



FINAL REPORT

BENCHMARK SECURITY AND BORDER CONTROL

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The Netherlands Directorate General of Civil Aviation

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INTRODUCTION

1.1 The Dutch Ministry of Transport, Public Works and Water Management recognises and endorses the economic and social importance of ensuring that the Netherlands is easily accessible by air. Another aim of the Ministry is to ensure fair (inter) national rules in the aviation market. There is therefore a requirement to establish the extent to which the Dutch aviation sector can and does operate under equal competitive conditions.

1.2 The Dutch Government has to a certain extent influence on the costs of the aviation sector through national measures and the implementation of international law. In view of this capability, the Market Access and Regulation Unit of the Directorate General of Civil Aviation ('DGL') launched a project entitled 'Aviation and Level Playing Field'.

PROJECT AVIATION AND LEVEL PLAYING FIELD

1.3 The primary aim of the project is to identify the impact that government rules have on the competitive position of the aviation sector. In the first phase of this project aeronautical charges have been compared. For the second phase of the project, DGL has defined further research areas for which the influence of the government needs to be analysed.

1.4 In October 2004, SH&E was commissioned by DGL to undertake a benchmark study on Security and Border Control, including determination of policies and practices in a number of other countries. DGL defined three key research questions:

1. What impact do government services and measures and the underlying national and international legislation in the field of security and border control have on the costs and the quality of the passenger handling process at Schiphol and a number of competing airports?
2. What are the consequences for the competitive position of the Dutch aviation sector?
3. Are there reasons to consider changes in government policy relating directly or indirectly to security and border control?

1.5 In DGL's letter introducing SH&E to stakeholders that needed to be consulted, DGL indicated that the study's objective were "...to identify what impact government services and measures and the underlying national and

international legislation in the field of security and border control have on the costs and the quality of the passenger handling process at Amsterdam Schiphol and a number of other airports in the European Union...”. Moreover, the letter noted that SH&E would supply DGL with information in relation to this subject and this benchmark study would allow the Dutch Government to draw policy conclusions.

1.6 In addition to the three main research questions, a number of more detailed questions were set out in the Terms of Reference. These may be found in Appendix F.

1.7 In line with the Terms of Reference, SH&E’s study has been concerned exclusively with passenger traffic and not with freight.

SUMMARY OF APPROACH

1.8 Our work programme consisted of meetings with relevant stakeholders, visits to airports and distribution of a survey. We commenced our study with a meeting on 4 October 2004 with DGL representatives. Subsequently we arranged meetings with stakeholders (government, airport operators and airlines) in Amsterdam, Frankfurt, Munich, Paris and London, although not all relevant stakeholders were able to meet with us. No meetings were held in Madrid. Additionally, we sent a questionnaire to stakeholders in Rome, Copenhagen and Brussels (airports identified as being “...optional...” for inclusion in the study), although unfortunately the response was limited.

1.9 On 16 December 2004 we delivered our draft final report to DGL. This was followed on 10 January 2005 by a presentation and discussion with stakeholders (working group and sound board group). This final report takes into account the feedback we received from the following Dutch stakeholders: DGL, Ministry of Foreign Affairs, Royal Marechaussee (‘KMAR’), Ministry of Finance, Ministry of Justice, Immigration and Naturalisation Department, Schiphol Group and KLM.

1.10 Throughout the project it has been difficult to collect requested information. Stakeholders were interested in participating, although clearly there could be no compulsion to participate (certainly outside the Netherlands). However, many were too busy with day-to-day security business (especially in light of end of year European Commission audits) to be able to meet the original time table for the study and in some cases to participate at all. Moreover, some requested information was considered sensitive and certain parties were hesitant to share such information. Nevertheless we have collected substantial information to draw conclusions for the purpose of this security and border control

benchmark. The following exhibit shows who has co-operated.

Exhibit 1: Parties co-operating

Country	Government		Airport operator	Airline
	Ministry responsible for security or CAA	Immigration and Naturalisation Department		
Belgium		√		√
Denmark		√		
France	√		√	
Italy				
Germany	√	√	√	√
Netherlands	√	√	√	√
Spain	√			
United Kingdom	√	√	√ ¹	√

(1) Border control department only

1.11 In the course of the study, we focused our resources on the five main airports (Amsterdam, Paris, Frankfurt, London and Madrid) and less on the three optional airports (Copenhagen, Rome and Brussels). Since information had to come from many different parties, and sometimes different departments within the same organisation, data collection has proven a time consuming process, especially given the voluntary nature of the study. With the prior agreement of DGL, we indicated to stakeholders that they would receive a copy of our final report if they were willing to co-operate.

1.12 We would like to note our gratitude and thanks to all parties who assisted us in our work, and have given freely of their time and experiences.

INFORMATION

1.13 This report endeavours to present factual information gathered during our interview programme. During any oral exchange of information, the possibility for misinterpretation exists. As a safeguard we sent relevant parts of our draft report to individuals for verification. It is also possible that different parties attach different meanings to the same term (e.g. responsibility), particularly when not working in their mother tongue.

1.14 As mentioned earlier, some information relating to security and border control is confidential, in particular the standards for security measures. Since this report will be in the public domain, we have not included such standards in our report.

CONTENTS OF THIS REPORT

1.15 After the executive summary, we begin this report by discussing relevant legislation and previous studies (Section 3). Section 4 contains security benchmark information for Europe, followed by a section on security provision in the USA (Section 5)¹. In Section 6, we discuss border control aspects followed by a section with a summary and assessment of our findings. Finally, we present our recommendations in Section 8.

¹ We were not asked to look at border control in the USA

INTRODUCTION - ENGLISH

2.1 SH&E Limited was commissioned by the Directorate General of Civil Aviation ('DGL') of the Netherlands to undertake a benchmark study on Security and Border Control, including determination of policies and practices in a number of other countries. This is one of a series of projects undertaken to determine whether the Dutch air transport industry is able to compete fairly on the European/world scene.

Project Objectives

2.2 The overall objective of this project was to identify the impact of government measures on the cost and quality of the handling process in the field of security and border control. Based on the consequences for the competitive position of Schiphol, we were asked to assess if there are reasons to consider changes in government policy. A series of specific questions were asked in relation to the two subject areas of the project. The work scope was restricted to consideration of passengers and their baggage: freight traffic was outside the scope of our work.

Research Method

2.3 The research was conducted in the autumn of 2004, and information gathered on Security and Border Control at London Heathrow and Gatwick, Paris Charles de Gaulle and Orly, Frankfurt, Munich and Madrid, as well as Amsterdam Schiphol. We were asked also to include Rome, Copenhagen and Brussels airports whenever possible (the 'optional' airports). Stakeholders contacted included airport operators, airlines, civil aviation departments and other government agencies. A number of interviews were conducted and other parties provided written contributions. However, the response was far from complete for several reasons, including the busyness of some of the executives responsible in different countries and the sensitive/confidential nature of some of the information requested. Only limited quantitative data on financial matters and service standards was available. This has delayed and handicapped our work. Nevertheless, the information gathered is sufficiently robust to draw conclusions and make recommendations.

2.4 While there is some linkage between Security and Border Control, the issues we were requested to investigate are essentially distinct. Therefore, we summarise them separately.

SECURITY

Regulation

2.5 Security has become a major issue for the air transport industry since the events on 2001. Governments acted swiftly to introduce legislation, building on the existing frameworks established by ICAO and ECAC. The European Council approved Regulation 2320/2002 in December 2002. A series of supporting regulations have also been published. The objective of these regulations has been to produce a harmonised approach to airport security.

2.6 However, Regulation 2320/2002 did not specify all aspects of security, and several Member States had to prepare additional legislation to cover areas such as defining operational responsibility for security and determining how security measures were going to be financed.

Responsibilities and Practices

2.7 Aviation security covers a large number of activities and requirements, including access to restricted areas, terminal surveillance, staff screening, airport surveillance, aircraft security, passenger and hand baggage screening, hold baggage screening, and the separation of arriving and departing passengers. In addition to these normal functions, there exist the possibility for temporary measures (in response to specific threats). Within these areas, minimum standards are generally established, although most Member States studied have higher standards in at least a few areas.

2.8 There is some variation at a detailed level in the operational responsibilities and practices at the airports and in the countries studied. Despite this, there is no obvious disadvantage for the Dutch air transport industry. Differences in operational responsibilities have no impact on the competitive conditions if the efficiency of security services and the method of financing were the same.

Financial considerations

2.9 The financing of aviation security measures varies significantly at the airports considered (and for which we have information). While in general most countries work on the basis of the industry ultimately paying for the costs of security, in Spain there is some financial support from government. However, how the industry pays varies.

2.10 Schiphol is the only airport with a security service charge (otherwise referred to as 'security charge'), which is intended to recover all security costs, and normally this charge is shown on a passenger's ticket, separately from the air

fare and other passenger taxes and charges. At most airports, security costs are included alongside other airport costs, and recovered mainly via a passenger charge (also identified separately on a ticket) and/or a landing charge (which is part of the air fare). The approach in the Netherlands appears the most transparent and allows the clearest identification of the costs of security.

2.11 Lack of information on total security cost at the different airports and difficulty in comparing different cost breakdowns makes it impossible to draw clear conclusions in relation to the efficiency of security services.

Practices in the USA

2.12 Since 2001, the US Government has invested heavily in the security of the air transport system. While any airline operating to a US airport benefits from the support of aviation security, only US airlines benefit from the financing of airline security measures, such as strengthening of cockpit doors. Therefore, US airlines competing with European airlines enjoy an advantage, and the playing field is not level.

Conclusions

2.13 There are many factors that determine the airport which a passenger uses, and the cost and efficiency of the security system is only one of them, and probably a relatively less important one². Security nonetheless does play a part.

2.14 The efficiency of the security process (in all its many aspects and particularly arrangements to comply with regulations on the separation of arriving and departing passengers) can affect Minimum Connection Times (MCTs), a very important parameter for Schiphol and KLM. We have not been able to obtain any quantitative data on quality of service aspects of security, in relation to either targets or performance.

2.15 Since the Dutch implementation of security aspects is a direct implementation of EU Regulation 2320, the influence of the Dutch government on security in a competitive context is limited.

2.16 EU Regulation 2320 leaves open the possibility for Member States to take stricter security measures, either through increased norms or through additional security measures. While in Spain and the Netherlands, Regulation 2320 is taken as the norm for security measures, increased norms are found in France, Germany and especially the UK

² An exception to this would be if an airport had a particularly bad reputation for the quality of its security, which is not the case for any of the airports considered in our project.

2.17 At all airports other security measures are taken (e.g. extra security high risk flights), and such measures at Schiphol are not substantially different from other airports, except for the UK where it appears significantly more other measures are taken.

2.18 In terms of staff screening, Schiphol has some competitive cost advantage over the London airports, where 100% staff screening at any part of the airport where screened departing hold baggage is held, is in place. However, this advantage will last no longer than 2009, when this will be required at all EU airports (EU Regulation 118/ 2004).

2.19 The check of Schiphol's security budget by the Ministry of Justice and subsequently the Ministry of Transport is generally similar to those at other airports.

2.20 Considering both airport security costs and airline security surcharges, the total charge incurred at Schiphol is above average for Origin and Destination passengers, but below average for transfer passengers, which are not only more important to the Dutch industry than they are elsewhere, but also are likely to be more sensitive to the level of charge. We estimate, though, that if Schiphol were to operate at the average charge levels that its traffic would be marginally higher, but only by less than 0.1% of its current traffic levels. Therefore, since our average charges include the charges at Madrid where there is a degree of subsidy from the Spanish Government, we conclude that the Dutch air transport industry does not suffer any competitive disadvantage.

2.21 Schiphol is the only airport where the costs of the US requirement for passenger profiling before check-in (for US carriers) and the secondary gate screening are spread over all airlines, irrespective of whether or not they fly to the USA. This makes Schiphol more attractive to US carriers than the other benchmark airports (Madrid being an exception), but obviously also marginally less attractive to all other carriers whose costs are higher than they would be with a different policy.

2.22 The mixing of arriving and departing passengers is a particular issue for Heathrow (to a lesser extent), Frankfurt, Munich and especially Schiphol as a result of the lay out of the terminal (no separate flows for arriving and departing passengers). EU legislation (e.g. the new security check for passengers from non-EU origin with EU destination) applies and the Dutch Government has no direct influence on this.

2.23 The table below gives an overview of the competitive effects in relation to

security.

Exhibit 2: Competitive effects – security

Security Area	Competitive effects	Comment
Airport security	No level playing field to the advantage of Dutch industry	Some other airports currently have more intensive staff screening
Aircraft security	No level playing field disadvantaging the Dutch industry	Spanish government partly finances aircraft surveillance
Passenger and baggage screening	Level playing field	
Mixing of arriving and departing passengers	Level playing field	But single terminal concept at Schiphol makes it more difficult to implement, compared to other airports
Additional security measures: standards	No level playing field to the advantage of Dutch industry	Other countries have increased standards
Additional security measures: other measures	No level playing field to the advantage of Dutch industry	UK has taken other security measures
Operational responsibility	Level playing field	Different parties could provide security activity for same price and at same service level
Financial aspects	No competitive disadvantage for Dutch aviation industry	If Dutch security charges are compared to the average security charges of the benchmark airports
USA	No level playing field disadvantaging the Dutch industry	Financial support US government

Recommendations

2.24 While there are national variations in the approach to implementation of the EU's security regulations, in general this has not produced an un-level playing field for the Dutch air transport industry. To the extent that the Dutch Government wishes to take policy initiatives in this area, it might wish to consider:

- Advocating further harmonisation of approaches across the EU;
- Encouraging greater financial transparency on EU level in the treatment and charging of security costs;
- Exploring opportunities on a European level to providing some financial support to security costs as is done in Spain, and more especially in the USA; and
- Providing other support in relation to research and development to improve security processes and technologies.

BORDER CONTROL

2.25 As with Security, there are several aspects to the subject of Border Control, and the DGL specified five areas for investigation, namely visas, rejected foreign nationals, passport control, separation of Schengen and non-Schengen passengers, and the consequences of the enlargement of the EU and with it the Schengen area.

2.26 Many of the issues of Border Control are related to the Schengen Treaty, first signed by five countries in 1985, and creating a single external border for all signatory states. This therefore requires a degree of harmonisation of processes, systems and rules for the admission of non-Schengen nationals. However, the principle of harmonisation is not all-embracing, and individual states retain certain rights and controls, which result in a number of variations at a more detailed level.

2.27 Variations between countries exist in relation to visas for both entry into the Schengen area and for transit through airports in the states. Although there are 12 countries whose nationals require visas for entry into Schengen, some Schengen states have more on their list, the Netherlands for example having another six. There are also differences in the criteria for granting visas, their costs, and the time taken and process by which visas are obtained. However, there should be some harmonisation of visa prices in July 2005.

2.28 In contrast, there is greater uniformity between the states in the responsibility for handling foreign nationals who are denied entry into the Schengen area. In general, airlines are responsible for repatriation and some or all of the costs incurred, although there are variations. Penalties also exist for bringing a non-eligible foreign national to a Schengen entry port, but these vary, and in the Netherlands KLM has entered into a Memorandum of Understanding (MoU) with the Government which normally allows it to avoid payment of such penalties.

2.29 Passport control is a government responsibility in all countries. Details of performance standards (both target and achieved) are generally not available, and there appear to be very few Service Level Agreements (SLAs) in place to cover this area, which often creates a first impression of a country for a visitor. Automated Border Control (ABC) using biometrics is being introduced gradually in several countries to facilitate passport control. While Schiphol has had a distinct lead in this area with its Privium programme, development and growth of ABC has been handicapped by the lack of international standards.

2.30 The mandatory requirement to separate Schengen and non-Schengen passengers, as with associated issue of the separation of arriving and departing passengers, has affected airports differently. Schiphol, with its one-terminal

concept, appears to have incurred much higher modification costs than other airport operators.

2.31 The enlargement of the EU increases the number of signatories to the Schengen Treaty. However, each new signatory is allowed a period of several years to adapt its processes and infrastructure to conform to the Treaty's requirements. Therefore, a common feature in the states considered in this project, is that very little attention has so far been paid to the consequences of last year's enlargement of the EU.

Conclusions

2.32 Policies and processes in the area of Border Control are not fully harmonised, and this should prevent the establishment of a level playing field. However, the variations in general are unlikely to lead to significant inequalities and disadvantages for the Dutch air transport industry.

2.33 The Schengen states are not completely harmonised in their approach to visa requirements. This means there is no level playing field.

2.34 With 6 more countries (in addition to the Schengen common list), whose nationals require an airport transit visa to travel via Schiphol, the Netherlands scores in the middle of the other Schengen countries part of this benchmark (Italy the lowest and France the highest). The impact of this is potentially low, given the other elements that play a role (air fares, air services etc.) and the size of the markets to and from these 6 countries.

2.35 Prices of Schengen (airport transit) visa have been different from the different consulates (this difference should disappear from July 2005).

2.36 KLM stated that it appears that Dutch consulates are not always as active as their Schengen counterparts, despite an enlargement of Dutch presence abroad. However we have not been able to research this thoroughly to draw conclusions on this subject.

2.37 All Schengen countries are disadvantaged vis-à-vis the UK, since passengers travelling via the UK do not need an airport transit visa if they are in possession of a valid US or Canadian visa. This makes travelling via the UK more attractive vis-à-vis Schengen hubs.

2.38 Member States have different approaches in relation to rejected foreign nationals, since penalties to carriers vary. So far Dutch penalties have been in line with EU legislation and were lower than the UK and Belgium, which is an advantage for the Dutch industry, but shows there is not a level playing field.

Dutch and Belgium airlines are able to benefit from a Memorandum of Understanding (it lowers their cost).

2.39 There is a level playing field among Member States for the requirement for carriers to be financially responsible for returning rejected foreign nationals. However, until April 2005 when EU Directive 2001/51 is implemented in the Netherlands, carriers serving Schiphol have financial competitive advantages compared to some other airports: carriers do not pay for possible security escort and detention costs are not levied to airlines on a structural basis.

2.40 Schiphol is the only airport with a Service Level Agreement with the authorities for waiting time for passport control. Although not all waiting time targets are achieved at Schiphol, we have no insight in actual waiting times at other airports, so a direct comparison could not be made. From talking to airport operators, airlines and the government we do understand it is an area where improvements can be made.

2.41 There has been implementation of different technology across Member States, which will not have an impact on the level playing field or competitive position of airports. Schiphol is a frontrunner in the use of ABC, albeit with a small member group. Heathrow and Gatwick will soon make use of ABC for a wide public free of charge, which is expected to improve the passport control process significantly. Airports can create a competitive advantage by anticipating on the biometrics developments in relation to the future EU passports.

2.42 From an airport process point of view the UK benefits from the lack of an outbound border control. This makes the passenger journey through the airport easier and reduces cost.

2.43 The separation of Schengen and non-Schengen passengers has had a competitive impact, since there will have been different costs of modifying infrastructure at different airports. As a single terminal airport, Schiphol has had to make more adjustments to infrastructure and therefore incur significantly higher investments to facilitate separation, than have other airport operators.

2.44 No significant changes to infrastructure have been made at the benchmark airports as a result of last year's EU enlargement. Potential benefits and disadvantages will be similar at the different benchmark airports. In general the enlargement of Schengen countries is too far in the future (2007 earliest) for airports to have made clear plans to accommodate this.

2.45 The table below gives an overview of the competitive effects in relation to border control.

Exhibit 3: Competitive effects – border control

Border Control Area	Competitive effects	Comment
Visa	No level playing field, disadvantaging the Dutch industry	No harmonisation yet: different requirements for airport transport visa and until July 2005 different visa prices
Rejected Foreign Nationals	No level playing field to the advantage of the Dutch industry	Different penalties in Member States and less additional cost for airlines serving Schiphol
Passport Control	Competitive advantage for Dutch industry	Only country with SLA (but not always achieved)
	Competitive disadvantage for Dutch industry (from operational point of view)	Provision of ABC free of charge and lack of outbound border control in UK
Separation of Schengen and non-Schengen passengers	Competitive disadvantage for Dutch industry	Additional cost as a result of single terminal concept
Enlargement of EU	None	No significant changes to infrastructure have been made

Recommendations

2.46 Areas where the Government of the Netherlands might wish to consider initiatives to improve the position of the Dutch air transport industry include:

- Ease of obtaining visas from Dutch embassies and consulates, so increasing the chances of applicants using KLM and/or Schiphol for their journeys;
- Extension of MoUs covering rejected foreign nationals to other airlines using Schiphol;
- Encouragement of the different parties involved in passport control to better achieve the SLA;
- Encouragement of the agreement and use of international standards for ABC, to facilitate its wider introduction and potentially allowing Schiphol to capitalise on its knowledge and position in this area.

INTRODUCTIE (NEDERLANDS)

2.47 SH&E Limited was door het directoraat-generaal Luchtvaart van het Ministerie van Verkeer en Waterstaat gevraagd om een benchmark onderzoek uit te voeren op het gebied van beveiliging en grensbewaking. Deze studie maakt onderdeel uit van een serie projecten met als doel te analyseren of er voor de Nederlandse luchtvaartsector gelijke concurrentievoorwaarden zijn in Europa.

Onderzoeksdoel

2.48 Het doel van deze studie is het identificeren van de invloed van overheidsmaatregelen op de kosten en kwaliteit van het afhandelingsproces wat betreft de onderwerpen beveiliging en grensbewaking. SH&E was gevraagd om aan te geven of er redenen zijn voor wijzigingen in het overheidsbeleid. Voor de twee deelonderwerpen was hiertoe een aantal specifieke onderzoeksvragen geformuleerd. Deze studie beperkt zich tot passagiers en bagage; vracht valt buiten het aandachtsgebied.

Onderzoeksmethode

2.49 De studie is uitgevoerd in de herfst van 2004 en informatie is verzameld voor aantal luchthavens: Londen Heathrow en Gatwick, Parijs Charles de Gaulle and Orly, Frankfurt, Munchen, Madrid, en Amsterdam Schiphol. SH&E was ook gevraagd om, waar mogelijk, de luchthavens van Rome, Kopenhagen en Brussel in de studie te betrekken ('optionele' luchthavens). De partijen die benaderd zijn waren: luchthavens (exploitant), luchtvaartmaatschappijen, luchtvaartdiensten en andere overheidsorganen.

2.50 Met sommige partijen zijn interviews gehouden en andere partijen hebben schriftelijk informatie aangedragen. Echter, niet alle partijen zijn gehoord, wat vooral een gevolg was van de beschikbaarheid van executives, en de gevoelige en vertrouwelijke aard van de materie. Er was slechts zeer beperkte informatie beschikbaar voor financiële en service aspecten, wat de studie heeft vertraagd en een beperkende factor is geweest. Niettemin, de verzamelde informatie is voldoende robuust om conclusies te trekken en aanbevelingen te doen. Hoewel er raakvlakken zijn tussen beveiliging en grensbewaking zijn de aandachtsgebieden voor deze studie verschillend. De twee onderwerpen worden dan ook afzonderlijk behandeld in deze samenvatting.

BEVEILIGING

Wetgeving

2.51 Sinds de aanslagen van 11 september 2001 is beveiliging van luchtvaart

een zeer belangrijk onderwerp geworden. Voortbouwend op het bestaande raamwerk van ICAO en ECAC hebben overheden snel gereageerd door nieuwe wetgeving te implementeren. In december 2002 heeft de Raad van de Europese Unie Verordening 2320/2020 aangenomen. Het doel van bovengenoemde wetgeving is het harmoniseren van de beveiliging van de luchtvaart.

2.52 Verordening 2320/2020 heeft echter niet op alle aspecten van beveiliging betrekking. Verschillende lidstaten hebben aanvullende wetgeving aangenomen om nadere invulling te geven aan bepaalde zaken, zoals bijvoorbeeld de operationele verantwoordelijkheid en de financiering van beveiligingsmaatregelen.

