficulty associated with estimating such benefits ten or twenty years into the future. This is all the more reason to exercise caution. In our view, the benefit projections put forward by the European Commission throughout the life-time of the Galileo project appear fanciful. These figures have generally been put forward explicitly to assist decision-making in the Council and European Parliament, and yet the supporting evidence has rarely amounted to more than the most basic collation of data. We urge the Government to continue to stand its ground in insisting that up-to-date evaluations of benefits must be produced. (Paragraph 30)
4. We are deeply concerned that the consequences of the five-year delay to the Galileo programme have not been taken into consideration in the Commission's calculations of revenues. Even if there are no further delays, and Galileo becomes operational by the end of 2013, the market context is likely to be very different and much more competitive than the one on which current revenue projections seem to be based. It would therefore appear likely that there are very significant risks associated with the data which is being used to underpin the decision to proceed with the Galileo programme. (Paragraph 37)

Cost-benefit analysis and value for money

5. The Galileo project is at a crossroads. The option of reducing its scope or dropping the project altogether cannot and should not be ruled out unless a balanced and comprehensive cost-benefit analysis, which includes an assessment of the marginal benefit of Galileo over GPS III, is on the table. (Paragraph 40)
6. It would be entirely unacceptable to proceed with the Galileo project at this stage without fresh, independent and rigorous evaluations of the balance between costs and benefits. We simply cannot expect Ministers to commit the sums required to the Galileo project and the re-opening of the financial perspective 2007–13 without proper cost benefit analysis. We support the Government wholeheartedly in its calls for the Commission to produce this analysis. (Paragraph 42)
7. The possibility that the project no longer offers value for money cannot be excluded on the basis of the figures currently available. If, as a result of the delay along with the cost-overrun and the collapse of the PPP, the benefits no longer outweigh the costs, the project must be dropped. The new cost-benefit analysis should include a comparative evaluation of the “zero-option” of scrapping the project altogether. It is imperative that the Government have the political courage to bring reason and cold economic prudence to the table in Brussels—even if that means advocating that a flagship programme such as Galileo be scrapped. To do otherwise risks throwing very significant amounts of good money after bad. (Paragraph 43)

Funding

8. We agree entirely with the Government that a re-opening of the Financial Perspective 2007–2013 in order to fund Galileo makes a mockery of the complex process of negotiations and compromises which form the basis for the Financial Perspective. Budgetary priorities agreed unanimously in the European Council should not subsequently be re-visited through a qualified majority. Otherwise, the Commission would have no incentive to be realistic, disciplined and prudent in its financial projections and management. Some Member States could seek to re-introduce changes which had been rejected under unanimity in the European Council. This is a slippery slope that must be avoided at all costs (Paragraph 53)
9. A re-prioritisation of funds within heading 1a of the Financial Perspective is, of course, not an ideal solution because other measures to strengthen competitiveness, growth and employment would receive fewer funds as a result. But an ideal solution to the fine mess in which the Galileo programme is currently mired does not exist, and it is vital that elementary and important principles of budget discipline are not wantonly abandoned in a scramble to save this one flagship project. (Paragraph 54)
10. Building and running Galileo over 25 years is estimated to cost almost £10 billion. To put it into perspective, that is almost two-thirds of the cost of the entire Crossrail project. British tax-payers could end up paying 17% of these costs, and we believe they are entitled to demand that such expenditure is not incurred without a clear demonstration of how they will benefit from it. We recommend that the Government produce a rigorous cost-benefit analysis, demonstrating how UK

taxpayers will benefit from the substantial sum of money they are contributing to the Galileo programme. (Paragraph 56)

Risk Management – governance and procurement strategy

11. We support the UK Government in pushing hard for sound governance structures and procurement strategies on the Galileo programme. Flawed governance or procurement strategies could be a source of further, disastrous delays and cost overruns. We recommend that the Government stick to its position that if the European Space Agency (ESA) is to manage procurement, a strong contractual relationship between ESA and the Commission needs to be established right from the beginning. We also recommend that the Government ensures that there is no retreat from the position that competition is vital in the procurement process at all contract levels. (Paragraph 62)

All or nothing?

12. There is an alarming absence of rigorous and unprejudiced appraisal of the costs and benefits of different options for Galileo. Cost-benefit analyses undertaken years ago, based on assumptions which no longer hold true, cannot be relied upon to justify or rule out any particular course of action in 2007 or 2008. It is entirely conceivable that the best cost-benefit solution at this stage might be to scrap the programme entirely, and the Government should not resile from that conclusion, if it is where the evidence leads. It might be, however, that a smaller-scale project of some kind, such as one with fewer satellites, offers the best way forward. We recommend that the UK Government press for the necessary work to provide the information needed to make sound judgements now to be undertaken urgently. In any case, neither the project as originally conceived, nor any smaller-scale variants should be proceeded with in the absence of a compelling cost-benefit case. (Paragraph 68)
13. We fear that Galileo's status as a flagship *grand projet* is clouding the judgement of some in relation to its true, realistic and proven merits. An atmosphere that does not allow the continued rationale for the full Galileo programme to be questioned appears to have enveloped Brussels. But no amount of perceived prestige and status derived from competing in a civilian space race and no amount of vague but euphoric anticipation of enormous economic and employment benefits can make up for rigorous and balanced analysis of costs and benefit. None of the three key EU institutions has seen fit to cool the overheated atmosphere by ensuring that proper comprehensive analyses and cost-benefit evaluations are undertaken before any further decisions are made. We recommend that the UK Government do all it can to ensure that the decision is approached in a dispassionate and unprejudiced way. (Paragraph 69)

EU decision-making processes – effects on the Galileo outcome

The pressure on Council for fast decisions

14. The chances of Galileo successfully achieving the sorts of benefits that the European Commission expects continue to decline with every passing month. However, the Commission has failed to match its own language of urgency with urgent action. The

failure to produce a solid analysis, including a robust and independent cost-benefit analysis in time for Ministers to make well-founded decisions within the deadlines set by the Commission itself is frankly negligent. (Paragraph 72)

15. The Government must work hard to ensure that no decision on the future of the Galileo programme or on its funding is made before all the options have been properly appraised. The United Kingdom, and the European Union, would be better served by delaying the decision on the future of Galileo until such a time as the Commission is able to put rigorous and comprehensive evidence and analyses on cost and benefits before Council and the Parliament. A further delay would clearly be preferable to a hasty decision based on unfounded speculation and wishful thinking. (Paragraph 73)

Council decisions by QMV

16. Given the uncertainty surrounding the likely final cost of the project, the fact that the budget increase required on this occasion has fallen short of the 0.03% threshold which would trigger the unanimity procedure might be viewed with a degree of scepticism. We recommend that the UK Government strongly resist any attempt to smuggle major budget increases through as a series of incremental changes taken under QMV. (Paragraph 76)
17. We recommend that the Government push for any decision on the future of Galileo to be made unanimously by Heads of State and Government at a European Council. It is neither reasonable nor democratic for decisions of such magnitude and cost to be taken by QMV in individual Councils of Ministers. Furthermore, a very important principle is at stake when deciding whether or not to re-open the Financial Perspective. This decision in itself could have very significant consequences for the Community, and therefore merits unanimity. (Paragraph 77)

The role of the European Parliament

18. The process for reaching a decision on the future of Galileo and its funding is impenetrably complex. We fear that this complexity, along with the fact that the Galileo decision is now caught up in the negotiations on the 2008 EU budget, is creating an unstoppable momentum for a very expensive decision that is not supported by any robust evidence. We are deeply concerned that, with no one individual or body taking ultimate responsibility for a decision of this magnitude, a path of least resistance will simply be taken. This path is rapidly becoming a decision to proceed with and fund Galileo in the manner proposed by the European Commission in September. The Galileo train appears to have left the station without a qualified driver or anyone to apply the brakes. It would be a shameful indictment of EU decision-making if our worst fears were vindicated. (Paragraph 82)

Conclusion – the Government’s options

19. The jury is out on the continued rationale for Galileo. There is insufficient reliable and robust information about projected costs, relative to the benefits, for us to be able to judge whether scrapping or proceeding with the programme offers the better value for money for taxpayers. Neither are we able to judge which system

configuration, and what level of involvement by the private sector, would provide the best cost-benefit ratio, in the event that we proceed with the programme. More worrying still, neither the European Commission, nor any Member State, is in any better position to make these judgements. The evidence and analysis provided by the Commission is scant, and gives no real thought to crucial risks and alternative options. On this basis, Governments find themselves pressurised to make snap decisions costing billions of pounds of taxpayers' money. The Government must do everything within its power to prevent any decision on Galileo from being made until independent and robust analyses of the costs and benefits of all the options are on the table. (Paragraph 86)

20. We note that the Government on its own does not have the power to stop, or to impose changes on the Galileo project. However, the Government must nonetheless consider seriously what the true price of complacency on Galileo could turn out to be. In the worst case scenario, this matter is serious enough that the UK might have to make progress in negotiations in other EU policy areas contingent on a reasonable and well-informed decision-making process on the Galileo programme. (Paragraph 87)
21. We are not opposed to the Galileo project *per se*, but we see no choice but to recommend that the British Government seek a debate on the future of Galileo at a European Council of Heads of State and Government. We also recommend that the Prime Minister discuss with other Heads of State and Government how to ensure that decisions of this magnitude will never again be pressed through in the unacceptable manner and on the basis of such poor evidence and analyses as has happened in the case of Galileo. (Paragraph 88)
22. The history of the Galileo programme provides a textbook example of how not to run large-scale infrastructure projects. Many of the problems encountered by the project are not peculiar to the EU and can be observed across a wide range of projects carried out by Member States. However, the processes and institutions of the European Union are in danger of falling into disrepute if Galileo is allowed to continue in its present form. The Government must work to ensure that common sense and good governance are reinstated. The time has come for the Government to initiate a reappraisal of other large EU projects to ensure that the Galileo fiasco is not repeated elsewhere, outside the limelight. (Paragraph 89)
23. We believe it is essential that the UK Parliament is given the opportunity to debate developments in the Galileo programme once again before any decision is made on the project. British tax-payers will be paying around 17% of the cost of Galileo—hundreds of millions of pounds at the very least—and they have a right to expect that this expenditure will be adequately scrutinised by their elected representatives. If no time is found for an urgent debate, we shall seek an Estimates Day Debate at the earliest opportunity. We therefore recommend that the Government schedule a debate on the floor of the House of Commons as soon as possible, and certainly before the next meeting of the Transport Council on 29 November 2007. (Paragraph 90)

Formal minutes

Wednesday 7 November 2007

Members present:

Mrs Gwyneth Dunwoody, in the Chair

Clive Efford
Mrs Louise Ellman
Mr Philip Hollobone

Mr John Leech
Mr Lee Scott
Mr Graham Stringer

Draft Report (*Galileo: Recent Developments*), proposed by the Chairman, brought up and read.

Ordered, That the Chairman's draft Report be read a second time, paragraph by paragraph.

Paragraph 1 to 90 read and agreed to.

Resolved, That the Report be the First Report of the Committee to the House.

Ordered, That the Chairman do make the Report to the House.

Ordered, That the provisions of Standing Order No.134 (Select committees (reports)) be applied to the Report.

[Adjourned till Wednesday 14 November at 2.30 pm.]

Witnesses

Wednesday 10 October 2007

Page

Rt Hon Rosie Winterton MP, Minister of State for Transport, **Mr Ian Woodman**, Director, Maritime and Dangerous Goods, and **Ms Elizabeth Duthie**, Divisional Manager, Galileo Programme Division, Department for Transport

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Reports from the Transport Committee for the previous Session (2006–07)

First Report	Work of the Committee in 2005–06	HC 226
Second Report	The Ports Industry in England and Wales	HC 61-I & 61-II
Third Report	Transport for the London 2012 Olympic and Paralympic Games: The Draft Transport Plan	HC 199
Fourth Report	Department for Transport Annual Report 2006	HC 95
Fifth Report	The Government's Motorcycling Strategy	HC 264
Sixth Report	The new National Boatmasters' Licence	HC 320-I & 320-II
Seventh Report	Novice Drivers	HC 355-I & 355-II
Eighth Report	Passengers' Experiences of Air Travel	HC 435-I & 435-II
Ninth Report	The draft Local Transport Bill and the Transport Innovation Fund	HC 692-I & 692-II
First Special Report	Passenger Rail Franchising: Government Response to the Committee's Fourteenth Report of Session 2005–06	HC 265
Second Special Report	Roads Policing and Technology: Getting the right balance: Government Response to the Committee's Tenth Report of Session 2005–06	HC 290
Third Special Report	Bus services across the UK: Government Response to the Committee's Eleventh Report of Session 2005–06	HC 298
Fourth Special Report	Local Transport Planning and Funding: Government Response to the Committee's Twelfth Report of Session 2005–06	HC 334
Fifth Special Report	The work of the Civil Aviation Authority: Government Response to the Committee's Thirteenth Report of Session 2005–06	HC 371
Sixth Special Report	Transport for the London 2012 Olympic and Paralympic Games: The Draft Transport Plan: Olympic Delivery Authority Response to the Committee's Third Report of Session 2006–07	HC 484
Seventh Special Report	Department for Transport Annual Report 2006: Government Response to the Committee's Fourth Report of Session 2006–07	HC 485
Eighth Special Report	The Government's Motorcycling Strategy: Government Response to the Committee's Fifth Report of Session 2006–07	HC 698
Ninth Special Report	The Ports Industry in England and Wales: Government Response to the Committee's Second Report of Session 2006–07	HC 954
Tenth Special Report	The new National Boatmasters' Licence: Government Response to the Committee's Sixth Report of Session 2006–07	HC 1050

Eleventh Special Report	Novice Drivers: Government Response to the Committee's Seventh Report of Session 2006–07	HC 1051
Twelfth Special Report	Passengers' Experiences of Air Travel: Government Response to the Committee's Eighth Report of Session 2006–07	HC 1052
Thirteenth Special Report	The draft Local Transport Bill and the Transport Innovation Fund: Government Response to the Committee's Ninth Report of Session 2006–07	HC 1053

Oral evidence

Taken before the Transport Committee

on Wednesday 10 October 2007

Members present

Mrs Gwyneth Dunwoody, in the Chair

Mr David Clelland
Clive Efford
Mrs Louise Ellman
Mr Philip Hollobone

Mr Eric Martlew
David Simpson
Graham Stringer
Mr David Wilshire

Witnesses: **Rt Hon Rosie Winterton MP**, Minister of State for Transport, **Mr Ian Woodman**, Director, Maritime and Dangerous Goods, and **Ms Elizabeth Duthie**, Divisional Manager, Galileo Programme Division, Department for Transport, gave evidence.

Chairman: Minister, welcome. May I ask you to indulge us for two seconds in a little bit of housekeeping? Members having an interest to disclose: Mr Clelland?

Mr Clelland: Member of Unite.

Mr Martlew: Member of Unite and GMB Union.

Graham Stringer: Member of Unite.

Clive Efford: Member of Unite.

Chairman: Gwyneth Dunwoody, ASLEF.

Mrs Ellman: Member of Unite.

Q1 Chairman: Thank you. Now, Minister, may I say that we are grateful to you for coming. As you know, this question of Galileo is one which has given the Committee considerable concern. May I ask you first to introduce yourself and your colleagues and then ask you if you want to say something before we begin.

Ms Winterton: Thank you, Mrs Dunwoody. I would like to say something before we begin if that is convenient. May I introduce Elizabeth Duthie, who is Divisional Manager of the Galileo Programme team and is also Deputy Chair of the Galileo Supervisory Authority Administrative Board, and Ian Woodman, who is Director of Maritime and Dangerous Goods. Thank you for the opportunity to appear before the Committee. I am certainly very well aware of many of the concerns about Galileo, not least because it was the subject of one of the first debates that I had in my new role as Transport Minister. I know you are aware that the June Council followed the collapse of the private public partnership which had been established for Galileo. At that Council Stephen Ladyman, my predecessor, asked and was successful in securing the point that he wanted to see much more rigorous assessments of the costs, benefits and risks of the Galileo programme. In fact, I think he put forward many of the points that you put forward in your 2004 report. On 19 September the Commission published a new communication to the European Parliament called *Progressing Galileo: Re-profiling the European Global Navigation Satellite System Programmes*. This appeared too late for substantive discussion at

the Council and, frankly, it would have been inappropriate for the UK to agree in any way to a way forward on the basis of that communication prior to it being considered by the scrutiny committees. I made it very clear therefore at the Council that there was a parliamentary scrutiny reserve on the proposals. The Council did agree that the community should take an integrated decision on Galileo before the end of the year. That means that we expect the communication to be on the agenda at the Transport Council on 29 and 30 November, and perhaps also at the December European Council. A lot of work is going to be needed if a decision is to be taken there and I think it is also very important that the views of Parliament are available to support the Government in continuing our discussions with the Commission and other Member States. Briefly, the Government's broad view by way of background is that the UK has supported the concept of a European Global Navigation Satellite System to be operated alongside the US GPS system because again, like the Select Committee 2004 report, we believe that Galileo has the scope to provide real improvements in the world's navigation and satellite systems. Complementary with GPS, it does have the ability to stimulate the market in satellite navigation applications which could bring quite substantial benefits to the European and UK economies' business. When it operates alongside GPS it will double the number of satellites that would be potentially available to users, again, bringing some real benefits in terms of signal availability, particularly in urban areas. It would also add resilience, enabling commercial users to utilise it in a broader range of applications, and because it would be a civil system under civilian control it would be possible to use it for commercial applications in a way that is not true of GPS. All of that means that Galileo would be likely to be widely used alongside GPS and further stimulate that expanding market, which by some forecasts is predicted to grow from £13 billion this year to something like £300 billion by 2025. Also, because it is a £2.3 billion procurement

programme, it offers the European and UK space industries a major opportunity in this area of cutting-edge technology. UK firms have already been quite heavily involved in the development phase. Satellite production would offer further opportunities for UK firms as well as the operation of the system. We also have Cardiff's bid to host the Galileo supervisory authority and, obviously, there are big implications there for industry and for jobs in the UK. However, we have always said that we do not support Galileo at any price. It must offer value for money for the Community and there has to be a sensible balance between the costs and benefits that Galileo will deliver. That is why we have been pushing, very much along the lines that you recommended in the 2004 report, for greater clarity over the costs and benefits from the project. The latest communication we have had from the Commission gives us more information on the costs but we still have strong reservations about the robustness of the estimates and particularly about whether sufficient allowance has been made for risks, so we will be continuing to press on those points to get clarity on the likely costs of the programme. That means that if we are going to get value for money we have to have strong financial discipline, effective risk and project management and a very clear focus on what the commercial applications of the system will be. We know that these are things that the private sector can do well and we have been arguing very strongly for the involvement of the private sector in a PPP arrangement. That was the position that we took. We were very disappointed when the Commission was not able to take forward the negotiations on the PPP. The position we are in at the moment is that if the majority of our partners wish to proceed with a public procurement of Galileo we will continue to argue for more effective governance and procurement arrangements that provide sound project management and maximum competition and, we would argue, financial discipline, and therefore we cannot and did not endorse the Commission proposal to reopen the 2007-2013 financial perspective. We did that at the Council here. If extra funding is required to deliver the project through public procurement we believe that this should be found through reprioritisation from the existing programmes. If there is a budget set we have to stick to it; we cannot start going back for more. We do recognise there is a strong commitment in the EU to the Galileo project. We think there are some real benefits for the Community. We are disappointed that the PPP did not go ahead and we will continue to argue along the lines that this Committee has suggested and that we endorse in the coming months.

Q2 Chairman: That is all very helpful but there are one or two technical things that I would like to think the Committee would be helped by if you could give us some information. As I understand it, decisions in the transport committee can be taken on a qualified majority vote.