Verantwoordelijkheid

2.53 Beveiliging in de luchtvaart heeft betrekking op een veelvoud aan maatregelen en verplichtingen, waaronder toegang tot beveiligd luchthavengebied, het screenen van personeel, observatie van de luchthaven, vliegtuigbeveiliging, screenen van passagiers en van ruim- en handbagage, en de scheiding van aankomende en vertrekkende passagiers. In aanvulling op deze basismaatregelen, is het mogelijk om tijdelijke maatregelen te nemen in geval van specifieke bedreiging. Voor deze maatregelen zijn over het algemeen minimum normen vastgelegd, hoewel de meeste lidstaten voor tenminste een aantal maatregelen hogere normen hebben geïmplementeerd.

2.54 Tussen de verschillende luchthavens en landen is er een zekere mate van variatie wat betreft operationele verantwoordelijkheid en uitoefening van beveiligingsmaatregelen die onderdeel uitmaken van deze studie. Er is echter geen concreet nadeel voor de Nederlandse luchtvaartsector. Indien de efficiëntie van beveiligingsmaatregelen en de wijze van financieren hetzelfde zijn, hebben verschillen in operationele verantwoordelijkheid geen invloed op de concurrentiepositie.

Financiële aspecten

2.55 De manier waarop de beveiliging van luchtvaart wordt gefinancierd verschilt sterk tussen de verschillende luchthavens (voor welke wij inzicht hebben gekregen). Over het algemeen komt het erop neer dat de luchtvaartindustrie betaalt voor de kosten van de beveiliging. In Spanje draagt de overheid voor een deel bij aan de financiering. Echter, de manier waarop de luchtvaartindustrie voor de beveiliging betaalt is verschillend.

2.56 Schiphol is de enige luchthaven met een heffing voor de beveiligingsdiensten ('security service charge'), die bedoeld is om alle beveiligingskosten te dekken. Deze heffing wordt afzonderlijk op het ticket van

de passagier getoond, naast de prijs van de vlucht en andere passagiersheffingen en havengelden. Op de meeste luchthavens worden beveiligingskosten opgenomen in andere luchthavengelden, en voornamelijk terugverdiend door een passagiersheffing (ook afzonderlijk op het ticket getoond) en/of landingsgelden (welke onderdeel uitmaakt van de prijs van de vlucht). De benadering in Nederland lijkt het meest transparant te zijn en geeft het meest duidelijke inzicht in de kosten van beveiliging.

2.57 Het gebrek aan informatie met betrekking tot de totale kosten van beveiliging voor de verschillende luchthavens, en de beperking van het vergelijken van verschillende kostenstructuren maken het onmogelijk om concrete conclusies te trekken wat betreft de efficiëntie van beveiligingsactiviteiten.

Situatie in de Verenigde Staten

2.58 Sinds 2001 heeft de Amerikaanse overheid zwaar geïnvesteerd in de beveiliging van de luchtvaart. Hoewel alle luchtvaartmaatschappijen die vluchten uitvoeren naar de Verenigde Staten voordeel hebben van de overheidsbijdrage aan luchthavenbeveiliging, profiteren alleen Amerikaanse luchtvaartmaatschappijen van de overheidsfinanciering van specifieke beveiliging voor luchtvaartmaatschappijen (zoals bijvoorbeeld de installatie van verstevigde cockpitdeuren). Als gevolg hiervan hebben Amerikaanse vervoerders een financieel voordeel ten opzichte van hun Europese concurrenten: op dit gebied is er geen 'level playing field'.

Conclusies

2.59 Er zijn verschillende factoren die bepalend zijn voor de luchthavens die passagiers als onderdeel van hun reis aandoen. De kwaliteit (en prijs) van het beveiligingsstelsel voor de passagier is daar één van, hoewel het waarschijnlijk één van de minder belangrijke factoren is. Niettemin, beveiliging speelt een rol.

2.60 De efficiëntie van het beveiligingsproces, wat betreft de diverse aspecten en in het bijzonder de inrichting van de luchthaven om te voldoen aan de wetgeving voor het scheiden van aankomende en vertrekkende passagiers, kan invloed hebben op de 'minimum connecting time', een zeer belangrijke parameter voor Schiphol en KLM. We zijn niet in staat geweest enige kwantitatieve informatie te verzamelen ten aanzien van de kwaliteit van beveiligingsdiensten.

2.61 In de context van concurrentie is de invloed van de Nederlandse overheid op beveiliging beperkt, aangezien de implementatie van beveiliging in Nederland een directe implementatie is van de EU Verordening 2320.

2.62 EU Verordening 2320 biedt lidstaten de mogelijkheid om meer strikte beveiligingsmaatregelen te nemen, ofwel door hogere normen te hanteren of door aanvullende maatregelen te nemen. Hogere normen worden gehanteerd in Frankrijk, Duitsland en in het bijzonder het Verenigd Koninkrijk; in Spanje en Nederland worden de bepalingen van Verordening 2320 als de norm genomen.

2.63 Op alle onderzochte luchthavens worden aanvullende beveiligingsmaatregelen genomen, zoals bijvoorbeeld de extra beveiliging voor vluchten met een hoog risico ('high risk flights'). Dergelijke maatregelen zijn op Schiphol niet substantieel anders vergeleken met andere luchthavens, hoewel in het Verenigd Koninkrijk significant meer maatregelen genomen lijken te zijn.

2.64 Schiphol heeft op dit moment een zeker financieel concurrentievoordeel in vergelijking met de luchthavens in Londen, waar reeds het 100% screenen van personeel van kracht is op alle locaties van de luchthaven waar gescreende ruimbagage aanwezig is. Dit voordeel zal op termijn verdwijnen, omdat vanaf 2009 deze maatregel op alle luchthavens van kracht zal zijn (volgens EU Verordening 118/204).

2.65 De controle van Schiphol's beveiligingsbudget door achtereenvolgens het Ministerie van Justitie en het Ministerie van Verkeer en Waterstaat is over het algemeen vergelijkbaar met procedures op andere luchthavens.

2.66 Op Schiphol zijn zowel de heffing voor de luchthavenbeveiliging, als de beveiligingsheffing van luchtvaartmaatschappijen (in aanvulling op de prijs van de vlucht) hoger dan het gemiddelde van de andere benchmark luchthavens voor lokale passagiers, maar onder het gemiddelde voor transferpassagiers. Deze laatste categorie passagiers is niet alleen belangrijker voor de Nederlandse luchtvaartsector in vergelijking met andere luchthavens, maar is ook een meer prijsgevoelig marktsegment dan lokale passagiers. SH&E's inschatting is dat, indien de heffingen op Schiphol het gemiddelde van de benchmark luchthavens zou hebben, het passagiersvervoer een marginale 0.1% hoger zou zijn vergeleken met het huidige aantal passagiers. Ook gezien het feit dat in het gemiddelde de heffingen op de luchthaven van Madrid zijn opgenomen, waar een zekere mate van overheidssteun wordt gegeven, concluderen we dat de Nederlandse luchtvaartsector geen concurrentienadeel heeft.

2.67 Schiphol is de enige luchthaven waar de kosten van de door de Verenigde Staten vereiste 'passenger profiling' voor de check-in (van Amerikaanse luchtvaartmaatschappijen) en de additionele screening aan de gate over alle luchtvaartmaatschappijen wordt verspreid³, onafhankelijk of deze wel of

³ De luchtvaartmaatschappij wordt door de luchthaven belast met de heffing, die deze heffing over het algemeen direct doorberekent aan de passagier, in aanvulling op de prijs van de vlucht.

niet naar Amerikaanse bestemmingen vliegen. Dit maakt Schiphol meer aantrekkelijk voor Amerikaanse maatschappijen dan de andere benchmark luchthavens, maar aan de andere kant ook minder aantrekkelijk voor andere luchtvaartmaatschappijen die hierdoor hogere kosten hebben.

2.68 Het vermengen van aankomende en vertrekkende passagiers is een belangrijk onderwerp voor de luchthavens van Frankfurt, Munchen, Heathrow (in mindere mate) en in het bijzonder voor Schiphol als gevolg van de inrichting van de terminal (geen gescheiden stromen voor vertrekkende en aankomende passagiers). EU wetgeving is van toepassing waar de Nederlandse overheid geen directe invloed op heeft. Dit heeft bijvoorbeeld geleid tot de nieuwe beveiligingscontrole voor transferpassagiers komende van buiten de EU met een EU bestemming (sinds december 2004).

2.69 Onderstaande tabel geeft een overzicht van de competitie effecten met betrekking tot beveiliging.

Exhibit 4: Competitie effecten beveiliging

Onderwerp	Competitie effecten	Comment
Luchthavenbeveiliging	Geen level playing field in het voordeel van de Nederlandse luchtvaartsector	Sommige luchthavens hebben meer intensieve screening van personeel
Vliegtuigbeveiliging	Geen level playing field in het nadeel van de Nederlandse luchtvaartsector	Spaanse overheid subsidieert voor een deel de vliegtuigbeveiliging
Screenen van passagiers en bagage	Level playing field	
Vermengen van aankomende en vertrekkende passagiers	Level playing field	Het one-terminal concept van Schiphol maakt het lastiger om dit te implementeren
Meer strikte veiligheidsmaatregelen: 1) normen	Geen level playing field in het voordeel van de Nederlandse luchtvaartsector	Andere landen hebben een aantal hogere normen
Meer strikte veiligheidsmaatregelen: 2) andere maatregelen	Geen level playing field in het voordeel van de Nederlandse luchtvaartsector	Verenigd Koninkrijk heeft andere aanvullende maatregelen genomen
Operationele verantwoordelijkheid	Level playing field	Verschillende partijen kunnen beveiligingsdiensten leveren voor dezelfde prijs en met dezelfde kwaliteit en service
Financiële aspecten	Geen concurrentie nadeel voor de Nederlandse luchtvaartsector	Indien de Nederlandse beveiligingsheffing vergeleken wordt met het gemiddelde van heffingen op de andere benchmark luchthavens
Verenigde Staten	Geen level playing field in het nadeel van de Nederlandse luchtvaartsector	Financiële bijdrage van de Amerikaanse overheid

Aanbevelingen

2.70 Hoewel er op de benchmark luchthavens verschillende benaderingen zijn voor de implementatie van de EU beveiligingswetgeving, heeft dit over het algemeen niet tot een ‘unlevel playing field’ geleid voor de Nederlandse luchtvaartsector. Indien de Nederlandse overheid beleidsinitiatieven wil ondernemen, dan zouden de volgende aanbevelingen in overweging genomen kunnen worden:

- Het voorstellen van verdergaande EU harmonisatie van de benadering en opzet van beveiligingsmaatregelen;
- Het stimuleren van meer financiële transparantie op EU niveau voor de opzet en heffing van beveiligingskosten;
- Het stimuleren op EU niveau om meer financiële steun te geven voor beveiligingskosten, zoals in Spanje en de Verenigde Staten plaatsvindt;
- Het ondersteunen van onderzoek en ontwikkeling om beveiligingsprocessen en technologie te verbeteren.

GRENSBEWAKING

2.71 Net als met het onderwerp beveiliging zijn er diverse invalshoeken voor grensbewaking. DGL heeft vijf onderwerpen gespecificeerd om aandacht aan te besteden: visa, toegangswegering van vreemdelingen, paspoortcontrole, het scheiden van Schengen en niet-Schengen passagiers en de gevolgen van uitbreiding van de EU en daarmee het Schengen gebied.

2.72 Het onderwerp grensbewaking heeft direct met het Schengen Verdrag te maken, dat in 1985 voor het eerst ondertekend was door vijf landen, en waarmee voor de betrokken lidstaten een enkele buitengrens is gecreëerd. Deze overeenkomst behoeft harmonisatie van processen, systemen en regels voor het toelaten van niet-Schengen burgers. Deze harmonisatie is echter niet allesomvattend, lidstaten houden dan ook bepaalde rechten en controle mechanismen, wat er toe leidt dat er verschillen bestaan op een meer gedetailleerd niveau.

2.73 Er bestaan verschillen tussen de Schengen landen met betrekking tot visa, zowel voor toegang tot het Schengen gebied als voor transfer toegang op de verschillende luchthavens⁴. Er zijn 12 gemeenschappelijke landen, waarvan de burgers een luchthaventransitvisum nodig hebben, hoewel sommige landen deze lijst met landen hebben uitgebreid. Nederland bijvoorbeeld heeft 6 extra landen

⁴ Deze transfer toegang wordt verkregen d.m.v. een zogenaamd ‘transitvisum’.

op deze lijst staan. Er zijn ook verschillen in de criteria voor het uitgeven van visa, de prijs van de visa, en de procestijd die het kost om een visum te verkrijgen. Vanaf juli 2005 gaat er verdere harmonisatie van de visum prijzen plaatsvinden.

2.74 Aan de andere kant is er meer harmonisatie te bespeuren tussen lidstaten met betrekking tot de verantwoordelijkheid voor vreemdelingen die de toegang tot het Schengen gebied geweigerd zijn. Over het algemeen zijn de luchtvaartmaatschappijen verantwoordelijk voor het terugvoeren van deze vreemdelingen, en worden deze vervoerders verantwoordelijk gemaakt voor tenminste een deel van de gemaakte kosten, hoewel er verschillen bestaan. Tussen de lidstaten bestaan er variaties in de opgelegde boetes. In Nederland heeft KLM een ‘Memorandum of Understanding’ (MoU) getekend met de overheid, wat het betalen van een boete kan voorkomen.

2.75 In alle landen is de paspoortcontrole een verantwoordelijkheid van de overheid. Gedetailleerde informatie met betrekking tot service targets en werkelijk behaalde resultaten zijn over het algemeen niet publiekelijk beschikbaar. Er zijn op dit gebied slechts in beperkte mate ‘Service Level Agreements’ overeengekomen, terwijl voor een bezoeker de paspoortcontrole vaak een eerste impressie geeft van een land. Om de paspoortcontrole te faciliteren wordt er op verschillende luchthavens steeds meer gebruik gemaakt van automatische grenscontrole, waarbij de biometrie een belangrijke rol speelt. Met het Privium programma heeft Schiphol een duidelijke voortrekkersrol gehad. Het gebrek aan international standaarden is echter een beperkende op de groei en ontwikkeling van automatische grenscontrole.

2.76 De verplichting om Schengen en niet-Schengen passagiers te scheiden, heeft verschillende gevolgen gehad voor de benchmark luchthavens, vergelijkbaar met het scheiden van aankomende en vertrekkende passagiers. Het is waarschijnlijk dat op Schiphol de modificatie kosten hoger zijn geweest om dit te realiseren dan op andere luchthavens.

2.77 De uitbreiding van de EU zal het aantal lidstaten van het Schengen Verdrag doen toenemen. Echter elke nieuwe lidstaat heeft een aantal jaar om de processen en infrastructuur in gereedheid te brengen om aan de vereisten van het Verdrag te voldoen. Het is dan ook gebleken dat de lidstaten, die onderdeel uitmaakten van deze studie, tot nu toe in beperkte mate aandacht hebben besteed aan de gevolgen van de uitbreiding van de EU in 2004.

Conclusies

2.78 Processen en beleid op het gebied van grensbewaking zijn niet volledig geharmoniseerd, wat zou betekenen dat dit het bestaan van een ‘level playing

field' belemmert. Over het algemeen is het echter niet waarschijnlijk dat de waargenomen verschillen zullen leiden tot significante ongelijkheden of nadelen voor de Nederlandse luchtvaartsector.

2.79 Er is geen harmonisatie onder de landen die het Schengen Verdrag ondertekend hebben wat betreft de visum vereisten. Dit betekent dat er geen 'level playing field' is.

2.80 Als het Nederlandse luchthaventransitvisum beleid beschouwd wordt, blijkt dat Nederland in het midden scoort vergeleken met de andere Schengen landen, die onderdeel uitmaken van deze benchmark. Nederland heeft 6 extra landen op de lijst van landen, waarvan de burgers dit visum nodig hebben om op Schiphol in transit te zijn (Italië heeft het minste en Frankrijk het meeste aantal landen op deze lijst). De gevolgen hiervan zijn betrekkelijk gering, omdat hier tal van andere elementen een rol spelen (tarieven, beschikbaarheid van vluchten e.d.) en de transfer markten voor deze specifieke landen relatief klein zijn op het totale aantal passagiers.

2.81 De waargenomen prijzen van luchthaven transitvisa zijn uiteenlopend voor de verschillende consulaten. Deze verschillen zouden moeten verdwijnen vanaf juli 2005, wanneer lidstaten dienen te voldoen aan aanvullende EU wetgeving.

2.82 Hoewel de Nederlandse consulaire aanwezigheid in het buitenland de laatste jaren is versterkt, is KLM de mening toegedaan dat de Nederlandse consulaten niet altijd voldoende actief zijn vergeleken met consulaten van andere Schengen landen. Wij hebben dit niet voldoende kunnen onderzoeken om op dit gebied concrete conclusies te trekken.

2.83 Alle Schengen landen hebben een zeker nadeel vis-à-vis het Verenigd Koninkrijk, aangezien alle passagiers die via het Verenigd Koninkrijk reizen en in het bezit zijn van een geldig visum voor de Verenigde Staten of Canada geen luchthaven transitvisum nodig hebben. Op dit punt is reizen via het Verenigd Koninkrijk aantrekkelijker vergeleken met Schengen hubs.

2.84 De EU lidstaten hebben verschillende boete systemen geïmplementeerd voor vervoerders die vreemdelingen aanbrengen die de toegang geweigerd wordt door de autoriteiten. De boetes in Nederland zijn overeenkomstig de Europese wetgeving en zijn lager in het Verenigd Koninkrijk en België, wat in het voordeel van de Nederlandse luchtvaartsector is maar ook aangeeft dat er geen 'level playing field' is. Daarnaast profiteren Nederlandse en Belgische luchtvaartmaatschappijen van de afgesloten MoUs (reducereert kosten).

2.85 Er is een 'level playing field' in de EU lidstaten wat betreft verplichtingen ten aanzien van het naar herkomst terugvoeren van vreemdelingen die de toegang geweigerd is. Tot april 2005, wanneer EU Richtlijn 2001/51 geïmplementeerd dient te zijn, hebben luchtvaartmaatschappijen die op Schiphol vliegen een financieel concurrentievoordeel vergeleken met een aantal andere luchthavens: zij hoeven voor dergelijke vreemdelingen niet op een structurele basis de kosten te vergoeden van mogelijke beveiligingsescorte en detentie.

2.86 Schiphol is de enige luchthaven die een 'Service Level Agreement' (SLA) met de overheid is overeengekomen voor de wachttijden bij de paspoortcontrole. Niet alle targets worden gehaald, maar bij gebrek aan informatie over gerealiseerde wachttijden op andere luchthavens, kunnen we geen directe vergelijking maken. Vanuit de gesprekken die gevoerd zijn met de betrokken partijen begrepen we dat er nog ruimte is om verbeteringen aan te brengen.

2.87 Voor automatische grens controle worden verschillende soorten technologie gebruikt door de diverse lidstaten. Dit heeft echter geen invloed op het 'level playing field' of op de concurrentiepositie van luchthavens. Schiphol heeft een leidende rol gehad in het de implementatie en het gebruik van automatische grens controle, hoewel het aantal passagiers dat hier momenteel gebruik van maakt relatief klein is. Op Heathrow and Gatwick zal in 2005 nog gebruik gemaakt gaan worden van een biometrisch systeem waar voor de passagiers geen kosten aan verbonden zijn (project IRIS wordt gefinancierd door de Britse overheid). De verwachting is dat dit een enorme wachttijdreductie teweeg zal brengen. Luchthavens kunnen een concurrentievoordeel creëren indien ze er in slagen om te anticiperen op ontwikkelingen in de biometrie met betrekking tot de toekomstige EU paspoorten.

2.88 Vanuit de invalshoek van het luchthavenproces heeft het Verenigd Koninkrijk een voordeel, aangezien het geen paspoortcontrole heeft voor vertrekkende passagiers. Dit resulteert in lagere kosten en maakt het luchthavenproces voor de passagier aanzienlijk makkelijker.

2.89 De verplichting om Schengen en niet-Schengen passagiers te scheiden heeft in zekere mate een competitie effect gehad, omdat er uiteenlopende kosten zijn gemaakt op de diverse luchthavens om dit te realiseren. Met het one-terminal concept en de inrichting van de terminal heeft Schiphol meer dan andere luchthavens moeten investeren in het aanpassen van de infrastructuur.

2.90 Op de onderzochte luchthavens zijn er geen indrukwekkende infrastructurele aanpassingen gemaakt als gevolg van de recente uitbreiding van de EU. Het is te verwachten dat mogelijke voor- of nadelen vergelijkbaar zullen

zijn voor deze luchthavens. Over het algemeen is de uitbreiding van de Schengen landen, wat niet eerder dan 2007 zal plaatsvinden, nog te ver weg voor de diverse luchthavens om concrete plannen te maken om deze uitbreiding te faciliteren.

2.91 De onderstaande tabel geeft een overzicht van de competitie effecten met betrekking tot grensbewaking.

Exhibit 5: Competitie effecten grensbewaking

Onderwerp	Competitie effecten	Opmerking
Visum	Geen 'level playing field' in het nadeel van de Nederlandse luchtvaartsector	Nog geen harmonisatie: verschillende vereisten voor luchthaven transitvisa en tot juli 2005 verschillende prijzen voor visa
Weigering toegang van vreemdeling	Geen 'level playing field' in het voordeel van de Nederlandse luchtvaartsector	Verschillende boetestructuren in lidstaten en mogelijk minder kosten voor luchtvaartmaatschappijen op Schiphol
Paspoortcontrole	Concurrentievoordeel voor de Nederlandse luchtvaartsector	Enige land met SLA (hoewel target niet altijd gehaald)
	Concurrentie nadeel voor de Nederlandse luchtvaartsector (vanuit operationeel perspectief)	Gebruik van automatische grens controle zonder kosten voor passagier of luchtvaartmaatschappij en geen paspoortcontrole voor vertrekkende passagiers in Verenigd Koninkrijk
Scheiden van Schengen en niet-Schengen passagiers	Concurrentie nadeel voor de Nederlandse luchtvaartsector	Extra kosten als gevolg van inrichting van de terminal
Uitbreiding van EU	Geen	Geen significante infrastructurele aanpassingen gemaakt

Aanbevelingen

2.92 Indien de Nederlandse overheid beleidsinitiatieven wil ondernemen op het gebied van grensbewaking, dan zouden de volgende aanbevelingen in overweging genomen kunnen worden om de positie van de Nederlandse luchtvaartsector te verstevigen:

- Het beschikbaar maken van MoUs ten aanzien van geweigerde vreemdelingen voor meer luchtvaartmaatschappijen (in aanvulling op KLM);
- Waar mogelijk en gepast, het vergemakkelijken van het verkrijgen van visa op Nederlandse consulaten en ambassades, waardoor de concurrentiepositie van Nederlandse luchtvaartmaatschappijen en Schiphol zou kunnen toenemen;
- Het aansporen van de verschillende partijen betrokken bij de

paspoortcontrole op Schiphol om de afgesproken targets beter te halen;

- Het stimuleren van internationale afspraken over en het gebruik van internationale standaarden voor automatische grenscontrole, om een breder gebruik te faciliteren en mogelijk voor Schiphol om de kennis en reputatie op dit gebied te kapitaliseren.

INTRODUCTION

3.1 In this section, we describe the regulatory context of airport security, and outline the contents and findings of previous studies on security. To provide context, we also present some relevant statistics on passenger traffic. Border control regulations are in the main the domain of each sovereign government, with the exception of a number of multi-lateral agreements designed to facilitate cross-border travel between neighbours, the Schengen Agreement being the largest and most important of these agreements in Europe. We discuss border control legislation further in Section 6.

3.2 The provisions made by airports for security measures are largely determined by international regulations. Annex 17 of the International Civil Aviation Organization (ICAO) contains mandatory regulations and recommendations. ECAC has laid down recommendations for its member states in document 30. Additionally, the European Union (EU) has issued requirements in relation to security through Regulation 2320/2002.

ICAO

3.3 Annex 17 of the International Civil Aviation Organization (ICAO) contains the mandatory regulations and recommendations in relation to security. One of the objectives of EC Regulation 2320 (discussed in detail below) is to provide a basis for a common interpretation of the related provisions of the Chicago Convention, in particular Annex 17. Regulation 2320 captures all elements on Annex 17, so that our discussion of this Annex can be limited to noting its existence.

ECAC

3.4 The European Civil Aviation Conference (ECAC), as an intergovernmental organisation, has as an objective the promotion of the continued development of a safe, efficient and sustainable European air transport system. ECAC seeks to harmonise civil aviation policies and practices amongst its current 41 Member States. ECAC issues resolutions, recommendations and policy statements which are brought into effect by its Member States. ECAC has laid down recommendations in relation to security for its member states in Document 30. Again, the provisions of this Document are fully reflected in Regulation 2320.





EU REGULATION

EU Regulation 2320/2002

3.5 EU Regulation 2320/2002 of 16 December 2002 was drafted partly in response to the events of 11 September 2001. It aims to establish common rules in the field of civil aviation security. The Regulation states that the establishment and application of appropriate provisions in the field of air transport policy cannot be sufficiently achieved by the Member States and can therefore be better achieved on EU level. The Regulation applies to any commercial airports in the Member States, although certain exemptions are possible at smaller airports.

3.6 The main objective of the Regulation is to establish and implement appropriate measures in order to prevent acts of unlawful interference against civil aviation.

3.7 In order to achieve the objectives of this Regulation, each Member State should adopt a National Aviation Security Programme (NASP), as well as corresponding quality control and training programmes. Each Member State must designate a single appropriate authority responsible for the coordination and monitoring of the implementation of aviation security programmes.

3.8 Under the quality control programme the airports in the Member States should be regularly audited under the responsibility of the authority co-ordinating the aviation security programmes. The European Commission is also expected to conduct inspections. Article 8 allows inspection reports to be secret and not in the public domain, since some security measures and specifications for the quality control programme are clearly highly sensitive pieces of information.

3.9 Article 4.1 states that the rules are based on the recommendations contained in ECAC's Document 30, and are laid down in the Annex to the Regulation. This Annex is confidential.

3.10 Member States also have the possibility to apply more stringent measures than laid down in the Regulation. However, Member States have the obligation to inform the Commission about this. We understand from the Commission that this information is confidential, that not all Member States have informed the Commission of these measures, and that in some cases those that have, have not provided sufficient detail.

3.11 Article 11 requires the Commission to publish each year a report on the implementation of the Regulation and on the situation in the Community as far as aviation security is concerned. This has not happened and the Commission informed us that the first report is expected to be published at the end of 2004 and

will reflect both 2003 and 2004.

3.12 The Annex to the Regulation covers 12 different areas where security measures needed to be taken. These areas are shown in the exhibit below, and range from airport security to guidelines for equipment. It does not cover in-flight security measures.

Exhibit 6: Annex to Regulation 2320

Section ¹	Area	Section	Area
2	Airport security	8	Air carrier mail and materials
3	Aircraft security	9	Air carrier catering
4	Passenger and cabin baggage	10	Air carrier cleaning
5	Hold baggage	11	General aviation
6	Cargo, courier and express parcels	12	Staff recruitment and training
7	Mail	13	Guidelines for equipment

¹ Section 1 contains definitions
Source: Regulation 2320

Other EU Regulations

3.13 After EU Regulation **2320/2002** was published a number of regulations have followed, clarifying, expanding or amending Regulation 2320. These regulations are discussed below in chronological order.

3.14 EU Regulation **622/2003** of 4 April 2003 lays down measures for the implementation of the common basic standards on aviation security. The Regulation requires Member States to notify the Commission about airports to be exempted from security measures laid down in Regulation 2320/2002 due to their low commercial activity. It also provides for the implementation of alternative measures to the separation of departing and arriving passengers for screening purposes as provided for in Regulation 2320/2002. The norms as laid down in the Annex of this regulation are confidential.

3.15 EU Regulation **1217/2003** of 4 July 2003 lays down common specifications for national civil aviation security quality control programmes. Three types of measures are covered by the Regulation: the national quality control programmes; the methodology for audits to be carried out; and the qualification criteria for auditors. On this basis, Member States will be in a position to develop common methods for monitoring compliance with the security rules. Inspectors will be employed by the European Commission or will be national auditors mandated by the Commission to monitor the application of the EU Regulation 2320/2002 on civil aviation security.

3.16 EU Regulation **1486/2003** of 22 August 2003 and Regulation **68/2004** of 15 January 2004 are on procedures for conducting Commission inspections in civil aviation security. These Regulation amend the Annex to the Regulation 622/2003, laying down a list of articles that are prohibited from being carried by passengers onto all flights from European Union airports. The list is not deemed to be exhaustive. The new legislation also requires national authorities to inform passengers of the content of this list before the check-in procedure is completed.

3.17 EU Regulation **849/2004** of 29 April 2004 amends Regulation 2320/2002 establishing common rules in the field of civil aviation security. This Regulation makes a number of technical corrections to the framework Regulation 2320/2002. It also introduces the concept of ‘demarcated areas’, which are defined areas, separated from the rest of an airport’s premises, exclusively for the use of general aviation and small commercial aircraft. ‘Demarcated areas’ may be exempt from the security requirements of the framework Regulation, and instead be subject to national security measures for the purpose of ensuring an adequate level of security. This provision avoids a disproportionately heavy investment in security being required when the derived benefit of enhancing security through this investment is relatively low.

3.18 Regulation **1138/2004** of 21 June 2004 establishes a common definition of critical parts of security restricted areas, access to which must be controlled by screening all staff for prohibited articles. Over a five year period the following elements should be included in these critical parts:

- 1 July 2004: the terminal building beyond the passenger screening point;
- 1 January 2006: aircraft, buses, baggage carts or other means of transport, walkways and air bridges, insofar as screened departing passengers are present;
- 1 July 2009: any part of an airport through which screened departing hold baggage passes is held, insofar as the hold baggage has not been secured.

PREVIOUS STUDIES

AAE

3.19 In November 2003 Amsterdam Aviation Economics (AAE) completed a study entitled ‘Government influence on aeronautical charges’. This study was commissioned by DGL. AAE analysed different charges: airport charges such as landing, passenger service, parking, noise and security service charge (otherwise referred to as ‘security charge’); and government charges such as noise and ATC charges.

3.20 The study showed the significant increase in the security charges from 1999 to 2003 at a number of benchmark airports. More generally, it was concluded that for the same period the aeronautical charges at Schiphol Airport have seen the highest growth among the benchmark airports. However, if all costs are added up only Frankfurt appeared to be cheaper than Schiphol and the London and Paris airports were more expensive based on AAE's calculations⁵.

3.21 The benchmark exercise showed that price levels at Schiphol are competitive despite recent increases. However, it was concluded that the disproportional increase of the cost at Schiphol has had consequences for the level playing field of the home carriers at Schiphol, especially for KLM, since its business model is dependent on transfer traffic for which competition is strong and margins are small.

3.22 AAE investigated security cost and provisions at a number of European airports. The report concludes that there are important differences in the way cost are recovered. The security costs for the airports that were part of the benchmark sample were estimated to be between € 100 and € 140 million in 2002. The report noted that a specific security charge was levied only at Frankfurt and Schiphol, whereas in Paris these costs were financed through passenger taxes and in London through passenger service charges. AAE stated that these different financing methods mask the insight in the influence from government on these fees and charges.

3.23 Moreover, it also concluded that the security costs at Schiphol and Frankfurt were fully carried by the users. This could not be concluded for Paris, as the financial system appeared to be unclear.

European Commission

3.24 The European Commission (EC) appointed consultants to conduct a study of security costs at airports in the European Union. The final report has only recently been published (mid December), but we did have access to the draft summary of the report when we started our study. Where relevant we have used information from this draft summary. The data in this report reflects the year 2002.

3.25 The objective of this study was to provide the Commission with accurate information on the status of financing civil aviation security in 15 Member States⁶, plus Iceland, Norway and Switzerland; and to contribute to an objective

⁵ This calculation is based on a representative fleet for Schiphol and its application to other airports.

⁶ The study commenced prior to the expansion of the EU to 25 states.

decision on whether specific legislation at EU level is necessary and desirable to promote harmonisation in methods of financing.

3.26 Without going into detail, the study differentiates between states with centralised or decentralised models. In the former model, the main security activities are primarily the responsibility of the government (such as Germany and Spain) and in the latter model the main security activities are primarily the responsibility of the airport operator.

3.27 The draft summary report available to us contained estimated operating results for each state on a government, airport operator and airline level. It is clear from the study that there are differences in policy towards security funding within Europe. However, it does not provide detailed information by airport about what kind of security activities the different parties undertake and by whom this is financed. Therefore, the study does not allow for a precise comparison from a competition or level playing field point of view.

ACI

3.28 In 2003, Airports Council International (ACI) Europe completed a study into the financing of security costs in Europe. The report notes that the European airports face a major challenge in implementing and financing the high security measures. ACI expressed the need for a harmonised approach to financing of security measures. The report discusses in some detail the responsibility and method of financing of security for some 20 European countries.

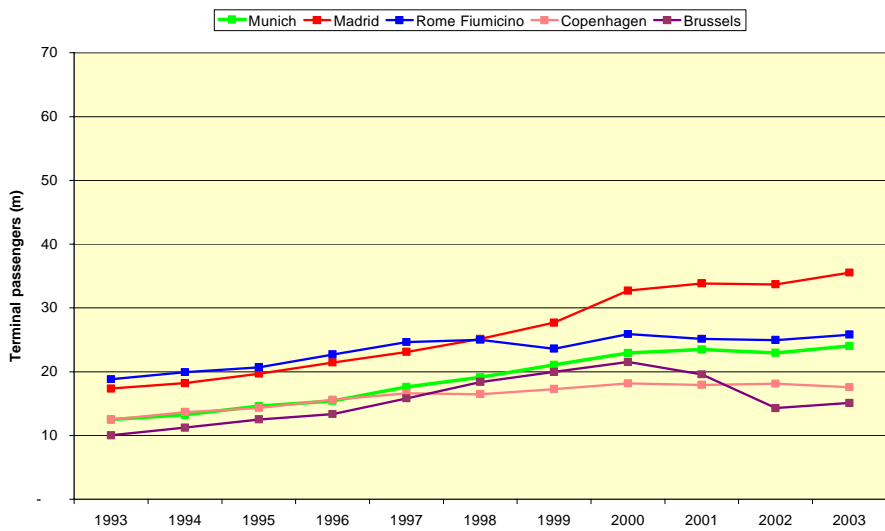
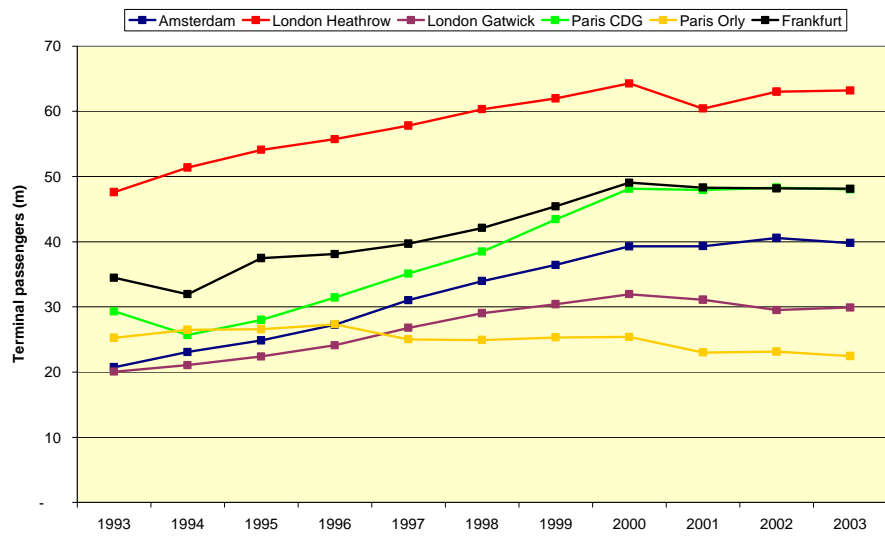
Schiphol Group

3.29 At the same time as the AAE's benchmark study, the Schiphol Group carried out a study into security costs and revenues at Schiphol and a number of other large European airports. We have made use of this information for this study.

TRAFFIC CHARACTERISTICS

3.30 Terminal passenger development at the sample of airports selected for comparison is given in the exhibit below. London Heathrow was the busiest passenger airport (63.2 million passengers) in 2003, followed by Frankfurt (48.1 million), Paris Charles de Gaulle (48.0 million), and Amsterdam ranked fourth (39.8 million). Brussels had the lowest passenger traffic (15.1 million). Average annual growth for Schiphol has been 6.7% from 1993 to 2003, significantly higher than the average for the benchmarked airports (4.0%).

Exhibit 7: Passenger development, 1993 to 2003



Source: ACI Europe

3.31 The percentage of transfer passengers varies from one airport to another. The exhibit below demonstrates this, although this information is not available for all airports. Frankfurt has the largest proportion of transfer passengers with 54%, followed by Copenhagen (42%) and Schiphol (41%).

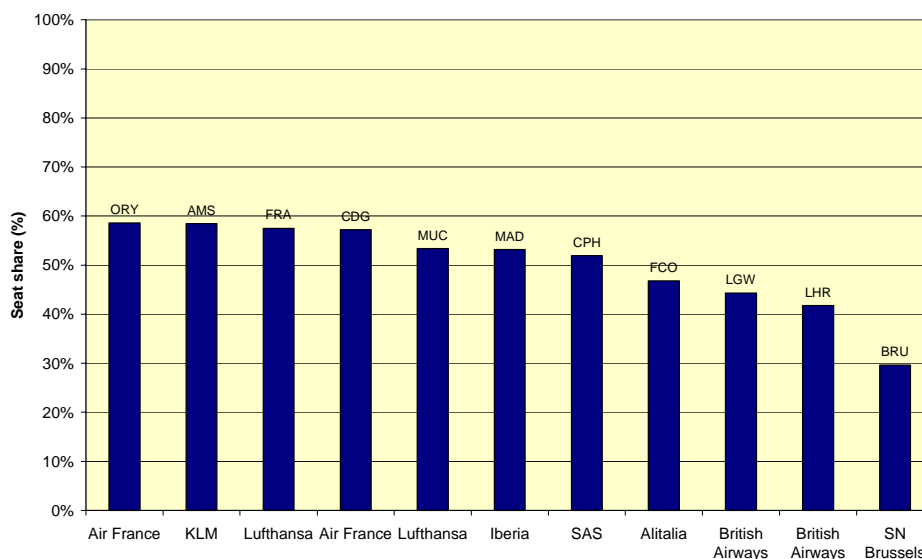
Exhibit 8: Transfer traffic

Airport	Proportion of transfer traffic	Year
Frankfurt	54%	2003
Copenhagen	42%	2003
Amsterdam	41%	2003
London Heathrow	33%	2000
Paris airports (Charles de Gaulle and Orly)	33%	2003
Munich	31%	2003
Rome Fiumicino	29%	2003
Brussels	9%	2003
Madrid	Not available	

Source: ACI, ADR, UK CAA

3.32 The share of weekly departing seats for the home carrier ranges from 59% for Air France at Paris Orly, to 30% for SN Brussels at Brussels airport (in June 2004); with an average of 50%. KLM's share is 58% at Schiphol, excluding its partners such as Northwest and Air France.

Exhibit 9: Share of home carrier



Source: Official Airline Guide June 2004 and SH&E analysis

3.33 From the Schiphol Statistical review 2003 we have derived the breakdown of traffic as shown in the table below. In 2003 there were 23.5 million O&D (origin and destination) passengers⁷ of which the majority travelled within Europe (18.3 million). Transfer passengers were 16.3 million in total, representing 41% of traffic. Terminal passengers totalled 39.8 million.

⁷ i.e. passengers who start or end their air journey at Schiphol, as opposed to transfer passengers changing flights there.

Exhibit 10: Schiphol traffic segments

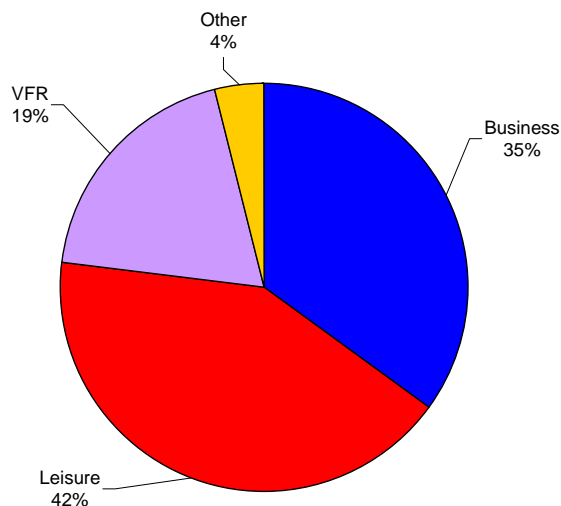
Segment		Passengers (million)	% of total
O&D	Europe	18.3	45.8%
	Intercontinental	5.2	12.9%
	Total	23.5	58.7%
Transfer	Europe	9.4	23.5%
	Intercontinental	6.9	17.4%
	Total	16.3	40.9%
Terminal		39.8	99.6%
Transit		0.2	0.4%
Total		40.0	100.0%

Source: Schiphol Statistical Annual Review 2003

3.34 The share of passengers travelling with low cost carriers in the total passenger transport increased from 7.3% in 2002 to 9.5% in 2003, i.e. almost 4 million passengers in 2003. EasyJet and Basiqair accounted for 84% of this traffic.

3.35 The chart below shows the composition of traffic. The largest single component of Schiphol's traffic was travelling for leisure purpose (42%), 35% was travelling for business, and 19% was VFR (Visiting Friends and Relatives) traffic. Leisure traffic is more price sensitive than business traffic.

Exhibit 11: Composition of traffic



Source: Schiphol Statistical Annual Review 2003

4

SECURITY COMPARISONS

INTRODUCTION

4.1 In this Section, we discuss several security aspects at the airports which are being compared as part of this benchmark study. We mainly look at the responsibilities for security and the method of financing of security measures. We also limit ourselves to consideration of the requirements for passenger security (including the security of their baggage).

4.2 We have consulted three categories of stakeholders (civil aviation authorities, airport operators and airlines) in order to complete this Section. We present the information for the airports for which we have received the relevant information.

4.3 ICAO defines security as "...a combination of measures and human and material resources intended to safeguard civil aviation against acts of unlawful interference...". It is important to realise that security is not the same as safety. Activities to ensure that a flight is operated safely are not considered to be security activities. Other activities that are not included in security checks are those related to border control. This includes passport control, custom control and related activities like armed protection⁸. Aspects of border control are discussed further in Section 6.

NATIONAL IMPLEMENTATION

4.4 EU Regulation 2320 is a regulation and therefore needs no enabling national legislation in any Member State. However, the regulation does not deal directly with the responsibility of the security activities, so that Member States need national legislation to assign responsibilities. The exhibit below shows the national legislation referring to security.

Exhibit 12: National legislation

Country	National security legislation
France	Code de l'Aviation Civile (amended 2002)
Germany	Federal Aviation Security Act (to be published Dec 2004)
Netherlands	Article 6 of the Police Act (1993) and Article 37 of the 'Luchtvaartwet'
Spain	Spanish law of Air Security 21/2003
United Kingdom	Aviation Security Act 1982, as amended by the Aviation and Maritime Security Act 1990

⁸ Source: DGL, Benchmark government influence on aeronautical charges, November 2003

4.5 Regulation 2320 triggered Member States to amend the national legislation. This was the case in Germany as recently as October 2004. In addition to amending legislation to comply with Regulation 2320, Member States have also made changes not directly resulting from Regulation 2320. The exhibit below gives an overview of such changes. For example, in the Netherlands the responsibility for undertaking security activities transferred to the airport operator. In Germany a law enforced air marshal programme was established. In France there is national provision for agreements with all companies within the security restricted area.

Exhibit 13: Changes in legislation

Country	Main changes in legislation (not directly resulting from 2320)
France	Requirement for all companies within the security restricted area to comply with specific security measures
Germany	Annual background check
	Law enforced air marshal programme
	Transfer of responsibility to screen staff upon entering security restricted area from authorities to airports and airlines
	Additional screening for passengers and carry-on baggage and screening of transfer hold baggage to US and UK
Netherlands	Responsibility for undertaking of all security activities transferred from Ministry of Justice to the airport operator
	Provision for temporary security measures
Spain	None
United Kingdom	A number of Directions have been issued including SDAM (Single Direction to Aerodrome Managers) and SDAO (Single Direction to Aircraft Operators) as well as numerous variation Directions to the industry
	Anti-terrorism, Crime and Security Act 2001

Source: SH&E analysis

4.6 We understand that the UK was the only Member State that already complied with EU 2320 before it was introduced in December 2002 as the standards of aviation security already exceeded those of the Regulation. It has introduced further Directions and the Anti-terrorism, Crime and Security Act 2001.

4.7 Each Member State needs to adopt a National Aviation Security Programme (NASP), a corresponding quality control programme and a training programme. It is necessary for each Member State to designate a single appropriate authority responsible for the coordination and monitoring of the implementation of aviation security programmes. This is a government responsibility, where national civil aviation authority, Ministry of Transport, Ministry of Interior and, in the Netherlands, the Ministry of Justice are involved.

The NASPs are confidential documents.

4.8 In the Netherlands the Ministry of Justice is responsible, in consultation with the Ministry of Transport, Public Works and Water Management, for the legislation and standards of security of civil aviation.

4.9 Some Member States already had a National Aviation Security Programme in place prior to EU Regulation 2320, and have amended it accordingly.

Exhibit 14: Status of NASPs

Country	Implementation	Party responsible	In force
Belgium	Yes	Civil Aviation Authority	1991
Denmark	Yes	Civil Aviation Authority	1994
France	Yes	Ministry of Transport	Jan 2002
Germany	Yes	Ministry of Transport & Ministry of Interior	2002
Italy	Yes	Civil Aviation Authority & Ministry of Interior	1991
Netherlands	Yes	Ministry of Justice	Jan 1996
Spain	Yes	Civil Aviation Authority	Feb 2002
United Kingdom	Yes	Department for Transport	1982

Source: SH&E analysis

4.10 A particular concern for airlines is that a security programme needs to be drafted and approved by the national authority for each country to which they fly. Since the format for every Member State is different, airlines have to submit different programmes to the different Members States. Since the required information is very detailed, this is often a time consuming process for the airlines. While Regulation 2320 tried to achieve European harmonisation for security, in fact, it has achieved the opposite for airlines in this respect.

4.11 Changes in responsibilities for the provision of security measures appear to have taken place only in Germany and the Netherlands. In Germany, the government is no longer responsible for screening staff for access to security restricted area, and as mentioned above, in the Netherlands responsibilities to provide security measures shifted to the airport operator. The security activities that are subcontracted are listed below as well (mainly passenger and baggage screening in France, Germany and the Netherlands). It appears that staff screening to the security restricted areas is subcontracted at Schiphol and the Paris airports.