Ms Winterton: Yes.

Q3 Chairman: On the other hand, this is a commitment of large sums of cash. Could you tell us whether the decision would be taken in the transport committee or in the finance committees?

Ms Winterton: The overall position in the transport committee is, as you said, qualified majority voting. If all partners wish to go ahead then obviously we would be bound by that. However, what we have done is to be very clear that in the Finance Committees we have again argued that the financial perspectives should not be opened, and indeed, at the ECOFIN meeting yesterday the point was again made by UKRep that we should not open that. We had a lot of support there.

Q4 Chairman: From?

Ms Winterton: From Germany, from the Netherlands, from various of the other European partners, and if we were to add up some of the reservations of people who were supporting us, which were Germany, Sweden, Poland, Latvia, the Czech Republic, the Netherlands and Austria, all who supported our concerns about the opening financial perspective, that would add up to 134 votes and I think the required blocking number of votes would be something like 90. Whilst I am very well aware that things can change during the course of these discussions I do think it is fair to say that we certainly do have support for not opening up the idea of going back for more money from Member States. Of course, it is also true that we anticipate that this is an issue that could well go to the Heads of Government meetings at the European Council.

Q5 Chairman: Could you tell me, is it correct that amendments to the financial perspective 2007-2013 are subject to unanimous decision by the finance ministers only if the change proposed amounts to more than 0.03%?

Ms Winterton: I am not sure if it is 0.03% of the EU GNI.

Q6 Chairman: I think it is very important, Minister, that you—

Mr Woodman: Perhaps I could just amplify it, that is—

Q7 Chairman: Mr Woodman, is that correct?

Mr Woodman: That is correct. It is 0.03% of the EU GNI.

Q8 Chairman: Does that mean that the changes that were proposed come above that threshold or below that threshold?

Mr Woodman: The changes were below that threshold.

Q9 Chairman: I see. Could I also ask you, Minister, because, although we did have a very clear statement of the Government's position, it was a rather gentle glide over vulgar things like the figures

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involved, could you be frightfully working class and go back and find out what the actual money is we are talking about?

Ms Winterton: The Commission itself has said it believes that the cost has increased by --- it is asking for another £1.67 billion (€2.4 billion.)

Q10 Chairman: Is that on top of the £5.1 billion that was the original estimate?

Ms Winterton: No, it is not. The costs so far have been £1.1 billion. I am doing this in pounds, by the way.

Q11 Chairman: Oh, good, what a clever lady. You will obviously have a long career.

Ms Winterton: Exactly. The costs so far have been £1.1 billion. The estimate of what it should have been was £750 million. The latest Commission estimate for the total cost of deployment and initial operation, ie, the next bit—we have designed and developed something like four; this is for the next 26—is £2.3 billion¹. In terms of the operating costs, the figure at the moment has been estimated by the Commission in December 2006 to be £5.5 billion at 2004 prices.

Mr Woodman: That is right.

Q12 Chairman: I am sorry—that last figure was?

Ms Winterton: £5.5 billion at 2004 prices. That was over the 20-year PPP concession period.

Q13 Chairman: So that is phases one to three, the 30 satellites into orbit?

Ms Winterton: That puts the 30 satellites into orbit and the £5.5 billion is an operating estimate cost over 20 years.

Q14 Chairman: So what estimate do you make of the United Kingdom contribution to that, which is 17% of the total cost?

Ms Winterton: We have so far contributed approximately £96.7 million through ESA and the European Commission costs have been £546 million. As you know, we pay 17.1% of the total into the whole budget. It is a little more difficult to say that this is what is exactly spent on one particular area, but overall the UK costs, as I say, are £96.7 million and then our part of the European Union—

Q15 Chairman: I mean, it is a bit of a pace here, is it not, because for the modernisation of the West Coast Mainline we said £8.6 billion, Crossrail is £16 billion, Heathrow Terminal 5 an estimate of £4 billion, the Jubilee Line extension £3.5 billion. We are talking big figures here. The amount of money that we would have to commit would be equivalent to various major transport schemes, would it not?

Ms Winterton: Yes. We are talking about spreading that cost across the European Union.

Q16 Chairman: We still would have to pay 17%.

Ms Winterton: Yes, and that is exactly why we have been arguing that we really do need to make sure that the costs are well thought out, that there is a good cost benefit analysis. I do not think we can deny that there really are potentially some big benefits for industry and for the economy as a whole.

Q17 Chairman: Yes. The thing is, Minister, what is an integrated decision?

Ms Winterton: An integrated decision is one that is agreed not only by the Transport Council but also by the financial ministers and as well, if it goes to the—

Mr Woodman: Heads of Government might well wish to take a view at the Council in December.

Q18 Chairman: They “might well”. That is careful phrasing, Mr Woodman: “We do not know but we think it is so much money that even they might take a vague interest”, or do I misinterpret you?

Mr Woodman: I think that is a very plausible interpretation.

Q19 Chairman: Thank you. The difficulty we have, Minister, is that PPP has failed but both in the predecessor inquiry into Galileo and recently the Government keeps saying that it is clear the Council cannot take a final view on the commercial viability or commit taxpayers’ money without a clear picture of the value added, but this Committee cannot really look too clearly at that if we do not know what those figures are. I am sure we are very clever, but—

Ms Winterton: I think the Committee is certainly reflecting the Government’s concerns which we have raised consistently and indeed raised again at the October meeting.

Q20 Chairman: Did you suggest they could drop it? That might be one way out.

Ms Winterton: What I said was that we were completely opposed to reopening the financial perspectives, that we believed there had to be more work done on the costs and benefits, on the commercial opportunities. We said that we thought there ought to be more work to have a proper governance system and if the European Space Agency is to be the procurement body there should be a proper contractual relationship between that and the Commission, and that the financial risk estimates had to be looked at more carefully. We have been quite clear in saying that we feel that these are matters that should be very seriously considered by the Commission.

Q21 Chairman: But Mr Woodman has just told us that in effect the decision could still be taken because it is under this 0.03, so it could be taken without the support.

Ms Winterton: I do not think they can open the financial perspectives without a much wider support than there is currently because the alternative is to come back to Member States and

¹ Note by witness: The Commission is asking for a total of £2.3 billion on-top-of the £750m already set aside for Galileo in the current Financial Perspective.

ask for more money. We made it very clear that we did not want it taken out of different headings and that if we went to the agriculture budget, as was being suggested by the Commission, we did not think that was acceptable.

Q22 Chairman: The agriculture budget?

Ms Winterton: That is what the Commission was suggesting.

Q23 Chairman: On the basis that the agriculture budget is 60% of the total costs?

Ms Winterton: On the basis that there is some money that is not spent by the agriculture budget.

Q24 Chairman: And it could be used to count sheep on Dartmoor?

Ms Winterton: And it could be used to transfer into the heading 1A.

Q25 Chairman: It does get more like *Dead Souls* every day, does it not? Could we opt out of this unilaterally?

Ms Winterton: I think we would find it very difficult to just opt out. We have supported it as a key Community project and it would be a question of thinking extremely carefully about the possible benefits that we would be saying we were not going to be involved in.

Q26 Mrs Ellman: In your opening comments you expressed concern about the robustness of the estimates and the assessment of the risks. What is going to happen now in taking those things forward that is different from what has happened before?

Ms Winterton: What will happen now is that there will be a series of working groups that have been established to go back to the Commission, take the issues that we have raised and work through the cost benefit analysis. We ourselves are doing a study to see further what the potential might be for commercial applications, which we hope to have before the November Council. I would be more than happy to share that with the Committee if that would be helpful.

Q27 Chairman: I think it would be almost *de rigueur*, if we may be continental, Minister.

Ms Winterton: We will certainly be more than happy to pass that through. We wanted to do that so that we ourselves had more information about some of the—

Q28 Mrs Ellman: Who is doing that? Who is actually carrying out that study?

Mr Woodman: We have employed a firm called ESYS, who have done some work before for us, and this is looking in particular at the potential benefits for the UK from the use of Galileo once it is in operation. Could I just add something by way of amplification to what the Minister has said? You asked what was going to happen now about costs and the Minister has pointed out that there is going to be a great deal of work going on in

working groups looking at this, but it is true to say that the communication that we received in September and the cost information contained within that is much more open and transparent than the information we have previously had. We have had several good meetings in advance of that being published going through some of their figures. We still have reservations about those figures. We believe that in some cases the costs may be underestimated and we are certainly concerned about the risk estimates that are included in those figures, but the Commission has greatly improved the transparency and openness with which it is discussing these issues with us.

Q29 Chairman: Only because they did not tell you anything before.

Mr Woodman: They have always found it quite difficult to give a complete picture before because, of course, so many of these costs have been dependent on what might be the arrangements that were reached on the PPP decisions.

Chairman: It is all right, Mr Woodman. Do not rise.

Q30 Mrs Ellman: In the work that is now going ahead, looking at application uses, is that taking into account the impact of the delay on Galileo and the fact that an improved GPS might become more acceptable to organisations that would have used Galileo?

Ms Winterton: Oh, yes, it is looked at in the light of that. I should say that even with GPS III there will still be things that Galileo can do that GPS III will not be able to do because of the different applications that we can get from it. The US has been very supportive of the development of Galileo because, obviously, that has the effect as well of improving the accuracy of the GPS system too, so we do look at it alongside that, but I think it is also worth remembering that the US is quite supportive of Galileo being developed.

Q31 Chairman: They are not paying for it, of course.

Ms Winterton: No, and, obviously, the US decided, as did Russia (and China in the future) to have their systems, which they are paying for, of course, through the Government, because it is very difficult to see, in fact almost impossible, that the private sector would ever develop some system like this by itself. Moving onwards to using the applications from it is slightly different.

Q32 Mr Clelland: The question is, surely, are the additional benefits or the extra uses over and above the present system going to be worth the amount of money which is going to have to be expended on the system?

Ms Winterton: That is exactly the further work that we have asked to be done through the Commission. It is just a more accurate cost benefit analysis. I could run through some of the benefits that we think are there if that would help, Chairman.

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Q33 Chairman: If you can demonstrate figures alongside them, Minister; otherwise I would like a written note to that effect.

Ms Winterton: Okay. One of the difficulties, obviously, is the interest of industry in some of those developments.

Q34 Chairman: Which they have not followed up by taking an interest in the PPP.

Ms Winterton: And that is one of the things that we want the Commission to do, a more realistic assessment of the extent to which mobile telephone companies can improve the accuracy in urban areas, if you can get information more accurately on mobile phones about things like the nearest restaurants or banks, or in terms of some of the shipping and aviation applications.

Chairman: We need from you a written note, Minister, and we need whatever your estimates are because we could all list aspirations. I have local government officers always telling me about aspirations and I think we might have a few figures put on it. Can I come back to Mrs Ellman?

Q35 Mrs Ellman: Are you confident that the new study that you have commissioned is going to be enough to deal with the uncertainties that have been expressed?

Ms Winterton: It is not only the new study that we have commissioned. It is also the work that is going on with the officials and experts that we have asked to sit down with the Commission to say what do we need to do to drill down more effectively on some of the costs and benefits, and I might ask Elizabeth if she would like to—

Q36 Chairman: Would you help us out since part of your burden is your Vice Chairmanship? Would you like to tell us what you think?

Ms Duthie: We have had several meetings with the Commission and with other Member States since the June Council and we are going to follow those up before the November Council. One of the points we have made very clearly to the Commission is the point which the Minister made about their costs being rather optimistic, about their estimation of risk being a bit patchy and about the lack of a cost benefit analysis on the basis of current predictions of revenues. We think, for instance, that some of the revenue predictions they used in the communication last month are still too high and they have not shaken out the figures for the delay which you mentioned earlier, so we are pushing quite hard and we have a reasonable amount of support from other Member States for getting a more accurate picture of what this is going to cost, not just for the current financial perspective 2007-2013 but the long term operating and replenishment costs that there will be for the lifetime of the system. My colleague has just handed me a note—he was at a meeting in Brussels yesterday and we have not caught up on it yet—which says that yesterday the Commission offered to share their latest cost benefit analysis with Member States. They say it is a bit rough and ready

but they are willing to share it, so we will certainly take up that offer and go through it with a fine toothcomb.

Q37 Mrs Ellman: But will the cost benefit analysis include a comparison with other options, or is it looking entirely at the present position?

Ms Duthie: Options other than public procurement?

Q38 Mrs Ellman: Is it all to do with Galileo as we have got it now or is it looking at other possibilities as well?

Ms Duthie: No, it is all to do with Galileo. There is a related point, which is that the Commission has been quite keen to suggest that Galileo is essential for some policy uses, you know, road tolling is often mentioned and so on, and that is the area where we want to make sure that they keep the alternatives open. We are strongly opposed to them saying that Galileo must be used.

Q39 Mrs Ellman: On road tolling in particular, what assumptions can you make when we are told there has not been any national decision there?

Ms Winterton: That is exactly the point. We would be very clear that there would be no national decisions, so the idea of basing everything on the fact that there would be would be entirely mistaken.

Q40 Mrs Ellman: So within the way that you are still approaching it is there any possibility of saying Galileo is not worth it and another direction is more cost beneficial?

Ms Winterton: If we were to say another way it would be basically saying, “Don’t have Galileo”, and that does, obviously, raise the issue that you then do not get some of the benefits that we believe we can get from Galileo.

Q41 Chairman: But you are going to have to give us a note on that, are you not, Minister, because Mrs Ellman’s point is incredibly relevant? How long are we going to go on listening to the Commission saying yes, it is all going to be marvellous and yes, we are going to get all these benefits, and yes, we need it for road tolling? Did they give you an explanation of why they said it should come out of the agriculture budget? I suppose it is better than silkworms but why it is coming out of the agriculture budget?

Ms Winterton: I think they thought it was because there was some money that had not been used.

Chairman: That sounds like a fine cavalier attitude.

Q42 Graham Stringer: I do not want to repeat Mrs Ellman’s question, but I suppose it is the same question in a way. What is unique about Galileo?

Ms Winterton: What is unique about it is that because it is a civilian system under civilian control there are certain things that it can be used for on top of the kind of mass market open communication which is an aspect of it, but that is the same as you could get from GPS. Using it

combined with GPS does mean that everybody gets greater accuracy from it. It does make an enhanced system, there is no doubt about that, which is why the Americans are supportive of it. For example, what you can do is have what is called a guarantee of integrity of service, which is very important for the safety of life service in terms of the maritime and aviation sectors. The search and rescue facilities that you can get from it, obviously, will provide a better service for those in distress. There is a possibility of what is called the public regulated service which involves an encryption which can possibly mean that in terms of, for example, the electricity grid, where you need very accurate timing if you are switching from one particular outlet to another,—I think I am talking sense here; I think it is the outlet that it is called—it makes it a much more effective system for doing that and that can be for government services, so there are added extras that can be obtained from Galileo, particularly when used in conjunction with GPS simply because if you have more satellite systems up there the accuracy of the signal is better, and if there are any problems with breakdown of GPS, which there have been, which have had an effect, for example, on the maritime sector, you do have a kind of back-up service which means that you are less likely to get those difficulties, rare but important when they happen, particularly in the maritime world.

Q43 Graham Stringer: I went to a seminar yesterday with one of your predecessors, Stephen Ladyman, and an American and a Tory who was opposed to this, where they all seemed to be agreed that there is very little difference between GPS III and Galileo, certainly when it came to resolution of the signal. They did not believe there was as much difference between the military use and the civilian uses as there have been previously because of the experience of al-Qaeda using GPS and it not being switched off in Iraq. I know you said you would give us a note but is there really much difference between GPS III and Galileo?

Ms Winterton: Really, the things that I have just set out.

Q44 Graham Stringer: Yes, but those are in the notes that we got in 2004, almost exactly those notes. What I am really saying is that when GPS is enhanced to its third phase the resolution comes down to less than a metre, which was one of the original selling points of Galileo, that there are enhancements to it. What I am really trying to get at is the difference between your lists that Stephen Ladyman gave us in 2004 and where we are at now with the experience of wars in different parts of the world where GPS has been used by the other side and the resolution, because in any cost benefit analysis the benefits must be diminishing, must they not, because Galileo has not been enhanced in that period?

Ms Winterton: There is the point that I made earlier about, for example, the back-up systems that would be available in the maritime sector. Undoubtedly

that would be an added extra outside GPS and that was not because it was turned off. I think the most recent one was that there was a service degradation. There was some instability in the spacecraft's atomic clock and that meant that there were problems that were caused to shipping. Obviously, if you have alternative systems that is reduced, but even with GPS III, as I said, there are certain applications, which is why the Americans are welcoming the development of Galileo because even with that it is undoubtedly true that it will increase accuracy and service integrity. I think Mr Woodman was giving me an example earlier of where, even at the moment, for something like, I think, an oil rig, other systems are brought in to ensure accuracy.

Mr Woodman: Perhaps I can expand on that. It is perfectly true to say that GPS III in technical quality compared to Galileo would be remarkably similar. There are arcane technical debates about exactly what might the difference be in terms of availability, in terms of the accuracy and all the rest of it, but largely they would be very similar. The key point about it, and this is a point that the Minister made, is that Galileo will be a commercial service so it will provide you with a commercial package. At the moment, if you want to use GPS and you want to use it for extremely precise surveying functions or for positioning oil rigs or things like that, you buy in extra services, extra information. You have a base station somewhere which is getting you extra information you can put in about the quality of the signal, about the distance that you are from the base station, and if you add those things together you can already get down to centimetre accuracy. You buy that from somebody else, it is not part of the GPS service. Galileo will offer you all of those things all together under the commercial service. There will still be an issue about which is the cheapest way to get it, could you buy it cheaper by using GPS Plus and buying it from somewhere else or could you get it cheaper from Galileo, but if Galileo gets it correct then Galileo will provide you with all of that in one package at a cheaper and better price.

Q45 Graham Stringer: One of the speakers yesterday said, "Why would you buy Coke if people were giving Pepsi away free?", and that is the real difference, that GPS is free and is going to remain free and part of the viability of Galileo is that you will have to pay for these services.

Ms Winterton: Not all of them.

Q46 Graham Stringer: No, but for the services that Mr Woodman was talking about.

Ms Winterton: Yes, but those services you cannot get. The point that is being made is that in a sense the open signal remains free under both systems but there are applications, particularly when I have talked, for example, of the safety of life service, the search and rescue service, the commercial service as well, which itself guarantees continuity of service, which is to be paid for, then that is on top of what you would get from even the GPS III system. I

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should say that some of the advances as well that there have been in GPS have been because of the work that has been done on Galileo that has enabled extra research and so on to be done.

Q47 Graham Stringer: You have said a number of times, Minister, that the United States are very supportive of this and that they have clearly co-operated on standardising the signals. The American Government adviser that was speaking yesterday said that the American Government was hostile because they saw this project as being the start of setting up a European defence organisation. That is what they said, you are saying something different. What I would like is if you could tie the statement that the American Government is supportive into evidence, you know, American Government ministers' statements.

Ms Winterton: There was a joint statement with the EU in March 2007 and there was a technical agreement on the format of the Galileo and GPS system.

Q48 Graham Stringer: That is slightly different from them being supportive, is it not, having a technical agreement?

Mr Woodman: There was the agreement in 2004 which provided a framework for co-operation between them. It is very difficult to imagine that the Americans would sign that if they were not happy with that co-operation.