Exhibit 15: Change in responsibilities

Country	Airport	Changes in responsibilities	Activity subcontracted to private company
Denmark	Copenhagen	Not available	Not allowed under Danish law
France	Charles de Gaulle	No, same parties are responsible	Passenger and baggage screening Screening of staff
	Orly	No, same parties are responsible	Passenger and baggage screening Screening of staff
Germany	Frankfurt	Yes, airport operator becomes responsible for screening of staff security restricted area	Government subcontracts passenger and baggage screening (to Fraport)
	Munich	Yes, airport operator becomes responsible for screening of staff security restricted area	Government subcontracts passenger and baggage screening (to local government)
Netherlands	Amsterdam	Yes, security responsibilities have transferred to airport operator (April 2003)	Passenger and baggage screening
			Screening of staff Surveillance airside
Spain	Madrid	No, but responsibilities have been established in writing	Passenger and baggage screening and airside surveillance
United Kingdom	Gatwick	No, same parties are responsible	Hold baggage screening
	Heathrow	No, same parties are responsible	Hold baggage screening

Source: SH&E analysis

EU OBLIGATIONS

4.12 The Annex to Regulation 2320 covers 12 areas where security measures need to be taken by the Member States. For each of the areas related to passengers and/or their baggage, we discuss responsibility (for undertaking and supervision of security activities) and method of financing. As may be seen, the responsibility for the provision of security services varies from one country to the other, as does the method of financing.

Airport security

Access to restricted areas and terminal surveillance

4.13 Under Section 2.2.1 in the Annex the access to security restricted areas and other airside areas shall be controlled at all times to ensure that no unauthorised

person enters these areas and that no prohibited articles can be introduced into security restricted areas or aircraft.

4.14 Section 2.2.2 states that surveillance shall be maintained over all terminal areas accessible to the public; terminals shall be patrolled and passengers and other persons kept under surveillance by security staff.

4.15 The exhibit below shows the parties that undertake airport security activity, the parties supervising it and the method of financing of these Section 2 activities (airport security).

Exhibit 16: Airport security (1/2)

Airport	Party undertaking	Party supervising	Method of financing	Party paying
2.2.1 Access to security restricted areas				
Charles de Gaulle	Airport operator	State	Airport tax	Passenger through ticket
Orly	Airport operator	State	Airport tax	Passenger through ticket
Frankfurt	Airport operator	State Ministry of Transport (Land Hessen)	Airport charges (mainly)	Passenger (passenger charge) or airline
Munich	Airport operator	Government of Bavaria	Airport charges	Passenger (passenger charge) or airline
Amsterdam	Airport operator	KMAR	Security charge	Passenger through ticket
Madrid	Airport operator	Guardia Civil	Security charge + government	Passenger through ticket + government
Gatwick	Airport operator	Airport operator	Airport charges	Passenger through ticket (passenger charge)
Heathrow	Airport operator	Airport operator	Airport charges	Passenger through ticket (passenger charge)
2.2.2a Terminal surveillance landside				
Charles de Gaulle	National Police (Police Aux Frontieres)	State	Government	Government
Orly	National Police (Police Aux Frontieres)	State	Government	Government
Frankfurt	Federal Border Police and airport operator	Ministry of Interior and State Ministry of Transport (Land Hessen)	Government and airport charges	Government + passenger (passenger charge) or airline
Munich	Federal Border Police	Federal government and Government of Bavaria	Government, partly aviation security charge	Government + passenger through ticket

Airport	Party undertaking	Party supervising	Method of financing	Party paying
Amsterdam	KMAR and airport operator	Government (Ministry of Justice)	Government + security charge	Government + passenger through ticket
Madrid	National Police	State	Security charge + government	Passenger through ticket + government
Heathrow	Police	Police/ airport operator/ other Control Authority Personnel	Airport charges	Passenger through ticket (passenger charge)
Gatwick	Police	Police/ airport operator/ other Control Authority Personnel	Airport charges	Passenger through ticket (passenger charge)
2.2.2b Terminal surveillance airside				
Charles de Gaulle	Gendarmerie des Transports Aériens	State	Government	Government
Orly	Gendarmerie des Transports Aériens	State	Government	Government
Frankfurt	Federal border police	Ministry of Interior and State Ministry of Transport (Land Hessen)	Government and airport charges	Government + passenger (passenger charge) or airline
Munich	Federal border police	Federal government and Government of Bavaria	Government, partly aviation security charge	Government + passenger through ticket
Amsterdam	KMAR and airport operator	Government (Ministry of Justice)	Government and security charge	Government + passenger through ticket
Madrid	Guardia Civil/ National Police	State	Security charge + government	Passenger through ticket + government
Heathrow	Police	Police/ airport operator/ other Control Authority Personnel	Airport charges	Passenger through ticket (passenger charge)
Gatwick	Police	Police/ airport operator/ other Control Authority Personnel	Airport charges	Passenger through ticket (passenger charge)

Source: SH&E analysis

4.16 Access to security restricted areas is the responsibility of the airport operator (subcontracted in the Netherlands). Only in Madrid does the airport operator recover the cost from more than airport charges (i.e. government support).

4.17 Terminal surveillance, landside and airside is the responsibility of the national or local police and at some airports police are assisted by the airport operator. The government finances this, although the security charge at Madrid is used to finance the budget of the Guardia Civil and the airlines in the UK contribute to the budget of the Metropolitan Police, the police force responsible

for the London area.

Staff screening

4.18 Section 2.3 states that all staff with items carried shall be screened before being allowed access into security restricted areas. One year after the introduction of the Regulation all staff with items carried should have been screened before being allowed access into the critical parts of security restricted areas. The Commission has adopted a common definition of the critical parts of security restricted areas (as discussed in Section 3).

4.19 The airport operator is undertaking staff screening, although at Madrid, Gatwick and Heathrow the Guardia Civil and the airlines are involved. Costs are recovered through airport charges and in Madrid the government (tax payer) contributes as well. Whereas in the Netherlands the security charge is used for recovering cost for staff screening, for example at Munich costs are recovered from general airport charges. The difference is that in Amsterdam passengers pay directly through their ticket⁹, while in Germany it is the airline that pays the airport charges and therefore the passenger pays indirectly.

Airside surveillance

4.20 Section 2.4 in the Annex states that airside areas shall be subjected to surveillance by patrols or other monitoring measures. Similar to the surveillance airside in the terminal, this is an activity undertaken by the government with assistance of the airport operator at most airports. The government finances this, although the security charge at Madrid is used to finance the budget of the Guardia Civil and the airlines in the UK contribute to the budget of the Metropolitan Police. The assistance of the airport operator is financed through general airport charges, except at Munich airport where the security charge pays for this as well.

⁹ Technically the airlines need to pay the security charge to the airport operator and they are free to levy this charge to the passenger.

Exhibit 17: Airport security (2/2)

Airport	Party undertaking	Party supervising	Method of financing	Party paying
2.3 Screening of staff /items carried and vehicles before entering security restricted area				
Charles de Gaulle	Airport operator	State	Airport tax	Passenger through ticket
Orly	Airport operator	State	Airport tax	Passenger through ticket
Frankfurt	Airport operator *	State Ministry of transport (Hessen)	Not yet confirmed (currently government)	Not yet confirmed (currently government)
Munich	Airport operator	Government of Bavaria	Airport charges	Passenger (passenger charge) or airline
Amsterdam	Airport operator	KMAR	Security charge	Passenger through ticket
Madrid	Airport operator/ Guardia Civil	Guardia Civil	Security charge + government	Passenger through ticket + government
Gatwick	Airport operator	Airport operator	Passenger charge	Passenger through ticket (passenger charge)
Heathrow	Airport operator	Airport operator	Passenger charge	Passenger through ticket (passenger charge)
2.4 Surveillance airside (outside terminal)				
Charles de Gaulle	Gendarmerie des Transports Aériens	State	Government	Government
Orly	Gendarmerie des Transports Aériens	State	Government	Government
Frankfurt	Federal border police	Federal Ministry of Interior	Government	Government
Munich	Federal border police	Federal and Bavarian Ministry of Interior	Government (partly aviation security charge)	Government + passenger through ticket
Amsterdam	KMAR and airport operator	Ministry of Justice	Government	Government and security charge
Madrid	Airport operator/ Guardia Civil		Security charge + government	Passenger through ticket + government
Heathrow	Airport operator + Local Police	NationalPolice/ airport operator	Airport charges	Passenger through ticket (passenger charge)
Gatwick	Airport operator + Local Police	NationalPolice/ airport operator	Airport charges	Passenger through ticket (passenger charge)

* Government transfer to airport operator foreseen for 2005

4.21 At the two Paris airports the “Police Aux Frontières” is supervising the screening of staff, passengers and cabin baggage for access to the security restricted areas in the terminal. The “Gendarmerie des Transports Aériens” is supervising the checking of staff, vehicles and hold baggage for access to the security restricted areas outside the terminal.

4.22 At Frankfurt, there used to be a more relaxed regime where staff could enter the restricted area with PIN access, without physical screening. Since January 2004, there has been 100% screening before entering critical parts of the security restricted area, as defined by Regulation 1138/2004. The screening of staff to enter the security restricted area is a government responsibility since January 2004. There is currently no recovery of cost by the government (i.e. taxpayer pays). However following new legislation this responsibility will shift to the airport operator and the costs will be charged to the users in the beginning of 2005. Lufthansa estimates this will cost € 50 million for all German airports.

4.23 The UK government’s policy is that the taxpayer should not subsidise air transport and therefore the Metropolitan Police at Heathrow and Gatwick are financed by the airlines (except for the increase in staff after September 2001).

4.24 Heathrow is the only airport where there is 100% security screening for staff to enter the restricted areas, including airside. At other airports such checks are only in the terminal areas. EU Regulation 2320 requires this only from 2009 onwards.

4.25 More information about the different badge regimes is presented below. The provision of badges is done by the airport operator, supervised by the government. Not all governments require a charge for the background screening (e.g. Spain). In the UK, special independent agencies undertake the background screening and not the government. The biometrics technology used for the airport badges differs from one country to the other. Over the next two years the 70,000 employee badges at Schiphol will be replaced and the new ID will include biometrics (iris) to enter the restricted areas for staff ID. The badge in Munich appears to be most expensive at €93 (including background check).

Exhibit 18: Badge regime

Airport	Party undertaking	Supervision	Method of financing	Process	Charge includes background check?	Biometrics	Comments
Charles de Gaulle	Airport operator	State	Charge for badge	Company pays airport operator	Yes	Yes, finger print	About € 50 per badge
Orly	Airport operator	State	Charge for badge	Company pays airport operator	Yes	Yes, finger print	About € 50 per badge
Frankfurt	Airport operator	Federal Ministry of Transport	Charge for badge	Company pays airport operator	Yes	No, PIN code	Background check is performed every year (versus EU guideline of 5 years)
Munich	Airport operator	Government of Bavaria	From airport charges		Yes (government check about €25)	No, PIN code	About € 67 per badge; Background check is performed every year (versus EU guideline of 5 years)
Amsterdam	Airport operator	Ministry of Justice	Charge for badge	Company pays airport operator	No charge from government	Yes, iris	About € 70 per badge; Implemented over coming two years
Madrid	Airport operator	National Police	Charge for badge	Company pays airport operator	No charge from government		
Gatwick	Airport operator	Airport operator	Charge background check and charge for badge	Company pays agent and airport operator	No, see comment		Employee's company pays special agent to do background check (£13), every 3 years; ID is about £35
Heathrow	Airport operator	Airport operator	Charge background check and charge for badge	Company pays agent and airport operator	No, see comment		Company pays agent to do background check (£13), every 3 years; ID is about £35

Source: SH&E analysis

Aircraft security

4.26 Section 3.1 of the Annex states that aircraft in service shall be subject to an aircraft security check immediately after passenger disembarkation, once all

service providers have left the aircraft. Section 3.2 of the Annex states that each aircraft in service shall be placed under surveillance sufficient to detect unauthorised access.

4.27 While the aircraft security check is performed by airlines (although this could be subcontracted to the ground handler) thereby absorbing the costs, the surveillance of aircraft is more diverse. At some airports, the airport operators are involved, and at some airports the national police force plays a role for which the taxpayer pays. Only at the Paris airports are the costs directly charged to the passenger. At some airports like Frankfurt, Gatwick and Heathrow airlines hire security staff to protect their aircraft¹⁰.

Exhibit 19: Approach to Aircraft Security

Airport	Party undertaking	Method of financing	Party paying
3.1 Aircraft security check before passenger boarding			
Charles de Gaulle	Airline	Cost absorbed	Airline
Orly	Airline	Cost absorbed	Airline
Frankfurt	Airline	Cost absorbed	Airline
Munich	Airline	Cost absorbed	Airline
Amsterdam	Airline	Cost absorbed	Airline
Madrid	Airline	Cost absorbed	Airline
Gatwick	Airline	Cost absorbed	Airline
Heathrow	Airline	Cost absorbed	Airline
3.2 Surveillance of aircraft			
Charles de Gaulle	Airport operator	Airport tax	Passenger through ticket
Orly	Airport operator	Airport tax	Passenger through ticket
Frankfurt	Airline	Cost absorbed	Airline
Munich	Airline	Cost absorbed	Airline
Amsterdam	Airline + Airport operator	Cost absorbed by airline + security charge	Airline + passenger through ticket
Madrid	Airport operator/ Guardia Civil	Security charge + government	Passenger through ticket + government
Gatwick	Airline	Cost absorbed	Airline
Heathrow	Airline	Cost absorbed	Airline

Source: SH&E analysis

¹⁰ In the UK the airport operator is responsible for surveillance of aircraft in the restricted zone where aircraft are parked and the airline is responsible for the protection of aircraft.

Passenger and Cabin Baggage

Passenger and baggage screening

4.28 Section 4.1 of the Annex also states that all departing passengers (i.e. both originating and transfer passengers, unless previously screened to required standards) shall be screened to prevent prohibited articles from being introduced into the security restricted areas and on board an aircraft. Section 4.3 of the Annex states that cabin baggage of all departing passengers shall be screened prior to being allowed into security restricted areas and on board an aircraft.

4.29 Only in Germany is passenger and baggage screening a government responsibility. The relevant authorities invoice the airlines on a monthly basis, depending on the number of passengers carried. Passengers pay the security related charges. Two exceptions are Heathrow and Gatwick where part of the passenger charge covers security cost, and Madrid where the government subsidises security activities.

4.30 Airports use comparable detection equipment and a similar number of security agents per lane.

Exhibit 20: Passenger and cabin baggage screening

Airport	Party undertaking	Method of financing	Party paying
4.1 Screening of departing passengers and 4.3 cabin baggage			
Charles de Gaulle	Airport operator	Airport tax	Passenger through ticket
Orly	Airport operator	Airport tax	Passenger through ticket
Frankfurt	Federal government (Ministry of Interior)	Security charge	Passenger through ticket
Munich	Government of Bavaria	Security charge	Passenger through ticket
Amsterdam	Airport operator	Security charge	Passenger through ticket
Madrid	Airport operator	Security charge + government	Passenger through ticket + government
Heathrow	Airport operator	Passenger charge	Passenger through ticket
Gatwick	Airport operator	Passenger charge	Passenger through ticket

Source: SH&E analysis

Mixing of passengers

4.31 Section 4.1 of the Annex also states that screened departing passengers shall not mix with arriving passengers who may not have been screened to the standard of the Regulation. Where these passengers cannot be physically

separated then the security objective shall be achieved by the application of ‘compensatory’ measures.

4.32 Mixing of arriving and departing passengers takes place at Amsterdam, Frankfurt, Munich and to a lesser extent at Heathrow. The exhibit below gives an overview.

Exhibit 21: Mixing of passengers

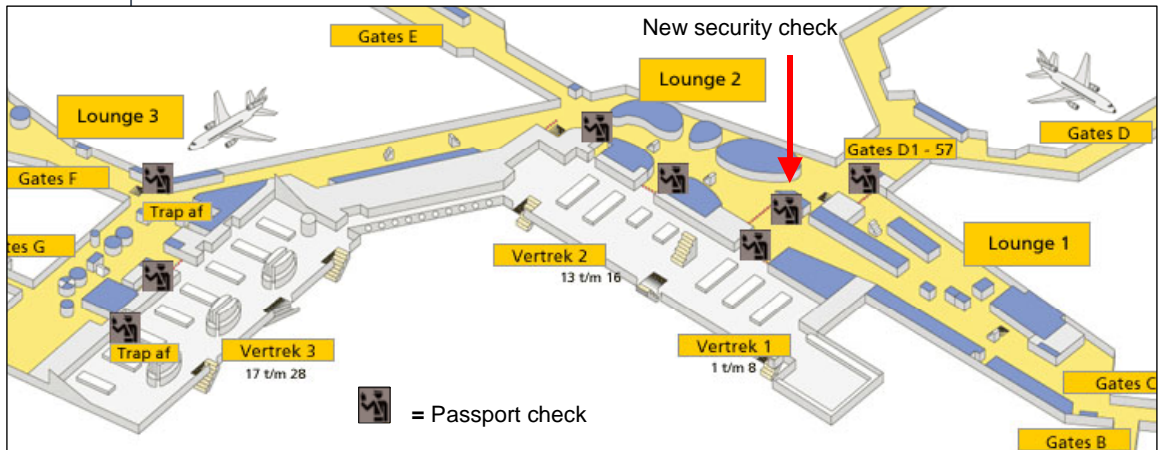
Airport	Do arriving and departing passengers mix?	Additional security measures taken
Charles de Gaulle	No, separate flows; transfer passengers are screened	None
Orly	No, separate flows transfer passengers are screened	None
Frankfurt	Yes, unless declared as not screened according to EU standard	Passengers from certain arriving non-EU flights are screened; secondary screening for specific flights at dedicated screening points
Munich	Yes, Terminal 1: EU passenger mix only; Terminal 2: EU and non-EU passengers . From June 2006 mix of clean passengers only	Passengers from certain arriving non-EU flights are screened;
Amsterdam	Yes, in the non-EU area	Non-EU to EU transfer passengers are screened and passengers from certain arriving non-EU flights are screened*
Madrid	No	There is additional screening to prevent arriving passengers mixing with screened departing passengers
Gatwick	No	
Heathrow	Yes, in some terminals (T1, T3); transfer passengers are screened	Ongoing construction to achieve 100% segregation; secondary screening at gate in non-segregated areas;

* Schiphol, like other airports, has a confidential list of countries that require screening upon arrival.

Source: SH&E analysis

4.33 At Schiphol, the Ministry of Justice instructed the airport operator in September 2004 to implement an additional security check for passengers transferring arriving from non-Schengen and departing to Schengen territory (see exhibit below), in addition to the passport control check already in place. This security check has been implemented as of December 2004. The location of this security check is shown in the exhibit below. The time frame for implementation has been limited. Normally the airport operator would take this up in the annual budget if the notice period were sufficient. Transfer passengers travelling from a non-Schengen country to a country within the EU, but not a Schengen country (e.g. UK and Eastern Europe) will pass through security check at the gate of departure. These measures allow all passengers departing to a EU destination to be screened.

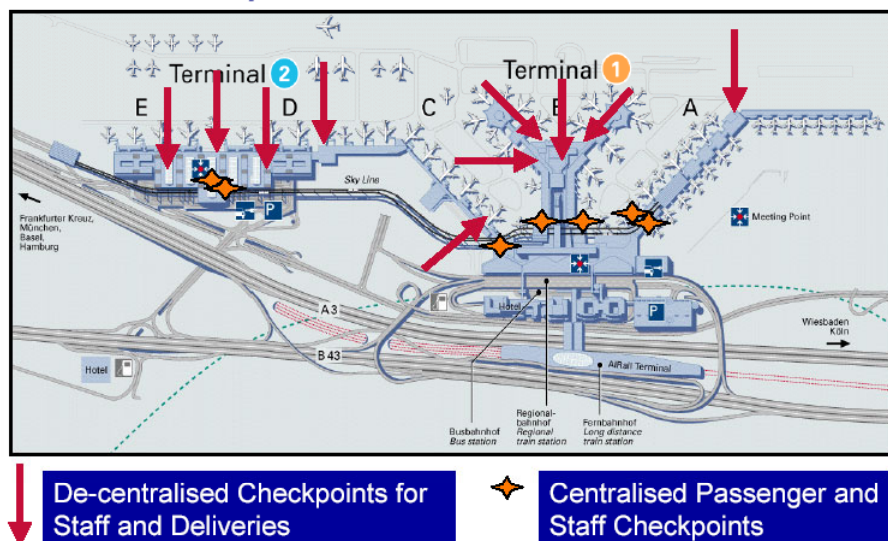
Exhibit 22: New security check at Schiphol



Source: Schiphol website

4.34 Frankfurt is a two terminal airport. As at Schiphol, there is mixing of arriving and departing passengers, although to a lesser extent since the screening takes place at the beginning of the piers and is less central than at Schiphol. Once passengers leave a pier they cannot enter another pier without being screened (a passenger has to re-enter a pier). The layout of Frankfurt is shown below. The additional measures Fraport has taken are screening of passengers from certain arriving non-EU flights and secondary screening for specific flights at dedicated screening points. Fraport is convinced that the terminal is a 100% clean area. The current system is being evaluated.

Exhibit 23: Security check at Frankfurt



Source: Fraport

4.35 Since September 2001 BAA has started adjusting the terminal layouts of Heathrow and Gatwick to achieve segregation of arriving and departing passengers. This work should be completed in 2009 and will cost a total of £600

million.

Hold Baggage Screening

4.36 Section 5.1 of the Annex states that hold baggage shall not be placed on board an aircraft unless the passenger to whom such baggage belongs shall be checked in for the flight on which it is carried.

4.37 Reconciliation of hold baggage with the passengers on-board (i.e. bags are only carried if checked-in passengers are on board the aircraft at departure) is performed by each airline (or its ground handler) and its cost is absorbed by the airlines as well. At London and Gatwick the system for reconciliation of hold baggage is more sophisticated than at the other airports (so called triple AAA system).

4.38 There is a penalty system for baggage reconciliation at the Paris airports; for every incident there is a penalty of € 7,500 (payable by the airline).

4.39 Section 5.2 of the Annex states that all accompanied hold baggage (i.e. originating and transfer hold baggage, unless previously screened to the required standards) shall be screened prior to being loaded onto an aircraft.

4.40 Airport operators indicated to us that the requirement for 100% hold baggage screening has been one of the major security changes for them. Significant investments and changes to infrastructure have had to be made to facilitate this process. For example at Frankfurt, there is as yet no integrated system for 100% hold baggage screening, which makes it labour intensive and therefore more expensive. At Schiphol, additional security costs were created temporarily while hold baggage screening was performed manually in the departure area, prior to the completion of the integrated system. Heathrow and Gatwick already have had 100% hold baggage screening in place for years. Airport operators normally subcontract the screening of hold baggage to private companies. This is the situation in Amsterdam, Madrid and Paris.

4.41 A special arrangement is in place at Gatwick and Heathrow. The Department for Transport had instructed the airport operator to install the hold baggage screening system. However, the airport operator BAA has left the operation of the system to the airlines; the airport provides the infrastructure and the airlines hire a security company to perform the screening. The fixed costs are paid by the airlines, and amount to about £0.30 per bag for local baggage and

about twice that for transfer baggage. Airlines find this an unsatisfactory system¹¹.

Exhibit 24: Hold baggage

Airport	Party undertaking	Method of financing	Party paying
5.1 Reconciliation of hold baggage			
Charles de Gaulle	Airline	Cost absorbed	Airline
Orly	Airline	Cost absorbed	Airline
Frankfurt	Airline	Cost absorbed	Airline
Munich	Airline	Cost absorbed	Airline
Amsterdam	Airline	Cost absorbed	Airline
Madrid	Airline	Cost absorbed	Airline
Heathrow	Airline	Cost absorbed	Airline
Gatwick	Airline	Cost absorbed	Airline
5.2 Screening of hold baggage			
Charles de Gaulle	Airport operator	Airport tax	Passenger through ticket
Orly	Airport operator	Airport tax	Passenger through ticket
Frankfurt	Federal government (Ministry of Interior)	Security charge	Passenger through ticket
Munich	Government of Bavaria	Security charge	Passenger through ticket
Amsterdam	Airport operator	Security charge	Passenger through ticket
Madrid	Airport operator	Security charge + government	Passenger through ticket + government
Heathrow	Airline	Fixed cost allocated among airlines depending on number of bags (about £0.3 per bag)	Airline
Gatwick	Airline	Fixed cost allocated among airlines depending on number of bags	Airline

ADDITIONAL SECURITY MEASURES

4.42 Throughout Europe an intensification of security measures has been seen since the introduction of EU 2320. Some Member States have taken additional security measures (i.e. security measures in addition to requirements of Regulation 2320). These additional measures can be categorised as follows:

¹¹ Especially in relation to responsibility if there were to be an incident

- Measures requested by the USA; or
- Measures with increased norms (quality standards) compared to those required by Regulation 2320; or
- Other measures not requested by the USA nor laid down in Regulation 2320

4.43 The security measures mandated by the Transport Security Administration (TSA) in the USA for non-American carriers flying to and from the USA are detailed and very diverse. The main security measures are:

- Continuous random hand search;
- Use of explosive detection systems for all hold baggage, either by the use of Explosive Detection Systems (EDS) or Explosive Trace Detector (ETD);
- Additional items added to the list of items restricted from carry-on by passengers;
- Control of shoes;
- Check of catering and baggage hold;
- More thorough screening of passengers with headgear or heavy shoes¹²
- Secondary gate screening of passengers;
- Protection of aircraft;
- Reinforced cockpit doors;
- Air marshal programme;
- Restrictions on cargo and mail that can be carried on passenger aircraft;
- Provision of advanced passenger data (APIS);
- Profiling of passenger pre-check-in;
- Automatic access to European airlines reservation system to collect Passengers Name Record (PNR).

4.44 The table below explores how US requirements are financed, if increased norms of EU measures are implemented, if other measures are taken and how these are financed. The main difference for financing of additional security for high risk flights, as required by the TSA, is that at all airports this is financed by the airlines involved, except at Madrid (government support) and Schiphol. At Schiphol there are two specific security measures financed through the security charge. This relates to the additional security check at the gate for all flights to the USA (for all carriers) and passenger profiling (for US carriers only, not for

¹² Most Walk Through Metal Detectors have a blind spot at the top and the bottom of the unit.

other carriers¹³). The airport operator is directed by the Ministry of Justice to undertake these activities, estimated at € 20 million per year.

4.45 Several airports have areas where the standards are higher than as required by EU Regulation 2320, exceptions being Schiphol and Madrid where the requirements of the Regulation are the norm. This does not mean that security is less tight at Schiphol.

4.46 Other common measures taken by airports include extra security for flights to Israel and additional police. From interviews with airlines we understand there are a number of other measures the UK has taken (paid by the industry), but UK authorities would not disclose this information.

¹³ Other carriers pay for this themselves.

Exhibit 25: Additional security measures

Airport	US Requirements implemented	Method of financing USA additional security	Increased norms	Other measures	Method of financing other measures
Paris Charles de Gaulle and Orly	Yes	Airlines involved	All sharp objects are banned	Extra security flights to Israel	Airlines, not through airport tax
			More specific training requirements for staff	Additional police	State
			Higher norm for search of cabin baggage	All companies within the security restricted area need to comply with security programme (not just airlines)	
Frankfurt	Yes	Airlines involved	Annual background check of staff	Extra security for flights to Israel and UK	Airlines, not through security charge
			All knives banned	Law enforced air marshal programme	Government and airlines
			Higher norm for random hand search of passengers		
Munich	Yes	Security charge	Annual background check of staff;	Extra security for flights to Israel and UK	Airlines, not through security charge
			Some additional sharp objects are banned	Additional police	Government
				Law enforced air marshal programme	Government and airlines
Amsterdam	Yes	Security charge	No, 2320 is standard	Extra security flights to Israel	Security charge
				Additional police	Government
Madrid	Yes	Security charge + government		Extra security flights to Israel	Security charge + government
Gatwick and Heathrow	Yes	Airlines involved	All sharp objects are banned	Extra security flights to Israel and Canada	Airlines
			Higher norm for hand search of cabin baggage	Additional police	Government
				National legislation on reinforced cockpit doors	Airlines
			Others, but not known	Others, but not known	

UNFORESEEN ADDITIONAL SECURITY MEASURES

4.47 The countries have different approached to deal with unforeseen additional security measures. For example in the Netherlands the government can instruct the airport operator to take special security measures for one or more flights in response to a sudden security risk known to government. Such an instruction may be made in response to a request form another country. These special security measures can be of a temporary nature or can become structural if they are incorporated in the security charge.

4.48 Article 37 of the Dutch aviation act stipulates that in response to a sudden security risk, as discussed above, the Minister of Justice can make provisions for the financing of additional security measures for a minimum of 5 months and a maximum of 12 months. This happens when such measures are incidental and generate cost that could not be budgeted for by the airport operator. After the cost of the additional measures can be incorporated into the adjusted airport charges (starting on 1 April or 1 November) the aviation sector will finance these costs. It takes a minimum of 21 weeks to allow for changes in airport charges to be made. So far this only happened when the Dutch government required additional security measures for flights to the UK.

4.49 As may be seen below, this initial government support happens also in Germany, while at other airports (Paris and London) the airlines involved pay. In France there is no government support. Losses or profits arising from security provision in one year are taken up in the security budget for the following year, which allows ADP to provide additional security measures (if necessary). At Madrid, the airport operator pays as long as the threat continues, although the airport operator is subsidised by the government (the security charge has not changed since 2001).

Exhibit 26: Temporary security measures

Country	Measures	Financing	Period
France	Specific instructions by government for specific flights	Airlines pay	As long as instructions are valid
Germany	Specific instructions by government	Initially government	Until measures can be taken up in airport charges
Netherlands	Instructions by government (e.g. extra screening of specific flights)	Initially government	Until temporary measures can be taken up in budget for security charge
Spain	Instructed by Ministry of Interior, depending on threat degree	Airport operator	While the threat continues
United Kingdom	Divers	Airlines pay. No government support	Not available

Source: Airport operators and Schiphol Group

FINANCIAL ASPECTS

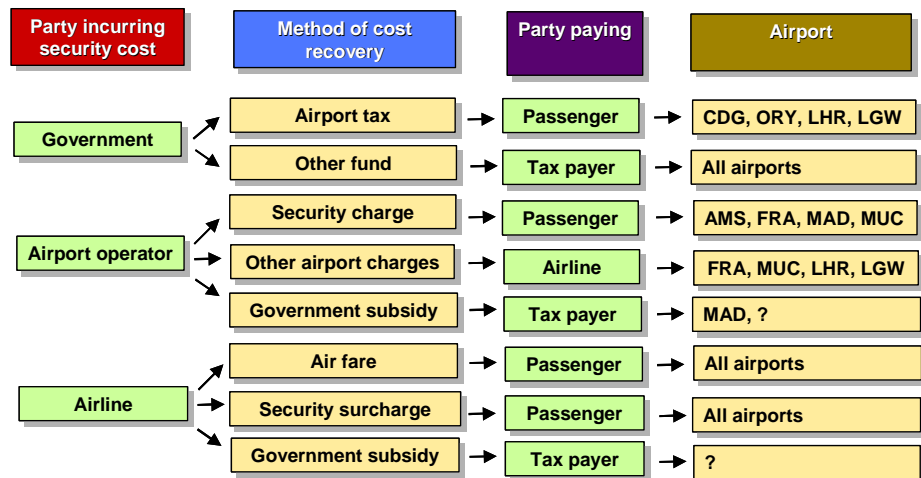
4.50 In the EU, passengers pay for security measures with limited government support. Regulation 2320 does not directly address the financing of aviation security. As a result, and also for historic reasons, there is no common approach to the financing of these measures: they vary from country to country.

4.51 The recent study for the EU notes that in 2002 security revenues were an estimated €2.2 billion in the 18 states considered (state taxes represent 36%, airport charges 30%, airline surcharges 28% and state grants 6%) with estimated expenditures between €2.7 and €3.8 billion. In situations in which the State net results were expected to be neutral, and carriers almost broke even (excluding cockpit door and insurance costs), airport operators accounted for any deficit.

Cost recovery

4.52 The exhibit below gives an overview of (i) which parties can incur security costs, (ii) what the method of cost recovery could be, (iii) which party can pay, and (iv) what proportion of this is applicable to each of the benchmark airports. A ‘?’ for government subsidy for the airport operator means it is unclear if this actually happens (except in the case of Madrid). Moreover we do not know if airlines received direct or indirect subsidies.

Exhibit 27: Charging overview



Source: SH&E analysis

4.53 The relevant security related airport charges and taxes (July 2004) that passengers pay through their ticket are shown in the table below. In France, Germany, the Netherlands, Spain and the UK, the approval of (security) charges is the responsibility of the Ministry of Transport. If the more recent charges of January 2005 are compared to those of July 2004, there appear to be no increases (except a small increase of € 0.06 at Munich).

Exhibit 28: Security related charges and taxes July 2004

Airport	Security related charge and tax	Charge	Comment
Charles de Gaulle & Paris Orly	Airport tax per departing passenger	€ 8.20	About 88% dedicated to security*
	Civil Aviation Tax per passenger	€ 7.60	About 21% dedicated to security*
Frankfurt	Per departing passenger	€ 8.98	Dedicated security charge
Munich	Per departing passenger	€ 6.44	Dedicated security charge
Amsterdam	Per departing O&D passenger	€ 10.55	Dedicated security charge
	Per departing transfer passenger	€ 1.60	Dedicated security charge
Madrid	Per departing passenger (international)	€ 1.15	Dedicated security charge
	Per departing passenger (domestic)	€ <1.15	Dedicated security charge
Heathrow	Included in passenger charge	£10.40	Passenger charge, about 74% dedicated to security
Gatwick	Included in passenger charge	£ 7.15	Passenger charge, about 74% dedicated to security
Rome (FCO)	Per departing passenger	€ 1.81	
Copenhagen	Not specified		
Brussels	Per departing O&D passenger	€ 6.28	
	Per departing transfer passenger	€ 6.02	

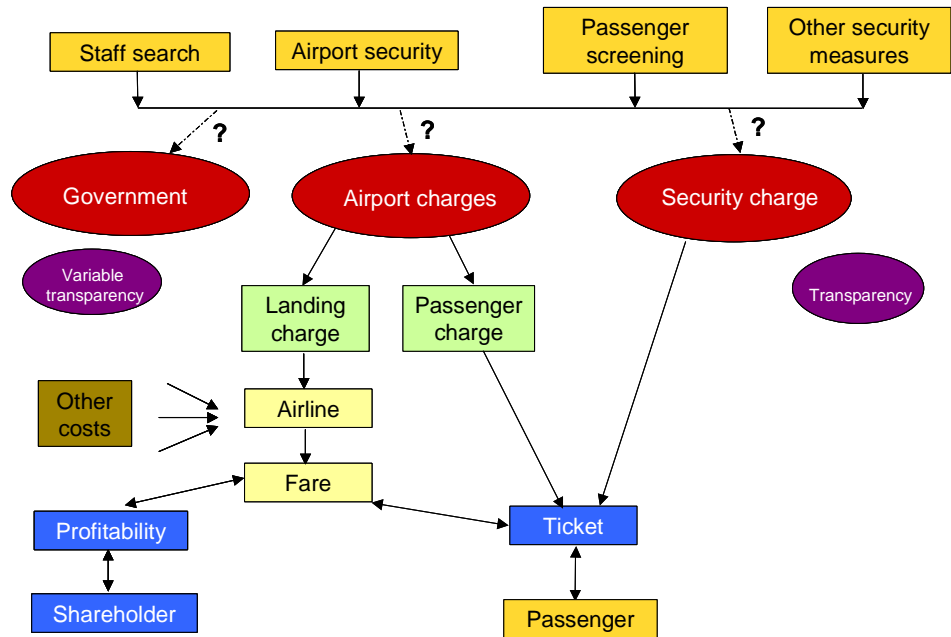
* Source for percentages is ADP

Source: IATA Airport and Air Navigation Charges July 2004

4.54 There are many variations in how security costs may be recovered, as shown in the exhibit below. The several different broad categories of cost can be divided (in any proportion) between allocation to a ‘pure’ security charge, a sweeping into general airport costs recovered through airport charges, or allocation to government (sometimes by the failure to explicitly recognise costs). This gives rise to significant differences in the transparency, with a security charge being the most transparent approach.

4.55 An additional complication to this arises from how airlines choose to pass airport charges onto passengers. The general approach adopted by most European airlines is to pass passenger charges directly to passengers as an addition to the air fare, but to include landing charges within its many other costs recovered by the fare. Some airlines consider that exclusion of costs from the fare and showing them separately on a ticket is more attractive, although in theoretical economic terms it should make no difference to passenger behaviour.

Exhibit 29: Dynamics of Cost Recovery



Source: SH&E analysis

Schiphol

4.56 In the Netherlands, the policy is that security costs should be recovered. At Schiphol the security charge represents about 30% of the aviation revenues for the airport. The charges are a responsibility of the airport. Once Schiphol Group has determined its forecasted security costs the Ministry of Justice checks if these costs can be taken up as security cost. The Ministry of Transport then performs a so-called marginal check based on principles of cost relatedness (including a reasonable rate of return), transparency and non-discrimination.

4.57 Schiphol levies different security service charges for O&D and for transfer passengers, since it considers transfer passenger require less security screening (operational reason) and it is a very price sensitive market segment (commercial reason).

4.58 The security service charge is expected to increase because the Ministry of Justice has ordered Schiphol to take additional security measures, i.e. an extra security check on passengers transferring from non-EU to EU territory as of December 2004 (as discussed earlier). The financial consequence is an additional annual cost of about € 13.5 million.

4.59 The security costs for Schiphol are based partly on the 2003 budget and a 12 months estimate. The actual cost for 2003 were somewhat lower than budgeted.

4.60 Unlike other airports, Schiphol has taken up some elements of border control in the security charge. This relates to costs for border control space and desks between the Schengen and non-Schengen areas. It is a matter of cost allocation for how the user pays: if this were not included within security charge, it would be part of other airport charges, as at other airports. The costs of passenger surveillance and development of new airport ID with biometrics are also included in the security charge, again unlike the practice at other airports.

4.61 KLM indicated airlines incur indirect costs as a result of security. For example, if for hold baggage screening there are more bags with a false alarm than the quality standard prescribes, the cost for an airline can be significant: e.g. if there were an additional 10 bags per day, this would cost € 0.5 million per year in rerouting and the delivery of these bags to the passenger.

4.62 While in general security costs have risen over the last few years, at Schiphol it appears that since the airport operator took over security activities from the Ministry of Justice, costs have been lower in both 2003 and 2004.

Paris

4.63 At the Paris airports the security costs are financed through two charges. The first is the “taxe d’aéroport” (airport tax) that was implemented in 1999. This airport tax also covers costs for the fire and bird scaring department and some measures in relation to environmental checks (representing 12%). The second charge is the civil aviation tax, 21% of which is related to security. However, according to the operator, Aéroports de Paris (ADP), the generated revenues from the civil aviation tax are not used for security cost recovery at the Paris airports but for security at regional French airports.

4.64 The French authorities in consultation with ADP and Parliament, determine the level of the charge on an annual basis. Since 2001 the number of security staff at the Paris airports has doubled. ADP has made investments of €250 million over a 4 years period, including €95 million in Explosive Detection Systems for hold baggage screening.

Frankfurt and Munich

4.65 In Germany the aviation security charge has gone from between €4 and €5, to €8 and €9 per passenger; or from €200 million to €300 million annually to allow for 100% hold baggage screening and extra security measures required by the TSA.

4.66 At Frankfurt the security charge is paid by the airlines to the Ministry of Interior on a monthly basis. Passengers pay this charge through the ticket. The Ministry uses this charge to fund measures carried out by the Federal Border

Police and pays Fraport, the airport operator, on the basis of the bilateral contract for passenger and baggage screening.

4.67 Since 19 January 2004, there has been 100% staff screening (similar to passenger screening) before entering the critical parts of the security restricted areas. This is paid by the airport operator and funded by general airport charges.

4.68 The costs for Frankfurt are lower than for Schiphol mainly because these figures for Frankfurt refer to staff costs only. Since November 2003 equipment costs have been recovered through the security charge as well and these have subsequently increased.

4.69 According to Lufthansa, the costs for passenger and baggage screening, as covered by the security charge, are estimated to be €145 million for 2004 (Lufthansa only). This does not include the surveillance and patrol costs, which were originally part of this security budget.

4.70 According to Lufthansa the aviation security charge at Frankfurt has gone down since April 2004 because security unit cost decreased. The charge covers the passenger and baggage screening and includes staff, facilities, rent and investments in and maintenance of equipment. Lufthansa appealed successfully about the inclusion of costs for surveillance/ patrolling airside, since it was Lufthansa's view that this is the responsibility of the government for which the airline or passenger should not pay. The determination of this charge is an annual exercise by the Ministry of Interior, although Lufthansa has no detailed insight in the cost breakdown for the budget.

4.71 The security charge at Frankfurt is higher than at Munich as at Frankfurt there is as yet no integrated system for HBS, making it labour intensive and therefore expensive. Moreover, the government has subcontracted the passenger and baggage screening to a daughter company of Fraport (ICTS). It is Lufthansa's view that this adds costs (no tender took place) and therefore is a potential reason for the cost difference between the airports as well. Fraport acquired ICTS to provide security services and is involved in providing security services especially in Germany, the United Kingdom and France¹⁴.

4.72 Not all departing passengers pay the security charge at Frankfurt. Only those transfer passengers that actually undergo security screening need to pay the security charge. For these passengers it is Lufthansa's policy to absorb these charges.

¹⁴ Fraport Group's annual report 2003 states that it achieved a revenue increase of 30%, particularly as a result of introducing 100% HBS and ICTS Europe's business expansion.

Madrid

4.73 The Spanish government informed us that security measures at Madrid Airport are funded by means of a security charge paid by passengers through the ticket and the rest is supported by the State. About 50% of security charge revenues are allocated to Aena and 50% to the State (for the Guardia Civil budget). Aena uses this to fund its security activities, and to pay its subcontractors (private security companies). The Ministry of Interior covers the staff cost for the National Police Force and Guardia Civil and the equipment used is covered by the State.

Gatwick and Heathrow

4.74 At both Gatwick and Heathrow the airport operator BAA recovers security costs through passenger service charges. We have not been able to discuss with BAA the details of security cost recovery. British Airways indicated to us that about 74% of the passenger charge is related to security. Under BAA's current regulatory regime, the airport operator is only allowed to charge 75% of its security related cost to the users. This means there is an incentive for the airport operator to reduce security related costs. The passenger charge is determined every five years, with the next determination due in 2008.

4.75 bmi British Midland and British Airways pointed out that in the UK the cost of implementation of additional security measures has been met by the airline industry. However, following the terrorist attacks the UK Home Secretary secured additional funding for the police service to provide a wide range of enhanced counter terrorism measures; some £42 million was provided to the Metropolitan Police Service. At Heathrow the airlines contribute some £24 million to police costs.

Airline security surcharge

4.76 After 11 September 2001, airlines were faced with additional security costs for many security related activities such as additional insurance, extra staff and installation of reinforced cockpit doors. This has had a significant impact on airline profitability. In 2002 additional security costs totalled €0.5 billion for 19 major European airlines and an estimated €1.2 billion for all European airlines (source: EC report). Airlines starting levying a security surcharge to recover these costs. The table below shows the charges levied in 2002.

Exhibit 30: Airline security surcharge

Airline	Security surcharge international passengers 2002 (per segment)
Air France	USD 8.00
Alitalia	EUR 6.00
British Airways	USD 4.00
Iberia	EUR 6.00
KLM	USD 8.00
Lufthansa	USD 8.00
SAS	USD 6.00

Source: Amadeus

Cost breakdown

4.77 The results of the comparison exercise that Schiphol Group undertook are shown in the table below. Comparison of different cost levels to determine if particular security tasks are undertaken in an efficient way is nearly impossible, because the cost information is not readily available (especially when multiple parties are involved) and where it is available the breakdowns are different. Moreover, there are many cost elements that might or might not be included in specific cost items, thereby invalidating comparisons. Therefore the information available is not complete and inconsistent.

Exhibit 31: Cost breakdown (€ million)

Airport	Schiphol Group (2003)	Fraport ¹ (2003)	BAA Heathrow (2003)	ADP (2004)
Screening of passengers and cabin baggage	€ 39	€ 60	€ 56	€ 75
Screening of hold baggage	€ 34	€ 23	€ 1	€ 69
Screening of staff and items carried	€ 14	€ 1	Unknown	€ 24 ²
Access control	€ 3	€ 5	€ 17	
Perimeter control	€ 8	€ 2	Part of access control	Part of access control
Other				€ 72
Screening of high risk flights	€ 26	Airline	Airline	Airline
Surveillance cost, border control, development access control system	€ 13		€ 36	
Police task charged to airport			€ 36	
Total	€ 136	€ 90	€ 111	€240

(1) Staff cost only

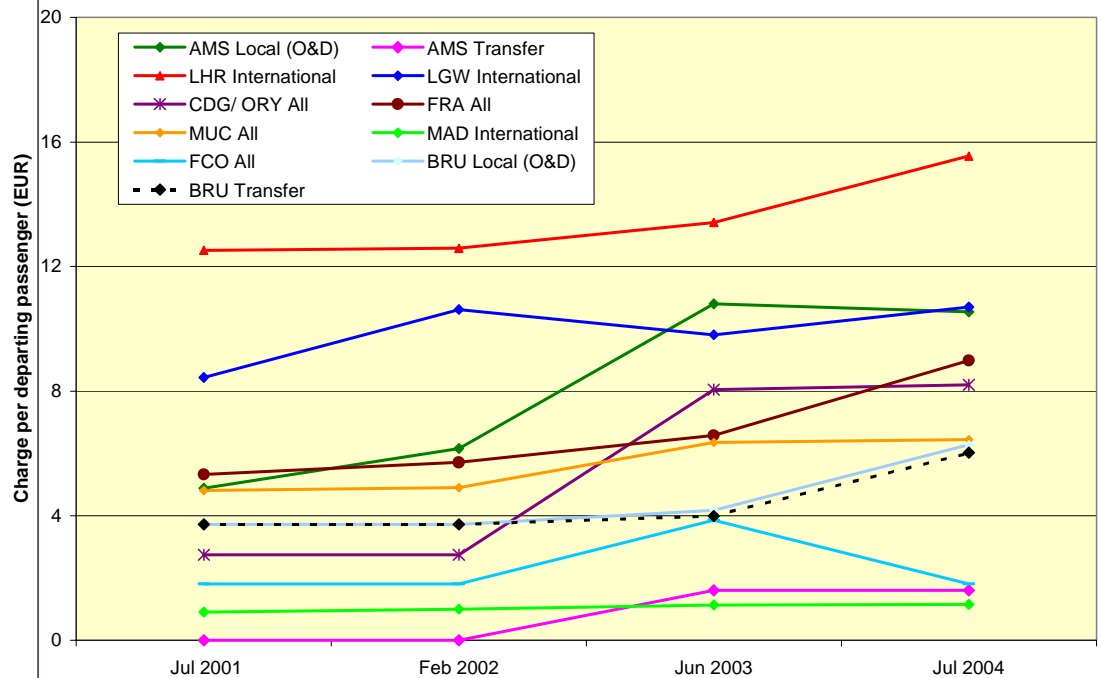
(2) Including access control

Source: Schiphol Group

4.78 However, what may be compared, although again with care, is the cost of screening of passengers and cabin baggage per terminal passenger. For Schiphol this cost is €0.99 and for BAA Heathrow and ADP it is €0.89 and €0.88 respectively¹⁵. Schiphol appears to be slightly more expensive, especially given the fact that the percentage of terminal passengers at Schiphol is higher than at these other airports, and unlike the Paris and London airports not all transfer passengers are screened at Schiphol. On the other hand hold baggage screening appears to be cheaper at Schiphol (€0.85 per passenger) than at the Paris airports (€0.98 per passenger). However, from a competitive point of view it is more relevant to focus on what security costs are finally charged to the users. We discuss this further in Section 6.