Ms Duthie: The statement which was made in March by the Commission and the US was supportive. The US, it is true to say, was not very happy about the development of Galileo some years ago. There was then a formal agreement between the EU and the US in 2004 about the technical format of the signal and there have been mostly technical groups meeting ever since to talk about these technical standards with the signal. That was what led to the agreement in July that was referred to which is about improving what you might call the frequency of the signal. There is a more technical explanation, but basically it is improving the strength of the signal. The statement that was made earlier in March this year was more on the political level because the US has realised that having agreements with other GNSS systems means, as the Minister has said, that you get improvements to GPS for everyone because there are more satellites in the sky so you are more likely to pick up the signal and that drives economic benefits, and so the US has become much more interested in getting agreements and talking to Galileo and they are starting to do it with the other countries which are thinking of developing GNSS systems and they are doing that through the United Nations committee.

Q49 Graham Stringer: Would the European Union have the power to put Galileo up if the latest treaty were not signed? What was the European Constitution is now the European Constitution under another name?

Ms Winterton: I do not think it makes any difference.

Q50 Graham Stringer: So the *Daily Telegraph* in May this year was wrong when it said that, was it?

Ms Winterton: I am advised that that is the case, yes.

Q51 Graham Stringer: You have said, Minister, that you are going to look at the views of Parliament. Obviously, you are at this Committee, the European committee.

Ms Winterton: The European Scrutiny Committee.

Q52 Graham Stringer: How else will you take into account the views of Parliament? Are there going to be more debates? Is there going to be a resolution? How do you intend to consult Parliament?

Ms Winterton: Correct me if I am wrong, but I think the European Scrutiny Committee has the ability to call for a debate if it wishes to. I made it very clear, as I said, at the recent European Council that we could not possibly agree to anything without further UK Parliament scrutiny, which is why I put the reserve scrutiny into our remarks, that we will certainly have to go back.

Q53 Clive Efford: I am not clear. Could you just clarify for me: in the note that you are going to provide and the cost benefit analysis there is going to be some sort of estimate of the benefits to industry and research and development in this field? Is that correct?

Ms Winterton: There are two things. We have asked a consultancy to look at the benefits and for our purposes to say what are the possible industrial uses, which bits might industry be interested in, but I think it is also important to emphasise that it is the Commission which we have said needs to do a proper cost benefit analysis because we want to be absolutely clear that the Commission is clear and is able to convince Member States that it has had a very rigorous approach to this in terms of cost benefit analysis, risk assessment and possible future commercial applications. We are doing some of our own work, which I said I would be very happy to share with the Committee, but I do think it is important to emphasise that we are expecting the Commission to do this. We are being helpful in pointing out the areas that we think need to be looked at in that, but it is for the Commission to be coming forward with that kind of analysis.

Mr Woodman: We can certainly provide in the note that we give the Committee information on what we think the benefits to industry might be. I am assuming you are referring to what we term upstream benefits, eg, people who might be involved in the procurement of the system, as it were. That would obviously depend very much on what were the procurement arrangements but clearly we can give some estimates of that.

Q54 Clive Efford: I was going to come on to procurement arrangements. You have expressed some concerns about procurement arrangements, so what progress has been made towards a clear and detailed procurement strategy in relation to Galileo?

Ms Winterton: That is one of the issues again that we have expressed some concern about. The Commission proposal at the moment is that the European Space Agency should be the procurement body and that there should be an oversight of that by what I think is called a comitology committee. We would have preferred the GSA to be the procurement agency and to have a different kind of oversight system. What we have said is that if the Commission and the ESA are the way forward then we would want to see a very clear contractual relationship between the Commission and the ESA which set out exactly how the procurement and development arm would work and how the Commission could, if you like, be an intelligent client. We would also like to see some input from the GSA into that process.

Q55 Chairman: You said very specifically that you did not think the European Space Agency could cope.

Ms Winterton: We are not happy at the moment with the—

Q56 Chairman: What is the difference between saying, “You are no good at it” and “We are not happy”?

Ms Winterton: What we have said is that if the European Space Agency is going to be—

Q57 Chairman: Yes, I know; you have said that, that you want a contract. Well, forgive me: having worked in the film industry, there is no contract in the world that cannot be broken. I think what we need from you is to know why you have changed your position. The Government thinks that the ESA is not capable of doing it and they have not got control. The next thing we know is, “Well, you know, we are not happy about it but nevertheless we are going to somebody else”. Why?

Ms Winterton: What we said was that we would have preferred it if the GSA had been the body. However, we think that if the European Space Agency is going to be the procurement body what we would want to be convinced about from the Commission was that there was a proper contractual relationship between the two, that the Commission had the expertise on it to manage the contract,—

Q58 Chairman: Forgive me; I am sorry to interrupt you, Minister, but look: for once the Government can hardly have been clearer. What you actually stated was that the Space Agency have no obvious ability to take and manage risk, you have doubts about their propensity to act as the official procurement agency, you have said it is critical to have competition in the supply chain, and now you

are saying to us, “We have told them, ‘Go away’. Despite what we have said, nevertheless we will go for somebody else”.

Ms Winterton: We have made very clear that we had reservations about it, but what we have said is that if it is going to succeed there are certain things that can be done to ensure its success and we would want to be convinced that those had been put in place. As I say, there are some things that they are good at. They are very good on some technical expertise. We want to see better project management and the way that we believe we can achieve that is if the Commission has a clear contract with them, if there is open public competition (again, something that we emphasised at the Council, that there has to be proper open and public competition) and we would want to see how far we could make sure that the GSA has a role as well in ensuring that the ESA is able to operate as a procurement agency.

Mr Woodman: Perhaps I could just add that one of the reasons why we were very concerned about the ESA being used as a procurement agency was precisely this point about competition because the way the ESA places contracts for its research work is under the principle known as “*juste retour*”, which is that you put the work into the countries that have contributed the funds for the project. That would be unacceptable for us as a way forward on procuring Galileo, for very obvious reasons. The Commission has been very clear in its current communication that the proposal is for open procurement. Now, provided that is the case then that consideration is obviously less of a concern for us. We are then back into issues about does ESA have the kind of capability to manage a major project? Our preference would have been for the GSA to manage this for a number of reasons but there would also be issues about does the GSA have the capability to manage such a contract? The key thing in both cases would be to make sure that the contract was set up in such a way and sufficient advice and support was put into these people to operate as procurement agents for this to work effectively.

Q59 Clive Efford: Is there a red line here then? Just how much detail do you want in place before any further decisions are made in relation to the procurement strategy?

Ms Winterton: That is exactly why we are working with the Commission, why we have got our people on the working groups, to say that the level we have had so far is not satisfactory and we are going back and we have said, which is why we made a very strong case at the recent Council, to say that we are grateful to the Commission for the work that has been done so far but we are without doubt very anxious that there should be more work done.

Q60 Clive Efford: But that seems to fly in the face of previous statements about it would be very difficult to pull out unilaterally of Galileo, so is this a case of we may be dragged along kicking and

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screaming, not agreeing with what is in place, or that we can draw a line in the sand and say, "Up with this we will not put"?"

Ms Winterton: We have been very clear, I think, that we think there are some potential benefits, which I outlined earlier, and to turn our back on those potential benefits would be an extremely big decision and British industry, trade unions and others have been very anxious that we do all that we can to support what they see as a key European project, which the Community see as a key European project and which has the potential for jobs and industrial development. At the same time, as I said in my opening remarks, we want to make sure that there is value for money and we have been rigorous, I think, and I want to pay tribute to Stephen Ladyman in terms of the work that he did at the June Council, in saying we want further information, all the things that this Committee raised. We have said there needs to be further work done on it.

Q61 Clive Efford: Given that the position is very difficult and the direction of travel is clearly in favour, then what sense have you got that there is any sympathy for the position that you are expressing?

Ms Winterton: With other Member States?

Q62 Clive Efford: Yes.

Ms Winterton: Certainly, in terms of the discussion at ECOFIN, there was concern about reopening the financial perspective. I think I have listed the countries that were supportive there. In the Transport Council itself there was support for the points that we were making about the need for a rigorous approach and that more work needed to be done. There was concern, as I said, about going to another budget because of the increased costs, and whilst we cannot underestimate the enthusiasm that there is in a lot of Member States for the project I think I can safely say that we managed to get a reasonable amount of support for saying, "This has to be done properly. This has to be done—"

Q63 Mr Clelland: Are the main benefits to the UK likely to come from the European phase of this, the four satellite options, or do we need to move to the full global system to get the kinds of benefits we want?

Ms Winterton: I think it has to go to the full system before it—

Mr Woodman: Could I just ask, is that in terms of the benefits for the user from the system?

Q64 Mr Clelland: We are told about all the benefits to business and benefits to travellers, et cetera. Does this mainly come in terms of our citizens and our economic prospects from the European phase of this or do we have to have the 30-satellite system? Could we stop with the four satellites which cover the European footprint and would we get sufficient benefit from that to warrant the kind of money which we would need to put into that?

Mr Woodman: I think the answer to that is that an additional four satellites would give a very patchy coverage indeed, so very marginal benefit, and indeed the four satellites are part of what is called the orbit validation phase of the project, which is just to see if it all works and can all be integrated together, so it would not give you a working system. Effectively you want the full constellation. There are lots of technical arguments that one could have about how many satellites you would need in a full constellation. If you look at GPS I think GPS would have a minimum of 24 and might have a maximum of 30, so there is clearly a range within which you could operate, but if you want the benefits, if you want people to be able to use it for better navigation, more information in urban centres and the like, then effectively you want the full system.

Q65 Mr Clelland: It is all or nothing then? We either go for the whole thing or we do not go anywhere? Does that mean there is no compromise on this? Does it mean we can negotiate with the Commission about reducing costs and having a less ambitious project, for instance?

Ms Duthie: If you want the Galileo specific services, the ones that the Minister mentioned, which are different from what you get from GPS, you have to have the full constellation. As soon as you start putting a reasonable number of satellites up, and some people say 12 Galileo ones, some say 15, 16, but about half to two-thirds of the 30, that will give you, they think, enough difference to the person in the street using it on their mobile phone to make it much more attractive to be used in those mass market applications, but when you talk about this in Europe you get almost a religious divide. There are some countries for which the fact that the specific Galileo services are technically so much better than GPS is now almost an article of faith and they really want the whole lot to be up. Clearly, as it becomes more obvious that you can get some of the economic benefits from a smaller number of satellites, because it is not something people have thought about terribly much until now, as the costs hit harder home people may be more interested in thinking that way and phasing the system.

Q66 Mr Hollobone: Presumably you do not need to be a member of the European Union to benefit from Galileo if it is up and running?

Ms Winterton: I think that is why the Americans are quite enthusiastic, because the more satellites there are up there the more accurate is the system.

Q67 Chairman: They could turn it off though, at any point, could they not? Were we not told originally, Ms Duthie, that this would still be dependent largely upon American technology?

Mr Woodman: I am sorry; Galileo would be dependent on US technology?

Q68 Chairman: Yes, there would still be an element of Galileo which was dependent on support from American GPS.

Mr Woodman: I do not believe that is true, no.

Q69 Mr Hollobone: I still do not think we have finally clarified whether or not the UK has a veto over this or not, but is there any point at which we could say, "Right; we do not want to take part any more"?

Ms Winterton: There comes a point when we can say that we will not be putting extra money into it.

Q70 Chairman: Not the same thing.

Ms Winterton: Not the same thing as being able to say we could veto it by voting against it in the Transport Council.

Q71 Mr Hollobone: But we could effectively opt out of our financial obligations to it?

Ms Winterton: No. As I say, we can gather support for being able to say that we would not agree to reopening the financial perspective, but opting out, just taking our money, I do not think works.

Q72 Chairman: Is it true that the costs have already gone up 50%? Is that an accurate assessment?

Ms Winterton: It had been £750 million and it ended up at £1.1 billion.

Q73 Chairman: I think the point that Mr Hollobone is making is a very sensible one. How far are we going to be prepared to go before we say, "We are not giving you any more money", and could you also tell me, while you are in the process, since this study that you let us have a look at was 2005, is there a later one from all these working parties?

Ms Winterton: Is there a—

Q74 Chairman: The study that you let us have a look at, which was very good, evaluating the costs and benefits for UK taxpayers, was in 2005. Have you got anything later than that?

Mr Woodman: It is in fact what we are updating in this work that the Minister has referred to, which we will obviously let you have a look at when it is completed. That was a study that was first done in 2001 and updated in 2005.

Q75 Chairman: But it does not include a comparative analysis of the benefits of UK participation in Galileo, does it, as compared with non-participation?

Ms Winterton: I think under the treaty obligations we contribute to the whole EU budget, so we cannot take our bit of the money away for Galileo and say, "We are not going to let you have that bit", because we pay an overall sum.

Q76 Chairman: I think the Committee are confused, because on the one hand we are being told the figures are going up. We have said we want this change, we did not want the ESA but they are going to hand it to the ESA, we do not think they are capable of doing it, we do not think they have got the ability, we do not think they have got the people, and anyway, we cannot take our money

away because we pay towards the whole budget, not towards this particular budget. Is that what you are telling us?

Ms Winterton: We contribute to the whole EU budget.

Q77 Chairman: Yes, and you cannot take away money from that.

Ms Winterton: Yes.

Q78 Chairman: Then we are also saying, if it is going up at 50% how far does it have to go before the British Government says, "Thus far and no further"?

Ms Winterton: What we have said is that we do not agree with taking it out of the agriculture budget, ie, moving budgets.

Q79 Chairman: Yes, we understand that.

Ms Winterton: And reopening the financial perspective.

Q80 Chairman: Yes, and that was what you got support for, not blocking the amount of money.

Ms Winterton: No.

Q81 Chairman: And not taking it out of another title.

Ms Winterton: We said that if it is coming out of any heading it should be out of the 1A heading, and therefore the Commission has to come back and say—

Q82 Chairman: We understand all of that, but that is not the answer to the question I am asking you. The question I am asking you is, if it is shooting up like money is no object, how far do we have to go before we say, "Thank you and goodbye"?

Ms Winterton: We remain committed to saying that if this project can be delivered with proper value for money within a budget that we believe adds up,—

Q83 Chairman: No, that is not the question I am asking you, Minister, forgive me.

Ms Winterton: Our bargaining point, if you like, is that we are saying we do not agree to any decision which we believe has not been properly costed and a proper analysis and proper governance are in place.

Q84 Chairman: But it could be taken on qualified majority voting and you could be outvoted because it is under the starting point at which somebody else can put a block on it, yes?

Mr Woodman: That is true.

Q85 Chairman: I need some answers to one or two questions. The Government still seems to be saying it wants a PPP, so why did the existing one fail?

Ms Winterton: The existing one failed for a whole series of reasons to do with the fact that in many senses the consortium itself did not work.

Q86 Chairman: So why does the Government think that there is still a hope of setting up a PPP?

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Ms Winterton: What we have consistently said is that we still believe that the PPP would have been the best option. We do accept that it is very difficult to see how we can attain that again.

Q87 Chairman: Yes. I believe it would have been better had I retained a hip measurement of 36 inches and not eaten as much as I have in the last 40 years. It is not a very useful conclusion.

Ms Winterton: No.

Ms Duthie: Perhaps in these sorts of circumstances where there is an unsatisfactory outcome you look for what you can do which is next best. We have made it very clear to other Member States that we supported the PPP, not simply because we support PPPs but because we think the involvement of the private sector and their own money means that there is a better chance of financial discipline, risk management and so on.

Q88 Chairman: But is it not clear to you, Ms Duthie, from where you have been sitting that that is not an option on offer?

Ms Duthie: A full PPP for the deployment is not an option on offer.

Q89 Chairman: And is there an alternative PPP offer in some form that the Government would accept?

Ms Duthie: We are talking to some other Member States who have similar views to ours about what forms of private sector involvement there could be. These discussions are still going on. They may not succeed, but we are using other opportunities where we can to stress that getting the private sector involved, with their experience of managing projects and the fact that the private sector is often sharper at managing things to budget and on time, which has been one of the difficulties with the European Space Agency, could bring benefits to the project and help keep the costs down even if it is not a full PPP.

Q90 Graham Stringer: It went to the private sector and the fact that you cannot make money out of this project was part of their sharp judgment, which is one of the reasons the consortium fell apart, whereas part of your analysis in terms of your benefits, Minister, is that there will be lots of people willing to pay for this system. Does not the fact that the private sector's judgment is at odds with yours lead you to worry a great deal about this?

Ms Winterton: I think we need to revisit slightly that that is why the PPP got into problems in the first place. I think there were four bidders to start with. Two of those dropped out fairly quickly, and then there were problems with selecting a preferred bidder because there were uncertainties, it is true, over risk-sharing, but remember that there we are talking about the whole project itself. The two remaining bidders were allowed to merge, so there was no competition therefore within that process. There were some particular difficulties, I think, about the consortium which had got internal

disagreements. I think they did not appoint a chief executive to manage the project, so a whole series of things came together in terms of the—

Q91 Graham Stringer: If we are talking about bidders, Minister, if it was like the ITV franchises going out in the 1950s, which were described as a licence to print money, if people believed there was a decent return on this they would not have got out. You said yourself that the private sector is good at measuring risk. The question I am really asking you is this. That is the judgment of the private sector. Why is your judgment about the potential commercial viability of this scheme better than the private sector's?

Ms Winterton: The industry was obviously concerned about risk. I think it is also worth remembering that in the US, in China, in Russia, these projects will all be initially funded by government, and in a sense we know that the private sector would never be able by itself to manage a huge great system when we are talking about up to 30 satellites. Therefore, we would have liked to see a PPP. As I say, there were various reasons why it did not succeed, but what we are quite clear about is that there is still a private sector input both in terms of building the project, and again I would say we need to be very clear that there are potential --- I mean, remember, the one and only successful satellite has, I think, been built in this country and that is the one that is up and wandering around that was built in Surrey. In that respect there are possible benefits to industry that the private sector would be interested in—

Q92 Graham Stringer: Minister, I do not doubt that if you spend a billion pounds in this country on high technology jobs are going to be created and it is a good thing. That is not the answer I am trying to get at. The answer is that if the private sector would not invest and you are saying that people are willing to buy part of this system, why is your judgment better than the private sector's on this matter, because if it is, all well and good, but if it is not then your cost benefit analysis is going to be shot.

Ms Winterton: First of all, I think there are issues about infrastructure and then what you have in ongoing purchase of possible systems. Elizabeth may have some more information in terms of the risk assessment so I will ask her if she could come in.

Ms Duthie: I will come in to give you some more information on the merged consortium's view of revenues. Most of the firms in the merged consortium were people who make satellites and satellite operating systems. They were not terribly focused on the idea of revenues. They assumed, I think, that EU governments would buy lots of the services.

Q93 Chairman: So why are your assumptions that half of Galileo exploitation revenue is going to come from the special use of open services real ones?

Ms Duthie: If I might park that one briefly, the consortium's assumptions, I think, were rather lazy ones, that they would get a lot of money from

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Governments. Road charging was one of the killer applications. When it became clear to them that a large number of governments were not willing to say they would use this whatever happened they got more anxious about it. The point also is that the benefits which the Minister has been mentioning will not necessarily come to the operator of the system. There is quite a long value chain between the people who send out the signal and the people who will be able to make money out of providing something you can buy for your mobile phone and your satnav or providing the more specialist services, so the consortium, as I say, not being used to operating systems, got rather nervous about, one, the lack of enthusiasm of EU governments to buy their system at any price and, two, the fact that it was going to be quite a complicated business to collect the revenues.

Q94 Chairman: So the people who could legitimately have expected to make money out of putting these satellites up decided that there was no money to be made. Whatever their reasons and however lazy their calculations, the people who were at the commercial end said, "We do not want to know"?

Mr Woodman: I do not think actually, Chairman, if I could come in, that is correct.

Q95 Chairman: I am afraid whether it is correct or not, Minister, we are going to allow you to escape. You will keep us very closely informed because otherwise you may find yourself coming back again.

Ms Winterton: Absolutely. It would be lovely to come back.