4.79 The exhibit below shows how the different charges have developed (see also Appendix D). The apparent average increase for all charges for the 3 years period from July 2001 to July 2004 was 16.5% per year. However, the actual change in security charges is likely to be different, mainly for two reasons. Firstly, in the Netherlands the method of financing changed as a result of change in responsibilities in 2003 and secondly, the charge for Heathrow and Gatwick is not a dedicated security charge, but a general passenger charge.

Exhibit 32: Charges development



Source: IATA Airport and Air Navigation Charges Manual

¹⁵ Calculation: cost of screening of passengers and cabin baggage divided by number of terminal passengers (2003 figures)

PERCEPTION OF PASSENGERS

4.80 None of the parties contacted was able to provide us with a survey showing the perception of the passenger towards security activities. From discussions with airport operators and airlines it became clear that in general people have a high tolerance for security and are willing to wait. This stems from the fact that passengers see this as necessary for ensuring national and personal security and they are therefore willing to sacrifice some time for this.

4.81 Two comments are relevant in this respect. First, passengers do not always understand why they have to pay separately for this and might regard security measures as a government task. Second, passengers sometimes perceive a second security check at the gate as unnecessary.

4.82 As far as we know, there are no airports using performance targets for passenger security screening, although we were unable to speak to BAA on this issue.

4.83 In general the intensification of security procedures at airports has put some pressure on the on-time performance of airlines. Although this cannot be substantiated directly by data, stakeholders agree that the number of passengers arriving late at the boarding gate as a result of being delayed at security check points has increased. It is not likely that there would be a significant difference between airports. The study for the EC concludes on this point that due to longer queues and processing time at security check points and 100% screening of hold baggage there have been some delays to airline on-time performance.

5

SECURITY IN THE USA

INTRODUCTION

5.1 This Section discusses the responsibilities and financial aspects of security provision in the United States.

TASKS AND RESPONSIBILITIES

5.2 In the USA the Federal Aviation Administration (FAA) is the branch of the US government held responsible for the safety of civil aviation. The FAA's mission is to provide a safe, secure and efficient global aerospace system that contributes to national security and the promotion of US aerospace safety. The FAA issues regulations, rules and guidelines to all aviation equipment operators in the US and the rest of the world.

5.3 After the terrorist attacks in September 2001 the responsibility for aviation security shifted from the FAA, a section of the Department of Transportation (DOT) to the Transportation Security Administration (TSA), a new department under the DOT that was created as part of the Aviation and Transportation Security Act (ATSA) of 19 November 2001. Initially, the TSA was headed by Mr. John Magaw, Undersecretary of Transportation for Security and staffed by a number of executives from American corporations such as Intel, Marriott Hotels, Walt Disney, McKinsey and Fluor. Subsequently, with the establishment of the Department of Homeland Security (DHS), the TSA was transferred from the DOT to the DHS. The TSA's mandate is to secure all of the US transportation systems, with air transport as its first priority

5.4 Key elements of the ATSA relating to air transportation are:

- More stringent screening of all passengers and hand baggage and screening for explosives in hold luggage as of December 2002;
- Transfer of responsibility of passenger and baggage screening to TSA responsibility;
- Establishment at five airports of a pilot programme to allow employees of private security companies to screen passengers, hand baggage and hold baggage;
- Deployment of necessary equipment for screening of passengers and hand baggage and setting deadlines for implementation of explosive detection systems for hold baggage at all airports;
- Making Federal Security Directors (FSD) responsible for supervision of

screening at all US airports. There are 158 FSDs with responsibility for the more than 440 commercial airports in the United States and its territories;

- Expanding scope for research and development and increased use of technology;
- Strengthening of cockpit doors and the established of the Federal Flight Deck Officer Program which trained, armed and authorised airlines cockpit crew members on passenger flights to carry firearms in the cockpit;
- Expansion of Federal Air Marshal programme to cover a significant number of profiled commercial passenger flights.

5.5 Prior to September 2001 the main security activities like passenger and baggage screening were the responsibility of the airlines. The airport authority provided airport perimeter and access security and made provision for the availability of Law Enforcement Officers (LEOs) as needed. In a similar way, as seen throughout Europe at the moment such activities were generally subcontracted to private security companies. At the time, aviation security policy was in the hands of the FAA, which established the basic standards and requirements and provided oversight of the airlines, airport and security companies in these matters.

5.6 The US government role shifted from setting and monitoring standards to financing and implementing these standards. The latter is in stark contrast to the situation in Europe. The response from the US government to the terrorist attacks was one of making additional resources available for national aviation and transportation security and by investing in research and development for future improvements in this field. TSA federal government employees perform the security screening. Airport perimeter and access security remains the responsibility of the airports and is contracted out to private security companies, LEO presence at security checkpoints are provided by local law enforcement agencies which can be airport authority police, when the airport has its own police force, local police or state police. The National Guard was removed from the checkpoints in 2002.

5.7 At five US airports¹⁶ a pilot programme has been undertaken where private companies are involved in providing passenger and baggage security screening activities under the direction and supervision of FSDs and under the rules and regulations established by the TSA.

¹⁶ San Francisco, CA., Kansas City, MO., Rochester, NY, Jackson Hole, WY, and Tupelo. MS

5.8 In the exhibit below a comparison is shown of security tasks in the US compared to the EU. The party responsible for ensuring compliance with the activities mentioned below are the respective government departments: Ministry of Transport or Ministry of Justice in the EU, and the TSA/DHS in the US.

Exhibit 33: Security task comparison

Section in Annex		Activity	Party undertaking	
			EU	USA
2. Airport security	2.1	Access security restricted area	Airport	Airport
	2.2	Terminal land side areas and public area	Airport/ Police/ Private	Airport
	2.3	Staff and vehicle screening	Airport/ Private	Airport
	2.4	Physical security and patrols airside	Airport/ Police/ Private	Airport
3. Aircraft security	3.1	Aircraft security check	Airline	Airline
	3.2	Surveillance of aircraft	Airline/ Police	Airline
4. Passengers and cabin baggage	4.1	Screening of passengers and cabin baggage	Airport/ Police/ Private	TSA (at 5 airports private)
5. Hold baggage	5.1	Baggage reconciliation	Airline	Airline
	5.2	Screening of hold baggage	Airport/ Police/ Private	TSA/ (at 5 airports private)
9. Catering	9.1	Check air carrier catering stores and supplies	Airport/ Private/ Airline	Airline
10. Cleaning	10.1	Check air carrier cleaning stores and supplies	Airport/ Private/ Airline	Airline

Source: EC report and TSA

5.9 In the US, several aspects of airport security such as access control and screening of staff, is a task of the airport operator. The aircraft security check before passengers board the aircraft and hold baggage reconciliation are tasks of the airline, similar to the EU. The screening of passengers and cabin and hold baggage is strictly a task of the TSA in the US, except at the airports with pilot programmes using private security companies. Checks on catering and cleaning supplies is a task performed by the airlines in the US, whereas in Europe this could be the airport operator or private security companies as well.

5.10 The norms or standards of security measures are strictly confidential and are not in the public domain.

5.11 As a customer service initiative, TSA had recently started providing security checkpoint wait time information to assist travellers in planning for their flight. The online database gives historical averages for particular times of the day and days of the week that can be used by the travelling public to estimate the

time they need to be at the airport.

5.12 There is currently a registered traveller pilot programme at five US airports: Minneapolis-St Paul, Houston-Bush International, Los Angeles, Boston Logan and Reagan Washington National. This programme sets aside airport x-ray and magnetometer security checkpoint lanes for registered fliers who have given personal details and biometric data to the TSA. Once matched against certain law enforcement databases, those who are cleared are approved as registered travellers and are able to use a designated security checkpoint lane. Once biometric information (either a finger or iris scan) has been provided and used to confirm identity, registered travellers and their carry-on bags will still go through primary screening, but more extensive secondary screening is largely eliminated.

5.13 The latest security development in the US is that in September the Senate committee passed a new aviation security bill ('Aviation Security Advancement Act') aimed at further improving aviation security. The Aviation Security Advancement Act calls for the development of standards to determine appropriate aviation security staffing levels at US airports, expanded air cargo screening for both passenger and cargo aircraft, improved air cargo screening technology and a requirement for all air cargo operators to install a barrier between the cockpit and the freight compartment of the aircraft. It also seeks to improve security perimeters surrounding US airports. It would also require the Department of Homeland Security to establish a schedule for installing in-line explosive detection system (EDS) equipment nationwide.

FINANCE

5.14 The US government has supported the industry after September 2001 in a number of ways. The Aviation Security Technical Corrections and Improvement Act provided a \$500 million fund for financing security related terminal modifications. The Century of Aviation Reauthorisation Act authorises several programmes. Airport operators and airlines can be reimbursed for security activities up to \$4 billion over a 5-year period. The Airport Improvement Program (AIP) supports US airports for security, safety, capacity and noise reduction projects. During the years 1999, 2000 and 2001, US airports had already received \$2.4 billion in assistance, although the AIP in particular was targeted on capacity expansion.

5.15 The more than 400 US carriers have received a total compensation of \$4.6 billion since September 2001 (on average about \$10 million per carrier), with the top 10 airlines representing about 80% of these funds. This was intended to reflect additional security costs and lost revenues. Moreover an additional \$100 million had been reserved for airlines to compensate them for the installation of

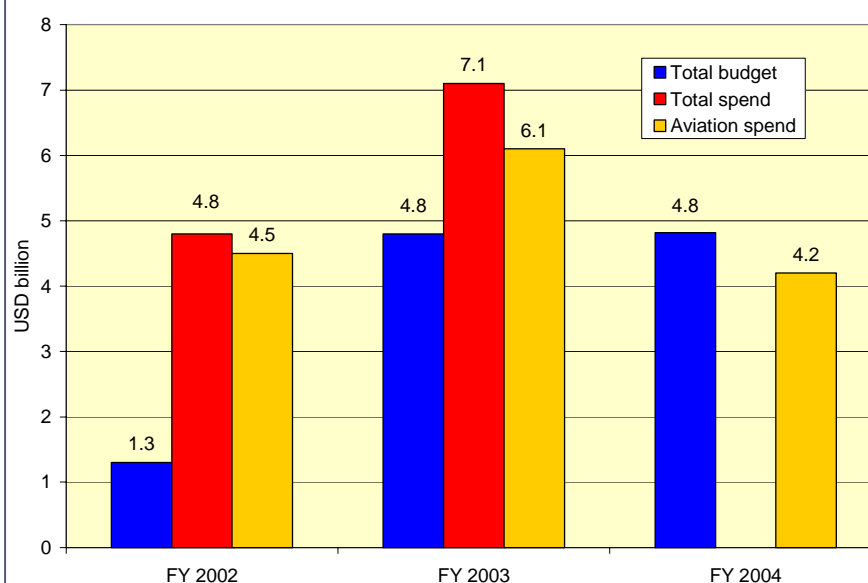
reinforced cockpit doors. Installation of cockpit doors has been a significant cost burden for airlines in Europe. To take Transavia as an example, it has invested about €1 million in this for its 25 aircraft fleet¹⁷.

5.16 TSA provides funds for the acquisition, installation and operation of additional security screening equipment, primarily Explosives Detection System (EDS), Walk Through Metal Detectors (WTMD) and Explosives Trace Detection (ETD) machines to screen passengers and hand and hold baggage for explosives and other prohibited items. TSA issued grants totalling \$78 million to a number of airports across the US.

5.17 TSA has taken control of most aspects of aviation security and has the means for this. TSA spent USD 4.2 billion on aviation security in the financial years (FY) ending September 2004. This is from a total US budget to combat terrorism of 52.7 billion¹⁸. About USD 2.5 billion was related to staff cost and USD 1.2 billion related to screening technology. According to the EC security study the government contributed over \$14 billion to the US aviation industry from FY 2002 to FY 2004.

5.18 The exhibit below gives an overview of the actual total spend by TSA and the spend for aviation. The major costs involve investment in equipment and staff cost (previously financed by airports/ airlines/ passengers).

Exhibit 34: TSA budget



Source: TSA

¹⁷ Excluding annual maintenance and additional fuel burn

¹⁸ Source: Seminair June 2004

5.19 The 2005 budget for the US Department of Homeland Security will be \$33 billion, a 9% increase on the 2004 budget. This includes a total of \$5.3 billion for the TSA. About 50% of the TSA budget is financed by the industry (i.e. passengers, airlines and other) and 50% by the American tax payer (see exhibit below).

Exhibit 35: TSA revenues estimate FY 2005

		USD (billion)	Percentage
TSA revenue	Passenger security fees	1.83	34.6%
	Air carrier fees	0.75 [*]	14.2%
	Transportation Workers Identification Card	0.05	0.9%
	Hazardous Materials fees	0.02	0.4%
	Total	2.65	50.1%
Tax payer contribution		2.64	49.9%
TSA budget		5.29	100.0%

* This number is the TSA estimate that is being contested by the airlines as it serves as the basis for what they must pay in ASIF charges to the TSA. The airline estimate is USD 0.32 billion

Source: TSA

5.20 The \$4.2 billion TSA aviation budget for FY 2004 allocated 43% to passenger screening, 22% to baggage screening and 35% to security enforcement.

Exhibit 36: TSA budget FY 2004

	\$ million	Percentage
Passenger screening	1,799	43%
Baggage screening	944	22%
Security enforcement	1,472	35%
Total aviation budget	4,215	100%

Source: TSA

5.21 The budget for 2005 is shown in the exhibit below. About 91% of the total aviation budget is related to screening. There are 45,000 FTE passenger and baggage screeners on the payroll, representing 42% of the \$5.3 billion budget.

Exhibit 37: TSA budget FY 2005

		FY 2005
		\$ million
Aviation screening operations	Total	4,810
Screener work force	Payroll	2,290
	Private screening contracts	130
	Total	2,420
Screening technology	Checkpoint support	86
	EDS systems	575
	IT support	375
	Research & development	99
	Total	1,200
Screener support	Core infrastructure	299
	FSD management	284
	Supplies	199
	Human resource	150
	Training	145
	Airport rent	116
	Total	1,190
Aviation security regulation & enforcement	Total	484
	Air cargo security	85
	Compliance & enforcement	252
	Transportation security enterprise	147
Total		5,290

Source: TSA

5.22 The US government has two different charges in place for security. The first is the ‘September 11th security fee’, which is paid by the passenger on its ticket. The fee is collected by the air carrier which remits the fee to the TSA on a monthly basis. This fee is capped by the ATSA at \$5 per one-way journey, based on a \$2.5 charge per flight segment since its introduction in February 2002. According to the IATA Charges Manual the maximum charge is \$5 for a one-way journey (2 sectors) and \$10 for a round trip (4 sectors).

5.23 The second charge is the Aviation Security Infrastructure Fee (ASIF), which is paid by the airline. As directed by the ATSA, TSA was created in 2001 to assume one of its major responsibilities of airline passenger and baggage screening, a service previously provided by air carriers. To assist TSA in paying for the increased costs of aviation security, the US Congress provided TSA with the authority to charge airlines (national and foreign) a security fee equal to their costs of passenger and baggage screening in 2000 based on data supplied by each affected airline. To the extent that the September 11th Security Fee was insufficient to cover the TSA’s costs for aviation security, ASIF charges make up

part of the differential. Airlines pay one-twelfth per month of their 2000 screening costs to TSA on a monthly basis but their annual cost is capped by the amount they spent on security in 2000. This limitation applies to the end of 2004 and can be adjusted by the Undersecretary for Transportation Security for 2005 and beyond.

5.24 In an attempt to improve profitability this fee was temporarily suspended in June, July and September of 2002, which is estimated to have saved \$700 million for the industry. Based on the Emergency Wartime Supplemental Appropriations Act of 2003 TSA received about \$2.3 billion from US carriers in the proportional share each carrier had paid or collected as of 16 April 2003 in passenger security and air carrier security fees. The act also suspended collections of both security fees (the September 11th passenger fee for security and the ASIF) for tickets sold during the last 4 months of fiscal year 2003.

5.25 Airlines and airport operators in the EU and the US finance various element of airport security. However, the TSA pays for some elements like the costs of the LEOs deployed at security screening checkpoints and background screening of its own staff and the provision of ID cards for its own employees. Aircraft security is paid for by the airlines in the US, in a similar way to that in the EU. Passenger and baggage screening is financed by TSA and some of the total cost incurred by TSA is recovered through the two charges discussed above.

5.26 There is no airport in the US that levies a specific direct security charge in addition to the TSA September 11th and ASIF security charges. The \$2.5 September 11th security charge per departing passenger levied by the US is about €1.9 per sector (exchange rate of \$1.31 to the €1). Since most US domestic passengers fly two sectors on a one-way journey due to the hub and spoke structure, the charge would be about €3.8, significantly less than for passengers departing from any of the benchmark airports (except Madrid).

5.27 As a result of consumer pressure many US airlines, faced with increasing fuel prices, have decided not to pass on the costs to the passengers. Although some have fuel surcharges in place (like American Airlines) none of the US airlines have security surcharges in place (unlike the European carriers).

BIOMETRICS

5.28 In November 2004 TSA launched a prototype phase of a new biometric ID card for transportation workers, the Transportation Workers Identification Certification (TWIC). This will be a seven month pilot, and up to 200,000 workers from maritime, rail, aviation and ground modes of transportation in six states are expected to participate. Using this biometric data, each transportation

facility can verify the identity of a worker and prevent unauthorised individuals from accessing secure areas.

5.29 Currently, many transportation workers must carry a different identification card for each facility they access. One group that is exempted are airline cockpit and cabin crews whose single airline photo identification certifies that they are working crew members. A standard TWIC would improve the flow of commerce by eliminating the need for redundant credentials and streamlining the identity verification process. Many US airports have delayed the decision to deploy biometrics until new technologies have been fully tested.

5.30 Some airports, like San Francisco and Toledo are currently using hand recognition and there are some 20 airports with trials. Fingerprint controls are in use at Little Rock, Arkansas and Chicago O'Hare and iris technology is deployed at New York JFK. The TSA is developing a system wide common credential, which will include biometrics. European airports seem to be ahead of US airports with the adoption of biometric technology.

EU VERSUS USA

5.31 The TSA requirements for carriers flying to the USA are the same for all carriers involved, so this does not have an impact on the level playing field, except where cost are allocated in different ways. Airlines flying to the US from Schiphol will have an advantage, since security cost for high risk flights (e.g. passenger profiling and screening at gate) are part of the Schiphol security budget and are therefore paid by all passengers.

5.32 As discussed in this Section the US government contributes significantly to aviation security in the USA. Many parties that were interviewed expressed their concern about the role of the governments in the EU and the stark contrast to the USA.

5.33 This different approach in security financing does not distort competition directly, since EU carriers benefit from the government supported security provision in the USA and US carriers are in the same position on this side of the Atlantic as their European counterparts (and here pay more for security). However, the government support in the US does lower cost base of US carriers, which is an advantage EU carriers do not enjoy.

INTRODUCTION

6.1 There are five different aspects of border control that we address in this Section: visas (Schengen and transit), rejected foreign nationals, passport control, separation of Schengen/non-Schengen passengers, and enlargement of the EU. Each of these aspects is discussed separately. We have gathered the information from various sources. At all the benchmarked airports, border control is a government responsibility. However, it is important to have an understanding of the Schengen agreement when discussing border control issues; we therefore discuss this first.

The Schengen Treaty

6.2 The first Schengen Treaty between the five original group members was signed in 1985. A further convention was drafted and signed in 1990. When it came into effect in 1995, it abolished the internal borders of the signatory states and created a single external border where immigration checks for the Schengen area are carried out in accordance with a single set of rules. Common rules regarding visas, asylum rights and checks at external borders were adopted to allow the free movement of persons within the signatory states.

6.3 Among the main measures are the following, of which the last four are of particular relevance to this study:

- Removal of checks at common borders, replacing them with external border checks;
- Common definition of the rules for crossing external borders;
- Coordination between administrations on surveillance of borders (liaison officers, harmonisation of instructions and staff training);
- Strengthening of legal cooperation through a faster extradition system and faster distribution of information about the implementation of criminal judgments;
- Creation of the Schengen Information System (SIS);
- Separation in airport terminals (and other ports) of people travelling within the Schengen area from those arriving from or departing to countries outside the area;
- Harmonisation of the rules regarding conditions of entry and visas for short stays;

- Drawing up of rules for asylum seekers;
- Definition of the role of carriers in the fight against illegal immigration;

6.4 The Schengen area does not include all EU Member States. The 15 Schengen countries are: Austria, Belgium, Denmark, Finland, France, Germany, Iceland, Italy, Greece, Luxembourg, Netherlands, Norway, Portugal, Spain and Sweden. All these countries except Norway and Iceland are European Union members.

6.5 Ireland and the United Kingdom are able to join at a later date. Moreover, although Denmark has signed the Schengen agreement, it can choose within the EU framework whether or not to apply any new decisions taken under the agreements. New entrant states to the EU are expected to sign the Agreement and take steps to ensure that their standards are in line with the requirements of the Agreement, but are not expected to be operating to the required standards at the time of accession.

6.6 Member States retain their prerogatives, above all as regards the free movement of persons. They continue to have sole responsibility for ensuring law and order and safeguarding internal security. Denmark is not taking part in measures except those determining the non-member countries whose nationals must have a visa when crossing the external borders of the member states and measures introducing a uniform format for visas.

6.7 Common rules on visas for intended stays of up to three months include the following:

- A list of non-member countries whose nationals must be in possession of visas when crossing the external borders and those whose nationals are exempt from that requirement;
- Procedures and conditions for issuing visas by Member States;
- Uniform format for visas (Member States will issue the same format of visa to nationals of non-member countries);
- Rules on a uniform visa (the issuing of visas by the Member States is governed by common rules).

VISAS

Schengen visa

6.8 As discussed above, the policy on issuing visas is governed by the Schengen Treaty. The common Schengen visa is either a visa for short stays (tourism, visit or business) or for (airport) transit for the following countries:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Italy, Luxemburg, Netherlands, Norway, Portugal, Spain and Sweden. From 26 March 1995, foreigners travelling to one of the above mentioned countries may receive a visa for a short stay of 1 to 90 days (maximum) per 6 months, which is valid for all these countries. Other types of visa (medical treatment, special visa, visa for longer stay and visa for taking up employment) are still subject to the national legislation of the country of destination.

6.9 EU Regulation 539/2001 lists the common countries whose nationals must be in possession of visas when crossing the external borders states, and those exempt from it. The determination of those third countries whose nationals are subject to visa requirement is governed by a careful case-by-case assessment of a variety of criteria. Regulation 539/2001 has been amended by Regulation 2414/2001 and Regulation 453/2003.

6.10 The Schengen common list contains different nationalities to those on the UK visa list (not a Schengen member). An important difference between the Schengen visit visa and the UK visit visa is that the latter is valid for 180 days and the former for half of this period.

6.11 Appendix B gives an overview of the countries whose nationals require a visa to visit one of the Schengen countries or the UK. The exhibit below shows the countries whose nationals need a visa to visit a Schengen country, but these nationals do not need a visa for visiting the UK. Many of these 31 countries are former colonies, frequently small islands in the Atlantic Ocean (e.g. Bahamas and Barbados), or the Pacific Ocean (e.g. Marshall Islands and Tuvalu). However there are also some larger countries such as South Africa, Botswana and Namibia.