Written evidence

Memorandum from the Department for Transport (GAL 01)

GALILEO

At the meeting on 18 July between Mrs Dunwoody and Rosie Winterton to discuss the Galileo programme it was agreed that DfT would provide some further information, including:

- a summary of costs to the public sector of the Galileo programme;
- details of the points the Government is making to the Commission and other Member States about the issues that need to be addressed before a decision can be taken about the way forward on the Galileo programme;
- a copy of the updated UK Galileo cost benefit study completed by ESYS consulting for BNSC in 2005; and
- details of the work being done on downstream applications for Galileo.

GALILEO PROJECT COSTS

Details of the costs to date of Galileo programme and previous estimates for the deployment phase (under the PPP assumption) are set out in the note at Annex A. Information on the Commission's estimates of the potential costs of the options identified for taking forward the project following the failure of the PPP negotiations are set out in two Commission documents¹ (which Mrs Dunwoody already has):

- Galileo at a cross-road: the implementation of the European GNSS programmes—COM(2007)261 final, and
- The Commission Staff Working Document—SEC(2007)624.

The key estimates from these documents are summarised in the note at Annex A.

CONTACTS WITH COMMISSION AND OTHER MEMBER STATES

Since the June Transport Council, DfT officials have had a range of meetings with Commission officials responsible for the Galileo project and with officials from other Member States to discuss the way forward on the project. I attach at Annex B a note summarising the key points put to Commission officials and at Annex C a summary of the points being raised with other Member States. We expect to have further meetings during August and September to discuss any emerging proposals from the Commission.

UK GALILEO COST BENEFIT STUDY

A copy of the updated ESYS 2005 UK Galileo cost benefit analysis is enclosed.² The study makes a number of references to the benefits of Galileo for a potential national congestion charging scheme. This does not represent Government policy as no decisions have been taken on whether to proceed with the introduction of national road user charging or on the technology that might be used to support such a scheme. Nor does HMG support the mandatory use of Galileo services for any downstream applications as we do not accept that decisions on policy and service provision should be technology driven.

DOWNSTREAM APPLICATIONS FOR GALILEO

A wide range of work has been funded under FP6 on potential downstream applications for Galileo. A covering paper together with a list and description of the three calls made under FPG is at Annex D.³ The list of the 2nd and 3rd call for FP6 can also be accessed at http://ec.europa.eu/transport/gsa/rd.html#fp6_3rd.

There are no FP7 projects as yet. The 1st call should be launched in October 2007 with successful bids/ projects announced in early 2008. A gap analysis will be undertaken in the first quarter of 2008 to consider the outcome of FP6 and the 2007 call together with the responses to the Commission Green Paper on applications, and to make recommendations on indicative topics for the second call.

¹ Available at: http://ec.europa.eu/dgs/energy_transport/galileo/whatsnew/index_en.htm

² Not printed

³ Not printed

For further information on GSA-led Galileo R&D programmes you should contact:

Mr Pedro Pedreira
Executive Director
European GNSS Supervisory Authority (GSA)
Rue de la loi 56
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Belgium

OTHER ISSUES

Mrs Dunwoody also asked for an early sight of the Government's views on the Commission's proposals on Galileo prior to the October Transport Council and for an assessment of the industrial and other benefits to the UK from proceeding with the project. My Minister is happy to provide Mrs Dunwoody with a copy of the updates that the Government expects to make to the Scrutiny Committees as soon as further information is formally made available from the Commission. We will also look carefully at what assessments we might make of potential benefits to the UK in the light of whatever information the Commission is able to provide about potential procurement routes and deployment timescales.

August 2007

Annex A

COST OF THE GALILEO PROGRAMME

DEFINITION PHASE

The definition phase of the Galileo programme, which began in 1999 and was completed in 2001, was primarily funded by ESA with other funds coming from the EC's Trans-European Networks (TENS) and 5th research framework programme. The total cost of the definition phase was €133 million (£91 million) at 1998 prices, with ESA contributing €93 million (£63 million). ESA's budget is provided by subscriptions from member states. The UK share of costs for this phase was €15.3 million (£10.4 million).

DEVELOPMENT AND VALIDATION PHASES

The Commission and ESA are partners on the current development and validation phases, which are funded in equal measure from the TENS budget and by ESA.

The budget for the cost of the development and validation phases was previously set at €1.1 million (£750 million at 2001 prices). The UK is committed to making a direct contribution of €126.7 million (£86.3 million) for this phase through its subscription to ESA. Half of this has already been paid. ESA's current estimate for the overall costs for the Development and Validation phase is €1.5 billion (£1,023 million) at 2004 prices and this figure is expected to rise further. Under its constitution ESA is entitled to draw down a further 20% from member states subscriptions when they know the available funds have been exhausted for a particular programme. The UK's contribution to this phase of Galileo through its subscription to ESA is therefore expected to increase by up to €20 million (£13.6 million).

DEPLOYMENT AND COMMERCIAL OPERATING PHASE

Overall Costs. Previously estimated costs for this phase were €2.1 billion (£1.4 billion) of which it had been proposed that no more than 1/3rd should come from the Community budget (€700 million) and 2/3rds (€1.4 billion) should come from the private sector under the terms of a PPP (public private partnership).

Community Funding. Under the original proposals it had been expected that the deployment (building and launching of the satellites and establishment of the ground based facilities) of the system would commence in 2006. Of the proposed Community funding, €500 million would be allocated from the Financial Perspectives for 2007–13 and €200 million would come from the preceding Financial Perspectives (ending in 2006).

The Financial Perspective for 2007–13 initially set the overall budget for the deployment and early commercial operating phases of Galileo at €1 billion, at 2004 prices. In May 2006, the European Parliament and the Council capped the proposed public sector contribution for Galileo at €900 million (at 2004 prices) in the budget compromise achieved on the financial perspective 2007–13, Interinstitutional Agreement, subheading 1A ("Competitiveness for growth and employment").

The Galileo financial regulation [COM (2004) 477 Final of 14.07.2004] set out proposals to ensure Galileo was adequately funded during its early deployment and commercial operation. The regulation attained partial general agreement in 2005. The figures in it were always intended to be indicative, as the exact amount of the Community funds needed for this phase would not be known until the conclusion of the negotiations on the PPP concession contract. An assessment was to be presented to Council and Parliament, as the budget authorities, once the main elements of the PPP contract had been agreed, along with a revised draft regulation.

Given the current difficulties of the programme, it will now be for Council to decide on future scenarios for taking the programme forward. Once Council has taken a decision it is expected that the Commission will then bring forward a revised draft EC financial instrument on the funding of Galileo (during 2007–13) for the Council and the European Parliament to ratify. There has been no political discussion of potential funding commitments for the public sector beyond 2013.

SUMMARY

These costs are shown in tabular form below:

<i>Phase</i>	<i>Status</i>	<i>Original estimate</i>	<i>Current Estimate or total budget cost</i>	<i>Direct UK contribution (ESA contributions)</i>
1. Definition phase (1998 prices):	Complete	80 (£54)	133 (£91)	15.3 (£10.4) (paid)
2. Development & Validation phase (2001 prices):	ongoing	1,100 (£750)	1,502 (£1,023) (current estimate)	126.7 (£86.3) (half paid)
Total (phase 1 & 2):		1,180 (£804)	1,635 (£1,114)	142.0–162.0 (£96.7–£110)
3. Deployment and Commercial Operational phase (2004 prices):	Not started	2,100 (£1,430) (2/3 of which from the private sector)	900 (£613) (from the Financial Perspectives 2007–13)	
Total for 3 phases:	3,200–3,400 (£2,180–£2,315) (public & private)	2,535 (£1,726) (allocated from the public sector)	142–162 (£97–£110)	

In 2004 the estimated cost of the development and validation phase of the project increased. The most significant increase arose from the additional security elements that had not been factored in, the need for an additional test satellite to secure the Galileo signal frequency and an increase in labour costs. The additional funds needed amounted to approximately €400 million. The EU agreed to provide half, mostly from a reallocation of the TENs budget, while ESA asked individual Member States to provide the other €200 million. The UK announced in May 2006 that it would provide an additional contribution to ESA of €31 million (£21 million).

OTHER FUNDING

In addition to providing 50% of the budget for the design and development of the programme, the Commission have allocated research and development funds for Galileo from under their Framework Programme budget as follows:

<i>Phase</i>	<i>Status</i>	<i>Budget for Galileo related Projects</i>
FP5—(up to 2001)	Allocated and complete	€30 million (£20 m)
FP 6—(2002–06)	Allocated / not all schemes complete	€110 million (£75 m)
FP7—(2007–13)	1st call to be published shortly (€40m—2007)	€340 million (£232 m)
Total budget		€480 million (327 m)

EUROPEAN GEO-STATIONARY NAVIGATIONAL OVERLAY SERVICE (EGNOS) SUMMARY OF PROGRAMME COSTS

The United Kingdom has also contributed to the cost of the separate EGNOS programme. Total EGNOS costs are shown below:

(Not all figures are at the same price base)

	<i>Euros (€)</i> <i>million</i>	<i>Sterling (£)</i>
ESA Members States	216.5	147.4
European Commission	187.1	127.3
Other (including national air traffic services)	116.6	79.5
Total	520.2	354.2

The total United Kingdom element of this (including contributions from NATS plc), funded through subscription to ESA is €55.68 million (£37.68 million).

The failure of the current concession negotiations for Galileo has also affected the EGNOS augmentation programme since the concessionaire was to have provided the long-term management and funding structure necessary for the certification of EGNOS (as part of the integration of EGNOS into the Galileo programme in accordance with the Transport Council Conclusions of June 2003). These delays will entail further costs, which are as yet unclear.

OPERATING COSTS

There are no definitive estimates of what the cost to the public sector of the continuing costs of operating the Galileo system might be and these costs would depend upon the exact nature of the operating arrangement. However, the Commission estimated, at the time of the December 2006 Transport Council that the gross financial exposure to the public sector over the 20 year PPP concession would be €8 billion (almost £5.5 billion—at 2004 prices). This exposure would be offset, to some extent by expected revenue from the Galileo services.