Exhibit 38: Schengen visa requirement

	Country		Country		Country
1	Antigua and Barbuda	12	Marshall Islands	23	Solomon islands
2	Bahamas	13	Mauritius	24	South Africa
3	Barbados	14	Micronesia	25	Seychelles
4	Belize	15	Namibia	26	Swaziland
5	Botswana	16	Nauru	27	Tonga
6	Dominica	17	East Timor	28	Trinidad and Tobago
7	Grenada	18	Palau	29	Tuvalu
8	Kiribati	19	Papua New Guinea	30	Vanuatu
9	Lesotho	20	Saint Kitts and Nevis	31	West Samoa
10	Malawi	21	Saint Lucia		
11	Maldives	22	Saint Vincent and Grenadines		

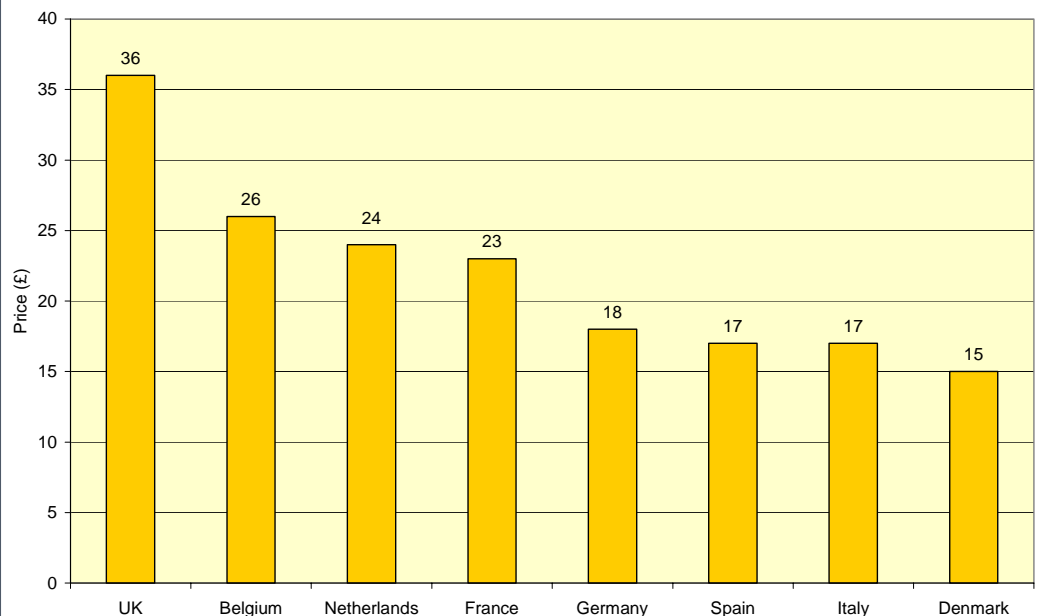
Source: UK home office, Regulation 539/2001 and national consulates.

6.12 There are only three countries whose nationals need a visa to visit the UK, but do not need a visa for visiting a Schengen country: Croatia, Bulgaria and Romania.

6.13 The prices of Schengen visas are currently not determined by EU legislation. Analysis of London embassy websites shows some price differentials, although generally not large. The Belgium short stay Schengen visa is the most expensive (£26) and the Danish visa is the cheapest (£15). A standard UK visa is significantly more expensive at £36. On the assumption that prices of short stay visas are the same if purchased in other countries, it seems the Dutch visa is one of the more expensive at £24 (or €35), since it is the only country that has adopted Council Decision 454/2003 (see below). The Netherlands and France are the only countries where there is no price differentiation for longer stay visa.

6.14 However, Council Decision 454/2003 of 13 June 2003 aims to harmonise the visa prices (€35) from July 2005. That implies that while there are price differences in the short term, but these should disappear in the medium term.

Exhibit 39: Price of Schengen visa (short stay)*



* UK visa relates to a standard visa

Source: London embassies

6.15 Of importance also are the processing time, the criteria and the documentation required for visa application for non-EU nationals wanting visas to Schengen. The criteria at the London embassies were very similar, but the processing time can be different. In some countries a visa can be processed very

quickly, e.g. 2 days or even shorter. On the other hand, in the Netherlands the application needs to be made at least three weeks before the journey (appointment system), but if there are no difficulties a visa can be provided on the same day. We have not analysed this further for other countries: therefore we cannot conclude that the visa processing in London is representative for other parts of the world. The table below gives further background information.

Exhibit 40: Visa overview

Country	Type of visa	Price	Process time
Belgium	Short stay visa (transit, 1, 2 or multiple entries up to 90 days)	£26	Within 48 hours except for certain countries
	Long stay visa	£37	
Denmark	Visa B: one, two or multiple entries	£7	Several weeks before start of journey
	Visa C1: very short-stay (not exceeding 30 days)	£15	
	Visa C2: short-stay (not exceeding 90 days)	£23	
	Visa C3: multiple entry, valid for 1 year	£33	
	Visa C4: multiple entry, valid for a maximum of 5 years	£33 + £20 per year	
France	Short-stay (not exceeding 90 days); one, two or multiple entries	£23	Short stay: a few hours; some African and Asian countries several weeks
	1 to 90 days (over 6 months) over 1 to 3 years; multiple entry	£23	
Germany	Short stay (up to 30 days)	£18	1 to 2 days
	Short stay (up to 31 to 90 days, 1 entry)	£21	
	Short stay (up to 31 to 90 days multiple entries)	£25	
	Short stay within 1 year (up to 90 days)	£35	
Italy	Short stay (up to 30 days)	£17	
	Long stay (over 30 days)	£24	
Netherlands	Short stay (up to 90 days)	£24	Application should be lodged at least three weeks before journey; certain nationalities can take longer
	Long stay (over to 90 days)	£24	
Spain	Short stay (up to 30 days)	£17	Variable; certain countries can take 2 to 3 weeks
	Short stay (up to 90 days); single entry	£21	
	Short stay (up to 90 days); multiple entry	£24	
	One year; multiple entry	£35	
United Kingdom	Standard visit	£36	Straightforward visa in 1 day; but waiting times vary from country to country
	Multiple entry (1 years)	£60	
	Multiple entry (2 years)	£70	
	Multiple entry (5 years)	£88	
	Multiple entry (10 years)	£150	

Source: London embassies + UK Immigration Service

Airport transit visa

6.16 Apart from these so called short-term or travel visas there are 2 other types of Schengen visas, of which the first is relevant to this study:

- The airport transit visa: this allows holders to pass through the international zone of an airport of a Schengen member state without access to the national territory of the Schengen member state; and
- The transit visa: this enables applicants to pass through the territory of one or more Schengen member states on their way to another country outside the Schengen area.

6.17 Regulation 539/2001 does not deal with airport transit visas, but the Council has common consular instructions for the provision of airport transit visas (laid down in 2003/C 310/01). In Annex 3 of these instructions a list of 12 countries whose nationals require such an airport transit visa is presented. We have used national consular sources in the public domain (mainly websites) to verify if this common list is indeed implemented by the different Member States. This appears to be the case. Details are presented in Appendix C.

6.18 On the basis of this analysis, there is a common requirement in the benchmarked Member States for nationals of 12 countries to have a transit visa for transferring at one of their airports: Afghanistan, Bangladesh, Republic of Congo, Eritrea, Ethiopia, Ghana, Iraq, Iran, Nigeria, Pakistan, Sri Lanka and Somalia. The Netherlands has an additional 6 countries on its list, and nationals from these states would also require visas if transferring at Schiphol.

6.19 The Dutch airport transit requirement is very similar to Danish, although the nationals from five African countries (Angola, Gambia, Sierra Leone, Sudan and Syria) can travel via Copenhagen without an airport transit visa, but not through Schiphol. The requirements for the Netherlands and Belgium are the same (i.e. for Benelux countries).

6.20 France has a significant 10 more countries than the Netherlands on the airport transit visa requirement list and the UK, as a non-Schengen country, more than double the number of the Netherlands. However, passengers from Guinea and Syria could travel via Heathrow without a transit visa, but not through Schiphol. Over the last few years the UK has added to the list of countries whose nationals need an airport transit visa. However, an important difference with Schengen Member States is that all passengers holding a valid US or Canadian visa, and having a ticket that includes a visit to the US or Canada, are exempted from the airport transit visa requirement in the UK. Moreover, on arrival in the UK, a passenger may apply for a transit if they fulfil particular criteria (not available to all nationalities), which appears not to be possible in the Schengen

countries.

6.21 Germany is stricter in terms of number of countries, but has exemptions for passengers with a valid US visa for nationals from Eritrea, India and Turkey (the last two are not required in the Netherlands). Italy has the least countries with visa requirements (mainly African countries compared to the Netherlands). Spain is more strict, with an additional five countries.

6.22 In terms of airport transit visa prices, there appear to be two types of categories at the moment. On the one hand Denmark, Germany, Italy and Spain have low prices, while Belgium, France, the Netherlands and the UK have prices that are three times more expensive. As of July 2005 such prices should be harmonised in line with EU legislation to €35 as the Netherlands has adopted already. The processing time is also different.

Exhibit 41: Price airport transit visa

Country	Price of airport transit visas in London	Process time
Belgium	£24	3 to 4 days
Denmark	£7	
France	£23	Few hours
Germany	£7	1 to 2 days
Italy	£7	
Netherlands	£24	
Spain	£7	
United Kingdom	£24	

Source: London embassies + UK Immigration Service

6.23 There appears to be lack of harmonisation among the Member States in the field of airport transit visa requirements (countries). Furthermore, prices (until July 2005) and processing times are not the same.

6.24 While the EU legislation is applicable to all Member States, it leaves open possibilities for individual countries to make their own national provisions. There is no uniform treatment of airport transit visas.

REJECTED FOREIGN NATIONALS

Directive 2001/51

6.25 Article 26 of the 1985 Schengen Agreement states that if an alien is refused entry into the territory of one of the Schengen countries the carrier that brought him to the external border by air, sea or land shall be obliged to assume responsibility for him. At the request of the border surveillance authorities the

carrier must return the alien to the third state from which he was transported, to the third state that issued the travel document on which he travelled or to any other third state to which he is guaranteed entry.

6.26 ICAO has drawn up world-wide guidelines for inadmissible persons in Annex 9 (Facilitation). The most relevant practices for this study are the following (the second practise is subject to discussion):

- Current practise (3.52.1): “the operator shall be responsible for the custody and care of passengers and crew until they are accepted for examination as to their admissibility into the Stae. The responsibility of the operator shall include the custody of passengers and crew between the aircraft and terminal building and with the terminal building transit area”
- Recommended practise (3.57): “...in case an operator took precautions to ensure that passengers are in possession of the relevant documents but the passenger is nevertheless not admitted due to document problems beyond the expertise of the operator or for reasons other than improper documents, the operator should not be held directly responsible for any cost related to the official detention of the passenger...”.

6.27 Furthermore, if an inadmissible person is expected to offer resistance to his removal, security should then be provided during the flight by government officials or by the operator at his own expense (this is not a recommended practice).

6.28 For the countries we have studied, and for which we have received the relevant national legislation/information, it seems the ICAO Annex 9 guidelines are followed.

Exhibit 42: Legislation rejected foreign nationals

Country	Relevant legislation in relation to rejected foreign nationals	ICAO Annex 9 guidelines followed
Belgium	Article 74/4 of the Law of 15 Dec 1980 concerning the access of foreigners	Yes
France		
Germany	Section 64 (1) of the Residence Act	Yes
Netherlands	'vreemdelingencirculaire', Annex 3, Chapter 1-3	Yes
Spain		
United Kingdom	Immigration Act 1971: Paragraph 8 (1) of Schedule 2	Yes

Source: National authorities

6.29 The Schengen agreement states that Schengen countries should impose penalties on carriers who transport aliens who do not possess the necessary travel

documents and EU Council Directive 2001/51 supplements this. Under Article 3 of this Directive, Member States are required to take the necessary measures to oblige carriers to bear the costs for the return of a refused national and if necessary to bear the cost of the stay if immediate onward transportation is not possible. Article 4 prescribes that the penalties under Article 26 of the Schengen agreement shall be dissuasive, effective and proportionate and that:

- The maximum amount of the financial penalty is more than € 5,000 for each person carried; or
- The minimum amount of these penalties is more than € 3,000 for each person carried; or
- The maximum amount of the penalty imposed as a lump sum for each infringement is more than € 500,000 irrespective of the number of persons carried.

6.30 This Directive should have been implemented by each Member State no later than 11 February 2003.

6.31 The Netherlands already had legislation in place before Directive 2001/51 was adopted (Directive 2001/51 was implemented in September 2004). There are three obligations for carriers arising from Article 4 of the 'Vreemdelingencirculaire'¹⁹: 'zorgplicht', 'afschrijfplicht' and 'terugvoerplicht'.

6.32 The 'zorgplicht' means that airlines need to take the appropriate measures and to hold reasonable supervision in order to prevent an alien, who is not in possession of the right documentation, being brought to Dutch territory. If this 'zorgplicht' is not fulfilled a warrant will be given. The airline needs to take appropriate measures in such a way that its staff is instructed to check the validity of travel documents.

6.33 The second obligation, the 'afschrijfplicht', stipulates that for passengers on flights from certain designated foreign airports a copy needs to be made of the relevant part of travel document of all passengers. At the moment the list consists of about 13 airports. In the Netherlands these copies need to be handed to the border control authorities within one hour of arrival at Schiphol if requested by the border control authorities for individual passengers.

6.34 For the third obligation, the 'terugvoerplicht', carriers are required to transport a rejected foreign national out of the Netherlands in all cases where a foreign national does not fulfil the requirements to enter the Netherlands (resulting from Chicago Convention and Schengen legislation).

¹⁹ This also applies to other transporters like ferry and cruise companies.

6.35 A warrant will be given in all cases where an inadmissible person is transported to the Netherlands where the airline did not fulfil the ‘zorgplicht’ and/or ‘afschriftplicht’ obligations. If Article 4 is breached a penalty of up to € 11,250 can be levied (legislation changed in September 2004). Until September 2004 Martinair for example paid on average about €2,250 per incident. If an inadmissible person cannot be returned within a reasonable time frame, the repatriation cost can be levied on the airline.

6.36 KLM has a special Memorandum Of Understanding (MoU) in place with the government. As long as the number of rejected foreign nationals is less than a specific threshold, no penalty will be levied (several thresholds are agreed upon). If this threshold has been reached a penalty will be applicable. Other airlines in the Netherlands do not have a similar agreement, but pay per incident. KLM of course has a scale of activity greater than any other airline by almost two orders of magnitude. It could therefore be of less interest to other airlines, and they could find that the potential savings from an MoU would not outweigh the additional investment to achieve the target.

6.37 In Germany, the law on the entry and stay of aliens in Germany (Alien Act Ausländergesetz) came into force in January 1991. According to Section 74 a carrier is forbidden to convey aliens into Germany, if they are not in possession of a passport and any necessary visa that they require by reason of their nationality.

6.38 If a carrier breaches the prohibition of carriage issued by the Federal Ministry of the Interior or an agency designated by the Ministry, for each alien it must pay a sum of at least € 1,000 and this could go up to € 2,500. Furthermore, each case of transporting aliens without the requisite travel documents into Germany could lead to an additional pecuniary fine up to €10,000 (independent of any compulsory fine mentioned above). From January 2005 this latter charge will not be applicable anymore, as the legislation has changed.

6.39 In Belgium, airlines are fined for carrying passengers without the required travel documents (€3,750 per passenger). However, airlines can sign a MoU with the Immigration Service. As a result of this MoU the fines will be lower. The fines increase as the number of inadmissible passengers rises within a certain time frame. For example, if the MoU specified that the number of inadmissible persons should not exceed 4 per month, then for the first 4 inadmissible persons the fine could be only €750, but for the 5th inadmissible person within the same month a higher fine would be levied. The Belgium government informed us that about 50 airlines have signed a MoU, including airlines with a relatively small operation.

6.40 In Denmark, Section 59 a of the Danish Aliens Act states that any carrier that brings to Denmark an alien who upon his entry is not in possession of the requisite travel document and visa is liable to a fine. The fine is DKK 8,000 or approximately € 1,076.

6.41 In the UK the airline's penalty for a rejected foreign national is about €2,900. The UK has an 'afschriiftplicht' similar to the Netherlands: for passengers on flights from certain designated foreign airports a copy needs to be made of the relevant part of travel document.

6.42 The penalties vary from country to country (see exhibit below), from €1,000 in Germany (for a first incident) to € 3,750 in Belgium. Germany and Denmark appear not yet to have implemented Directive 2001/51.

Exhibit 43: Airline penalty rejected foreign national

Country	Penalty per rejected foreign national	Comment
Belgium	€ 3,750	Airlines can sign a MoU with the Immigration Service
Denmark	DKK 8,000	Equivalent to € 1,076
France	Not available	
Germany	Initially €1,000, but could go up to €2,500	Before a penalty is given, warnings could be given and the government can provide airline with training and support
Italy	Not available	
Netherlands	Max € 11,250	KLM has special agreement (MoU) with Immigration and Naturalisation, other airline pay per incident
Spain	Not available	
United Kingdom	£ 2,000	Currently equivalent to € 2,900

Source: National authorities and legislation

6.43 The exhibit below shows the 'type' of rejected foreign nationals and costs for which airlines are responsible. In all Member States for which we have information the airline is responsible for returning the rejected foreign national. Furthermore, in all Member States, the costs for the government are staff and overheads in dealing with persons refused entry.

Exhibit 44: Responsibility airline

Country	Rejected foreign nationals for which the airlines is responsible	Airline Responsibility (in addition to returning passenger)	Government Responsibility
Belgium	Nationals who arrive without travel documents or who arrived with fraudulent, falsified or counterfeit travel documents	Cost of detention	All costs other than the costs of detention
France			
Germany	Nationals that do not have the proper documentation to pass border	Cost of detention (up to 3 years) Costs arising from necessary official escorts including personnel costs	Administrative cost
Netherlands	Nationals that do not have the proper documentation to pass border Nationals that are a risk to public order or national security Nationals that do not possess sufficient means to pay the costs of staying in the Netherlands	Some cost of detention Cost of removal can be claimed from the airline	In case of asylum request the government bears the cost of stay during the asylum procedure
United Kingdom	All nationals who are refused entry where there is evidence that the airline has brought them into the country	Cost of detention for the first fourteen days	Cost of detention after fourteen days

Source: National authorities and legislation

6.44 Although we do not have a complete picture it seems the cost of transportation is normally a responsibility of the airlines. The approach to the cost of possible security escort is different. The airlines will normally pay for the ticket for the escort, but for example in Germany the staff cost is levied to the airlines unlike the approach in the Netherlands (where staff costs are paid by the Royal Marechaussee). The cost of detention varies as well: in the UK the airline pays for the first 14 days, while in Belgium and Germany the cost of detention is a responsibility of the airline. In the Netherlands detention costs can be levied on the carrier, although this is currently not practised on a systematic basis (this could start in April 2005).

6.45 The situation in the Netherlands will change as of April 2005, when Directive 2001/51 will be fully implemented. This will mean that the cost of detention and the personnel cost of potential security escort can be claimed from the airlines.

6.46 Most airlines have made provisions in their general conditions, which imply that passengers must repay any fines, detention costs and other charges. KLM, Air France, British Airways, Lufthansa and Iberia have similar conditions (under administrative formalities):

- Refusal of entry: subject to any other regulations, the passenger agrees to pay the applicable fare whenever carrier, on government order, is required to return a passenger to his point of origin or elsewhere owing to the passenger's inadmissibility into a country, whether of transit or of destination carrier may apply to the payment of such fare any funds paid to carrier for unused carriage, or any funds of the passenger in the possession of carrier.
- Passenger's responsibility for fines: if carrier is required to pay or deposit any fine or penalty or to incur any expenditure by reason of the passenger's failure to comply with the entry or transit laws, regulations, orders, demand and requirements of the countries concerned or to produce the required documents, the passenger shall on demand refund to carrier any amount so paid or deposited and any expenditure so incurred.

6.47 However, airlines have indicated to us that the ability to re-claim these costs from the rejected person is limited. In general the best an airline can achieve is reselling the parts of the rejected person's journey (ticket) that have not been used.

6.48 Further relevant EU legislation is EU Directive 2004/82 of 29 April 2004. It deals with the obligation of carriers to communicate passenger data in order to combat illegal immigration and improve border control. The transmission of advance passenger data at the request of the appropriate authorities, to be implemented not later than September 2006, includes information such as number and type of travel document used, nationality, name etc.

6.49 Article 4 of this Directive prescribes the sanctions of failing to comply for carriers is a maximum amount of more than €5,000 (for each journey for which passenger data was were not communicated correctly) or a minimum amount of more than €3,000. This Directive does not specify for which countries this passenger data needs to be collected, nor does it specify how quickly the data needs be delivered to the authorities or how this should be financed.

6.50 We have not received sufficient information to compare this for the different countries, but since the implementation deadline is September 2006, it is unlikely Member States have adopted this requirement, as is the case in the Netherlands and Germany.

6.51 If a foreigner requests asylum in the Netherlands, this application will be dealt with first. The Dutch government bears the cost of the stay during the asylum procedure. This is not the same as in Germany: we learned from Lufthansa that the airline pays for accommodation cost for up to three years of the asylum procedure.

PASSPORT CONTROL

Responsibility

6.52 At the beginning of 2002 the Dutch government and the operator of Schiphol Airport agreed standards for the time taken to process passengers at passport control. The standard agreed by the government and the operator is that the maximum waiting period for 95% of all passengers is 10 minutes on arrival, 6 minutes for passengers who are transferring flights and also 6 minutes on departure. The starting point is that the passport control should be executed in conformity with the Schengen agreement.

6.53 To meet this standard the government and the operator agreed, among other things, to make the necessary investments in infrastructure and in staff. The government would increase the number of officials responsible for border control and the airport operator would increase the number of passport control desks. The standard is not achieved yet, except for passport control on arrival. The primary aim of this service level agreement is to reduce the waiting times at Schiphol.

6.54 We have had limited response from the responsible authorities (to the best of our knowledge always the government) in other countries. The number of staff varies from 500 at Gatwick to 1,700 at Charles de Gaulle, although these figures are not Full Time Equivalents (FTEs). The estimates take into account employees who are on the payroll but for various reasons are not working (e.g. maternity or sick leave). While government normally bears the majority of costs (staff), we know facilities are provided without charge at the London airports.

Exhibit 45: Responsibility passport control

Country	Airport	Party responsible	Number of staff involved ¹	Who bears cost
France	Charles de Gaulle	Ministry of Interior	1,700	Government
	Orly	Ministry of Interior	500	Government
Germany	Frankfurt	Ministry of Interior		Government
	Munich	Ministry of Interior		Government
Netherlands	Amsterdam	Ministry of Defence	800	Government (€ 119 million in 2004)
Spain	Madrid			
United Kingdom	Gatwick	UK Immigration Service	500	UKIS and partly BAA Gatwick
	Heathrow	UK Immigration Service		UKIS and partly BAA Heathrow

(1) This is not equal to number of FTEs

Source: National authorities and SH&E analysis

Performance targets

6.55 At Frankfurt, Munich, Madrid and the Paris airports there are no performance targets for border control waiting times, but at Schiphol and the London airports there are. At the London airport these performance targets are not part of a service level agreement (SLA) with the government. At Schiphol the performance targets have been in place since 2002 (they have not changed). Gatwick and Heathrow have no outbound passport inspection (except by airline staff for security purposes). The waiting time targets for arriving passengers are only applicable to non-EU passengers, whereas at Schiphol there is no distinction for nationality. The British targets are much less strict.

6.56 None of the stakeholders could provide us with actual waiting time. Only BAA had survey results (Quality Service Monitor) to give some insight into the perception of passengers. In general passengers give the immigration experience a score of 4 out of 5 at Gatwick and Heathrow.