FUTURE COST ESTIMATES

In its Communication of 16 May 2007 the Commission put forward some approximate figures, based on early assumptions and extrapolations of data, for the cost of different future options for the procurement and operation of Galileo. These figures are intended for comparative purposes between the options. They indicate a total required public sector budget commitment, including for infrastructure, availability payments (or operating costs), and replenishment costs, over the period 2007–30 of between €9 billion and €12 billion (£6.1 billion–£8.2 billion), depending on which of the options is chosen. The public sector costs in the period 2007–13 (the period of the current Financial Perspective) are estimated at between €2.4 billion and €3.4 billion (£1.6 billion–£2.3 billion) compared to the current budget of €900 million. The principle that EU member states would not be required to fund the deployment and operational phases of the Galileo programme from national budgets was agreed at the March 2002 Transport Council. Any increase in the EU contribution to these phases would therefore need to come from an amendment to the EU budget.

The costs of public sector support for the system would be offset by revenue return from users of chargeable Galileo services. Current Commission estimates, based on an independent assessment for the GSA are for revenues of the period to 2030 of €10 billion. The United Kingdom believes that any such estimates can only be very tentative. Uncertainties over the potential revenue streams are one of the reasons given by the Commission in its Communication for the collapse of the PPP negotiations.

Taking potential revenue returns into account, and allowing for the delay in such returns being delivered compared to the upfront investment, the Commission estimate that the discounted cash flow (Net Present Value) public sector costs of the future options they have so far considered range between €1.0 billion (£0.7 billion) and €2.2 billion (£1.5 billion). These overall estimates are highly dependent on the uncertainties surrounding the revenue return estimate.

POINTS MADE TO COMMISSION OFFICIALS

ASSURANCE

We see significant value in independent scrutiny of the project business case at key decision points. This allows decision makers some confidence in the information presented and seeks to reduce the likelihood of future cost increase and/or delays. For a project of the importance of Galileo, we would ideally expect such scrutiny to cover the costs, revenues, benefits and delivery strategy.

We understand that the Commission are concerned that it may be difficult to find suitably qualified and independent experts in the time available. An alternative approach could be to request formal assurance letters from the financial, legal and technical advisers that (i) the project is appropriately structured to achieve its objectives, (ii) the costs, revenue and risk assessments are appropriate for the stage of development of the project, (iii) the delivery strategy is realistic, (iv) the commercial aspects of the project are sufficiently mature, (v) the timetable is realistic, and (vi) that the technical specification is appropriate and optimised to the strategic requirement.

PROCUREMENT MODELS

The original PPP model had been designed to deliver some key benefits, namely (i) transfer of systems integration risk to the private sector, (ii) commercial incentivisation to reach full service commencement, (iii) optimisation of design and revenue generation potential, (iv) optimise whole life costs, (v) gain the benefits of third party funder scrutiny, (vi) have a single point of accountability for the project delivery, (vii) to transfer any inherent design or latent defect risks to the private sector and (viii) provide a strong financial incentive to continue to provide a fully functioning system for the contract duration.

We believe that these objectives are still appropriate and, to varying degrees, achievable in a new procurement structure. To the extent that the Commission is proposing a different commercial structure we are very keen to understand how these features are being replicated or compensated for and would expect this to be set out in any forthcoming analysis.

We also believe that there remains considerable potential for value for money in an availability based PPP concession structure, although removing the link, at least initially, to revenue generation. In particular the ability to incentivise successful service delivery rather than asset deployment must be a key goal.

With regard to the model currently favoured by the Commission, we suggest its ability to deliver the project depends on a number of key factors (i) the ability to have genuine and ongoing robust competition in all elements of the supply chain. To the extent that single or noncompetitive supply for any material part of the programme is the only option then this would present huge obstacles to the viability of the approach proposed that it may not be possible to overcome; (ii) the ability to incentivise ESA to act as efficient procurement agent when it has no obvious ability to take and manage risk, and (iii) the need for a very strong client function in the Commission/GSA to oversee the process, in particular to ensure that the costs are being controlled properly and design is optimised in terms of value for money and compliance with the high level requirements. Again we would expect the approach to these challenges to be explicit prior to approval.

On (ii) we would suggest that the introduction of a commercial “risk integrator” into the structure could add significant value and make the approach more appealing. Such a body would need to be independent of the supply chain and experienced in specifying and managing complex system projects.

The more we reflect on this matter, the greater the need that we perceive for a clear and detailed procurement strategy to be set out in advance of any further decision. As has been seen in the past this aspect has the ability to both drive increases in cost through inefficiency and introduce delay for non-project reasons.

COSTS, RISKS AND REVENUES

On costs we welcome the intention to proceed with an independent review of the underlying costs and would ask you to ensure that it covers not only the unit cost elements but also the necessary risk premia to come to a price for a delivered and functioning system.

On revenues, in the absence of any new external work, I would suggest that it would be helpful if revenues were presented as a range of outcomes to assist in communicating the material uncertainties that exist in the underlying business case.

Overall, we would repeat that the absence of a quantified risk assessment is a major deficiency in the robustness of the business case and we would urge you again to consider if this could be addressed appropriately.

GOVERNANCE

We support the objectives of seeking an efficient and proportionate governance structure. The key features of this could include a reduction of the “distance” between the GSA and Commission, alongside a unification of the member state oversight groups. But changes in member state involvement in programme decisions could only be assessed if there was a robust underlying business case, clearly defined project delivery parameters bounding the freedom of the delivery agent and transparency of process to member states with escalation rights back to the appropriate Councils.

In the absence of ESA funding, we think there would be no need for any ESA member states decision making roles although it may be considered appropriate to include the additional member states in the single oversight body as appropriate.

Annex C

GALILEO- UK VIEWS

At the June Transport Council the Commission was asked to develop detailed proposals (based on an additional thorough assessment of costs, risks, revenues and timetable) for taking the stalled GALILEO project forward. The UK and the Netherlands entered a Minute Statement at Council that set out our views: the points below develop these.

THE UK WANTS TO SEE AN EFFECTIVE GALILEO SYSTEM RUNNING AS SOON AS POSSIBLE

1. To achieve this we do not believe a public-private partnership (PPP) method of delivery should be immediately ruled out. The original PPP model was designed to deliver some key benefits which, irrespective of the approach that is agreed by Council in autumn, ought to be duplicated. We are not clear that these features are currently retained in the Commission’s preferred approach. These include:

- (i) optimisation of design and revenue generation potential;
- (ii) provision of a strong financial incentive to continue to provide a fully functioning system for the contract duration;
- (iii) gain the benefits of a single point of accountability for the project delivery;
- (iv) transfer of any inherent design or latent defect risks to the private sector; and
- (v) gain the benefits of scrutiny from potential third party funders.

2. Before we can make any final decision Ministers, including Finance Ministers, must be able to properly and publicly debate all options. This means we need full and up to date information on progress, projected costs, risks, revenues and timetable. The UK is therefore pleased that Transport Ministers tasked the Commission at the June Council to look closely into these aspects. Further detailed and realistic information on financing options must be made available before any decisions can be taken and the UK would want this to be supported by a measure of independent verification.

3. It is unclear within the current Commission document from where any proposed extra funding should be sourced. In their March Communication the Commission suggest an extra €2.4 billion is needed. The suggestions that this funding could be made available from a different heading, or from off-budget financing (asking capitals for more) both set dangerous precedents: the UK does not support a re-opening of the 2007–13 Financial Perspective nor does it support funding via the European Space Agency (ESA). The UK believes that if more funds are required, the only budget-disciplined approach is for these to be reprioritised from within the ceiling of Heading 1a of the EC Budget.

4. However, by diverting funding from other projects within the same Heading, Galileo will negatively impact on other Community priorities. These include the Trans-European Network transport projects, Research and Development programmes and the proposed European Institute of Technology. We must therefore collectively consider what relative priority we attach to Galileo.

5. The UK believes that the use of EU funds should not contravene Union principles and law. Neither “Juste retour” nor “spread geographical return” are appropriate principles for distributing EU funds. EC financial regulations and procurement rules require transparency, proportionality, equal treatment and non-discrimination and these rules should not be violated.

6. The UK also believes that we need a clear and realistic delivery programme to get Galileo back on track as soon as possible. We will therefore be looking for the Commission to provide further details on the timetable and cost overruns on the current programme so that, in keeping with sound financial principles, the risks of the project and its affordability can be properly examined.

7. The UK believes that the project requires a clearer governance structure allowing full transparency to Member States and the budgetary authorities. In essence the UK wants to see a simple system of oversight and control where there is a clear line of control from the Council (making political decisions) down to Technical Experts and Industry implementing the programme, that both does not prevent necessary movement on the programme but at the same time allows Member States the necessary

oversight and ability to raise problematic issues to a political decision-making forum. This is essential in preventing the programme returning to a situation where continually optimistic timetables, reports and communications mask problems.

8. We will also be looking for a strong contract between the Community and the agent who will procure the satellites, be it public or private. Without clear lines of accountability and incentives for success we risk a repeat of the delays and cost overruns of the previous phases of development.

9. In keeping with Transport Ministers repeated commitments (most recently in October 2006) the UK believes Galileo should be a civil programme under civil control. There is a probability that some military forces may use Galileo for civilian purposes like transport logistics. Similarly organisations like the coastguard and border police, which among our European partners, are technically under military control might also find Galileo useful. However the UK believes it is not realistic to expect organisations like these, or any other government users, to provide the bulk of Galileo revenues.

Without a thorough evaluation of progress to date and a rigorous analysis of future financing options, in keeping with the lines set out above, the UK could not, at this stage, sign up to public procurement of a full 30 satellite system. The UK believes that we must reach the right decision now: it will only be more embarrassing and costly if we are later faced with another crisis because we did not make a full and frank assessment of the current situation and our options for dealing with it.