6.57 Stakeholders indicated that they considered it unlikely that passengers would find this an important aspect in the choice of a particular airport.

Exhibit 46: Quality aspects

Airport	Performance targets	Perception passengers/ survey results	Comments
Charles de Gaulle	None	Non available	
Orly	None	Non available	
Frankfurt	None	Non available	
Munich	None	Non available	
Amsterdam	Arrival: maximum waiting time for 95% of passengers is 10 minutes	Non available	Part of SLA (target achieved)
	Transfer and departure: maximum waiting time for 95% of passengers is 6 minutes	Non available	Part of SLA (target not achieved)
Madrid	None	Non available	
Gatwick and Heathrow	Maximum waiting time for 100% of non-EU passengers is 45 minutes and for 90% of non-EU passengers this is 30 minutes; no standard for EU passengers	In general passengers give the immigration experience a score of 4 out of 5 at Gatwick and Heathrow	

Source: Airport operators

Automatic Border Control

6.58 Automatic Border Control (ABC) makes use of biometrics technology. There is no international standard for biometrics, which makes a harmonised

approach difficult. In 2003 ICAO recommended making face recognition the primary biometrics for ABC. The use of biometrics for passenger facilitation, including border control, would benefit air carriers and airports, since passengers can be handled more conveniently and quickly, thus improving the image of the airport. Another benefit would be an increased level of security that would improve the safety of passengers.

6.59 On 26 October 2004 the EU Justice and Home Affairs Council agreed on the inclusion of fingerprints as a second mandatory biometric identifier, instead of an optional one, in future passports issued by Member States. The Council also decided the dates of application of the two mandatory biometrics. A facial image of the holder will have to be included in all EU passports issued 18 months after the date of adoption of technical specifications to implement the Council Regulation on standards for security features and biometrics in passports and travel documents issued by Member States (expected in 2006). Fingerprints will be come mandatory after 36 months (expected in 2008). Passports and travel documents issued by Member States will thus include a chip that will contain a facial image and fingerprints scans to establish a reliable link between the genuine holder and the document. Therefore biometric systems will need to be installed and managed at European airports.

6.60 In a position paper of February 2004 ACI noted that biometric technology has been applied relatively slowly due to three factors:

- Over-promise and under-delivery of biometric technology vendors;
- Fast progress of biometric capabilities;
- Lack of a cohesive approach from regulating bodies, leaving airports without guidance on the decision of adopting biometric technology.

6.61 Biometrics technology can also be used for staff. An ACI survey showed fingerprints are currently used in 67% of employee pilot programmes compared to hand geometry (17%) and facial recognition (8%). In passenger pilot programmes, fingerprints also came out top alongside iris recognition.

6.62 The exhibit below shows developments of ABC at different airports. Schiphol is the only airport where ABC for passengers is no longer in the pilot phase. Different technologies are used: fingerprint, iris and facial recognition.

Exhibit 47: Automatic border control

Country	Airport	Availability of biometrics	Technology	Who finances?	Biometrics developments
Belgium	Brussels	No	-	-	None
Denmark	Copenhagen	No	-	-	
France	Charles de Gaulle	Staff	Fingerprint	Company of employee	
	Orly	Staff	Fingerprint	Company of employee	
Germany	Frankfurt	Pilot for staff and passengers	Iris	Airport operator, airline and government	
	Munich	No	-	-	
Italy	Fiumicino	Pilot: identification for staff	Facial		
Netherlands	Amsterdam	Yes, Privium for passengers + staff ID	Iris	Privium members + relevant company	In May 2005 a pilot will start for ABC in co-operation with government
Spain	Madrid	No	-	-	
United Kingdom	Gatwick/ Heathrow	No	-	Government	Introduction of border control system based on IRIS technology

Source: airport operators and SH&E analysis

6.63 At Schiphol, the Privium programme for frequent travellers was introduced in October 2001. During the first year, the iris scan was run as a pilot project, after which the Ministry of Justice and the Royal Military Police ('Koninklijke Marechaussee' or KMar) agreed that the pilot period had shown that the iris scan technology satisfied all the security requirements.

6.64 Schiphol Group has a joint venture (Dartagnan) with the Dutch company Joh. Enschede to develop and implement biometric security technologies, including Privium. The government agreed with Schiphol that ABC would be offered to passengers for cost price. The Privium Basic programme (€ 99) offers fast-track border passage with the iris scan, while the Privium Plus programme (€ 119) also provides its members priority services, speed and comfort, based on exclusive and efficient facilities such as priority parking and check-in at business class desks of participating airlines.

6.65 Passengers can join Privium if they have a valid passport from one of the European Economic Area countries or Switzerland. The membership fee for Privium Basic, which allows using the fast-track border passage is € 99 per

annum²⁰. The 20 or so airlines that identify themselves with Privium have their own Privium check-in desks, which are often the business class desks (KLM does not participate). There are about 14,000 Privium members. According to the KMar this is much less than was expected

6.66 A further ABC development at Schiphol is that in May 2005, KLM Boeing 737 cockpit crew will take part in an ABC pilot. They can cross the border through a separate gate. This process will not be under the direct supervision of the KMar. The technology used will be fingerprint and possibly facial recognition. Schiphol Group is financing the project (i.e. large investments) while the Ministry of Interior is still considering taking financial responsibility.

6.67 At the Paris airports there is a fingerprint identity control system for the 90,000 staff working at the airports, of which only 10% is ADP staff. It is Europe's largest airport staff identity control system with 100 fixed and 15 mobile check points. It is expected that passengers will be able to use this system next year after a series of test runs with Air France. Strict legislation in relation to privacy has made it difficult to move forward with biometrics on a wide scale in France.

6.68 At Frankfurt the Federal Ministry of the Interior, Federal Border Police, Lufthansa, and Fraport have initiated a pilot project testing automated and biometrics-supported border controls in Terminal 1. Passengers travelling frequently can participate voluntarily in this project. The objective is to save time and personnel at border crossings. Fraport is the first German airport operator testing automated and biometrics supported systems as part of standard passengers operations. It is expected that frequent flyers who travel often to and from non-Schengen countries will benefit, especially during peak periods. Iris technology was chosen since it was considered to be the most secure system. There is also a pilot for Fraport and Lufthansa staff to test different technologies.

6.69 In the UK, project IRIS will be introduced in early 2005. This is a border control system based on iris technology. It will be implemented at Heathrow, Gatwick, Manchester, Birmingham and Stansted airports. Passengers will register in advance and will be able to use IRIS on arrival. The target group is non-EU passengers, although EU nationals will be allowed as well, depending on availability. Within 5 years, more than 1 million passengers are expected to enrol on a voluntary basis. No supplementary documentation is required and no modification to existing travel documents is necessary. It will be one of the first projects world wide using iris recognition technology on a large scale.

²⁰ The membership fee for the Privium Plus programme is €119 per year. The automatic border passage takes between 10 and 15 seconds.

SEPARATION OF SCHENGEN/NON-SCHENGEN

6.70 The mandatory physical separation of Schengen passengers and non-Schengen passengers has had different consequences for airports. This has very much depended on the existing layout of the airport. For the UK, of course, there were no consequences, since it is not a Schengen country. The impact at Schiphol with its one terminal concept would have been greater than at Charles de Gaulle where there are separate terminals allowing specialisation of use between Schengen and non-Schengen passengers without the need for structural changes (the cost for Schiphol seem to have been 5 times greater).

6.71 In general, airports finance changes to infrastructure through capital expenditure programmes that are ultimately subject to some form of government regulatory control. Capital expenditure programmes are funded by airport charges, often supplemented by profits from non-aeronautical activities. That means in the end the passenger pays, but there is limited scope to fund infrastructural changes through other channels. Although Milan Malpensa and the new airport in Athens have benefited from some assistance from European sources (the Trans-European Network project and EIB finances), the major airports considered in this study are operated in the main on a commercial basis. Support from government sources - even if countenanced by government – would need to comply with EU State Aid provisions and ensure that competition were not distorted.

6.72 Schiphol has taken up in the security charge some cost elements in relation to the Schengen/ non-Schengen separation (space and desks). We have not been able to find out how other airports approach this.

Exhibit 48: Schengen impact

Country	Airport	Consequences of Schengen obligation to separate passengers	Method of financing (does passenger pay)
France	Charles de Gaulle	Limited, different terminals (€40 million)	Aeronautical charges; capital expenditure
	Orly	Limited non-Schengen flights	
Germany	Frankfurt	Special Schengen piers	Aeronautical charges; capital expenditure
	Munich	New Terminal 2 designed to accommodate obligation	Aeronautical charges; capital expenditure
Netherlands	Amsterdam	The separation has cost the industry €200 million at Schiphol	Aeronautical charges; capital expenditure
Spain	Madrid	Terminals divided into different areas	
United Kingdom	Gatwick	Not Schengen country	Not relevant
	Heathrow	Not Schengen country	Not relevant

Source: Airport operators

ENLARGEMENT OF THE EU AND SCHENGEN

6.73 The number of EU member states increased by 10 on 1 May 2004. The number of Schengen countries will increase in the future, although under EU legislation the 10 new Member States while required to agree to the provisions of the Schengen Treaty, cannot enjoy its benefits until 2007 (depending on the outcome of the assessment by the Schengen Evaluation Committee). Hence, for the time being, this is less of a concern.

6.74 At Heathrow and Gatwick more desks have been opened for EU nationals. Further increase in the number of EU national desks is still being discussed.

6.75 At Schiphol the enlargement of the EU has had consequences for customs control: baggage of passengers from the new Member States is no longer checked for import to the EU. At Schiphol the airport operator expects that the EU enlargement will also reduce the burdens on passport control.

Exhibit 49: EU/ Schengen enlargement

Airport	Measures taken to cope with new EU Member States	Measures taken to cope with new Schengen States	Cost and method of financing
Charles de Gaulle	None	None	-
Orly	None	None	-
Frankfurt			
Munich			
Amsterdam	No specific measures	None yet	
Madrid			
Gatwick	Increase in number of passport desks for EU nationals + increase of checks on documents	UK not part of Schengen	No significant extra cost for restructuring of arrival control
Heathrow	Increase in number of passport desks for EU nationals + increase of checks on documents	UK not part of Schengen	No significant extra cost for restructuring of arrival control

Source: Airport operators

7

DISCUSSIONS OF FINDINGS AND ASSESSMENT

INTRODUCTION

7.1 In this section we assess how the differences in policies and practices between airport and countries described in the previous sections will impact on the competitiveness of Schiphol airport.

7.2 The starting point of this study has been the premise that the Dutch government has, to a greater or lesser extent, some influence on the costs of the aviation sector through national measures and the implementation of international law. In turn, the relative costs at Schiphol, as a result of government rules, have an effect on the attractiveness of the national airport.

AIRPORT COMPETITION

7.3 Analysing why passengers fly to and from Schiphol requires consideration of many different factors, among the more important are:

- Availability of air services (network)²¹;
- Passenger perception of Schiphol (and network carrier);
- Level of air fares and charges.

7.4 The reason passengers choose a particular airport is therefore dictated by a combination of factors. Parties interviewed have different opinions about the security charge and its influence on the choice of airport (or airline). Airlines, in contrast to airport operators, see a more sensitive relation between the level of charges and passenger demand.

7.5 In terms of **air services**, O&D passengers are limited in their choices, although passengers could fly to/from other Dutch airports and drive or take the train to/from Belgium and Germany. Inbound tourists could also opt for a different destination than the Netherlands. Airports compete for O&D traffic to the extent that they have overlapping catchment areas. In contrast, transfer passengers have more alternatives and could substitute Schiphol with other major hubs in Europe to reach their final destination (schedules permitting).

7.6 The **passenger perception** of Schiphol has to do with many different aspects as well: availability of shops, convenience of the one terminal concept and other quality aspects. The attractiveness for transfer passenger in particular is determined by the quality of the airport and the network carrier. The perceived

²¹ Which includes the marketing and sales efforts of carriers

quality of security and border control processes are part of this, but are unlikely to play a critical role. One barometer of passenger perception is the annual Skytrax airport survey²². The most recent survey from March 2004 showed that world wide, Asian airports dominate the top 5 with Hong Kong International Airport perceived as number 1 for the 4th consecutive year. Schiphol returned to the 2004 list of top 5 airports ranking 3rd (after having slipped to 7th position in 2003). Schiphol appeared to be Europe's only challenger to the Asian domination for airport comfort and efficiency²³.

7.7 Obviously the **level of airfares and additional charges** determine the attractiveness of Schiphol as well, particularly for leisure passengers paying for their own travel. The competitive position of a national single hub carrier is amongst others influenced by the different charges levied at other competing hubs. The level playing field or equal competitive conditions for airlines are disturbed if one carrier at its home base is confronted with a higher package of charges or tariffs than a competing carrier at another home base. It should be noted that differences in charges can arise for several different reasons (e.g. high costs of living leading to higher salaries), and policy decisions of financing or allocation of responsibilities are only one possible cause. Some airlines are more sensitive than others to changes in charges, as it represents a higher share of operating expenses²⁴. Security and border control are only two elements of the equation of competitiveness.

7.8 To come to conclusions about the main research questions, we first need an understanding of the term 'level playing field'. A level playing field (LPF) is defined by DGL as "an economic situation in which all competing suppliers on a relevant market are subject to either the same or at least comparable prerequisite constraints imposed by government regulation". There is no level playing field if (see Exhibit 50):

- EU-regulation is not met equally in all countries: the disturbance can be caused by more or less strict legislation practice on a national level; or
- (Other) differences between national rules or legislation in countries occur.

7.9 The levels of process efficiency influence the general competitive conditions in countries, but this is not a matter of level playing field (see Exhibit 51).

²² This global survey is made up of more than 86 different passenger nationalities.

²³ Singapore was 2nd, Seoul Incheon 4th and Kuala Lumpur 5th.

²⁴ For the financial year 2003/04 landing fees and navigation charges accounted for 9% and 15% of operating expenses for KLM and Transavia respectively

Exhibit 50: Competitive effects due to governmental legislation or rules

Average of national legislation / tariffs	More severe legislation (Higher tariffs) ↑		Disturbance of LPF: Disadvantage for industry ↑	↓ ↓	Level playing field
	Less severe legislation (Lower tariffs) ↓		Disturbance of LPF: Advantage for industry ↓	↑ ↑	

↑ translation to national level

EU-regulations (minimal requirements)	More severe legislation (Higher tariffs) ↑		Disturbance of LPF (lawful): Disadvantage for industry ↑	↓ ↓	Level playing field
	Less severe legislation (Lower tariffs) ↓		Disturbance of LPF (unlawful): Advantage for industry ↓	↑ ↑	

Source: DGL

Exhibit 51: Competitive effects due to process efficiency

Average efficiency of Security process	(Lower tariffs) ↑ More efficient ↑		Competitive advantage for industry ↑	↓ ↓	Equal competitive conditions
	Less efficient ↓ (Higher tariffs) ↓		Competitive disadvantage for industry ↓	↑ ↑	

Average efficiency of Border Control process	(Lower tariffs) ↑ More efficient ↑		Competitive advantage for industry ↑	↓ ↓	Equal competitive conditions
	Less efficient ↓ (Higher tariffs) ↓		Competitive disadvantage for industry ↓	↑ ↑	

Source: DGL

7.10 In the remainder of this section we discuss these elements. To determine if there is a level playing field, we analyse EU legislation and national implementation. To determine if there are equal competitive conditions, we analyse the efficiency of the security and border control process. Of particular relevance to this study is whether any of these factors is influenced by government policy decisions.

National implementation

7.11 In addition to amending legislation to comply with EU Regulation 2320 Member States have made changes to national legislation that do not directly result from Regulation 2320.

7.12 All Member States have adopted a National Aviation Security Plan and national legislation (except Spain). The Netherlands is the only Member State where the Ministry of Justice has responsibility for this.

7.13 Regulation 2320 does not deal with aspects of responsibility. The result is that there is no harmonisation in the EU: the responsibility for the provision of security services varies from one country to the other.

7.14 Though with some differences, there is a general pattern in the tasks executed by the different parties. At all airports that are part of this study, some activities are outsourced to private security companies.

Airport security

7.15 Access to security restricted areas is the responsibility of airport operators. The provision of terminal surveillance is performed by national or local police and in the Netherlands also by the airport operator. The Netherlands is the only country where there is a shared responsibility.

7.16 Only at Frankfurt and Munich is staff screening financed through general airport charges. The difference with Schiphol is that here passengers pay transparently through their ticket, while in Germany it is the airline that pays.

7.17 The UK is the only state investigated where there is 100% screening of staff prior to entry to the restricted areas.

7.18 The responsibility for the provision of badges is assigned to the airport operator, supervised by the government. Several governments do not require a charge for the background screening of staff. Airports are adopting different biometrics technology for staff IDs.

Aircraft security

7.19 While the aircraft security check is performed by airlines, the surveillance of the aircraft is more varied. In Paris and Madrid responsibility lies with the airport operator.

Passenger and baggage screening

7.20 Germany is the only country where passenger and baggage screening is a government responsibility. Usually this activity is subcontracted to private companies.

7.21 The requirement for 100% hold baggage screening has had a major cost impact at the airports investigated following adoption of EU Regulation 2320, except in the UK where it had been in place for some time. Reconciliation of hold baggage is a responsibility of airlines.

Mixing of passengers

7.22 The one-terminal concept at Schiphol is attractive for transfer passengers. However, it creates difficulties from security and border control perspectives, since under one roof a distinction needs to be made for EU and non-EU passengers for security purposes, and Schengen and non-Schengen passengers for border control. While there is considerable overlap between these two divisions, there are material differences.

7.23 Mixing of departing and arriving passengers takes place at Amsterdam, Frankfurt, Munich, and to a lesser extent Gatwick and Heathrow. Amsterdam seems to be most affected as a result of the central security system.

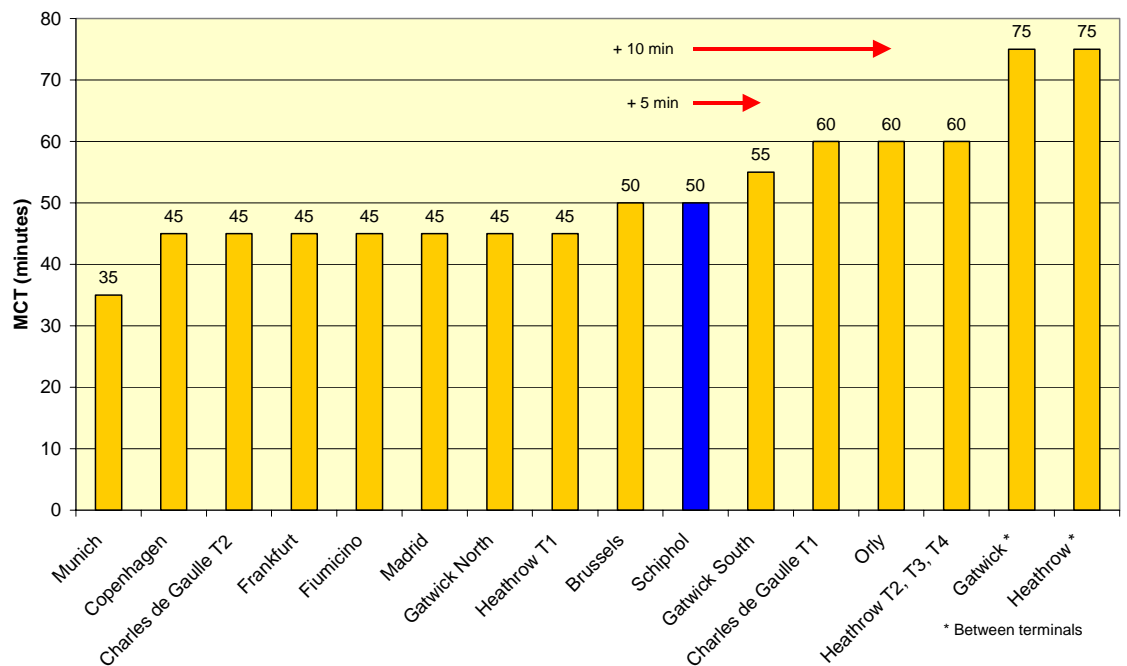
7.24 The additional security check for transfer passengers as of December 2004 has consequences for the one-stop-security at Schiphol, which is important for the quality of the transfer product. The minimum connecting time (MCT) at Schiphol is currently 50 minutes for a passenger connecting from a non-EU origin to a European destination.

7.25 KLM is concerned since achievement of this MCT has become more difficult with the additional passenger screening requirement (for non-EU to EU transfer passengers). Should this 50 minute standard no longer be achievable on a regular and normal basis, it would have a significant impact on KLM's traffic. Fewer flight connections can be achieved. With a higher MCT, the position of connections in the computer reservation systems of travel agents will become less favourable, which will have its effect on the attractiveness of Schiphol as a hub. Even a few extra minutes could be critical for connecting traffic (although KLM was not able to make a clear estimate of potential loss of traffic or revenues).

7.26 The exhibit below shows the MCTs at competing hubs for non-EU to EU transfers. It may be seen that the current MCT at Schiphol is already longer than at many competing hubs including Munich, Copenhagen, Charles de Gaulle Terminal 2, Frankfurt, Rome Fiumicino, Madrid, Gatwick North Terminal and

Heathrow Terminal 1. If the MCT were to increase by 5 minutes to 55 minutes for non-EU to EU transfer passengers, the MCT would be the same as Gatwick South Terminal. If the MCT increased by 10 minutes to 60 minutes, it would be the same as at Charles de Gaulle Terminal 2, Orly and Heathrow Terminals 1, 3 and 4. That would mean only the MCT between terminals at Gatwick and Heathrow would be higher.

Exhibit 52: Minimum Connecting Times



Source: OAG March 2003

7.27 At Schiphol, the options for preventing particular screened departing passengers from mixing with particular arriving passengers are limited. One option would be to go back to the old de-centralised system of screening at the gate.

Security for high-risk flights

7.28 As we have seen there are different types of additional security measures taken in the States investigated. Most relate to requirements from the TSA in the US. One of the main differences is the financing of additional security for high-risk flights. With the exceptions of Schiphol and Madrid this is financed by the airlines involved. However, this difference only distorts the level playing field if government bears some or all of the costs. Otherwise, the payment ultimately comes from the passenger. At Schiphol, there is some cost recovery through the security charge, which means that all departing passengers pay for this, which benefits the airlines (and passengers) flying to the USA, creating some distortions between the different markets at Schiphol and consequently its competitiveness in

each of these markets relative to its airport competitors. According to the AAE report, the security cost related to high-risk flights represents about € 26 million (estimate for 2003), which is about 20% of the total security budget.

Unforeseen additional security measures

7.29 The countries have different approached to deal with unforeseen additional security measures. For example in the Netherlands the government can instruct the airport operator to take special security measures for one or more flights in response to a sudden security risk known to government. Such an instruction may be made in response to a request form another country. These special security measures can be of a temporary nature or can become structural if they are incorporated in the security charge.

7.30 In response to a sudden security risk the Minister of Justice can make provisions for the financing of additional security measures. This happens when such measures are incidental and generate cost that could not be budgeted for by the airport operator. After the cost of the additional measures can be incorporated into the adjusted airport charges the aviation sector will finance these costs.

7.31 As may be seen below, this initial government support happens also in Germany, while at other airports (Paris and London) the airlines involved pay. In France there is no government support. At Madrid, the airport operator pays as long as the threat continues, although the airport operator is subsidised by the government.

7.32 At Schiphol, custom authorities have the right to search flights arriving from particular countries in South America and the Caribbean (such as Surinam and the Dutch Antilles)²⁵. This means the whole aircraft is searched and all passengers are screened on arrival, which could take from 20 minutes up to two hours. This procedure is in place to check the aircraft and passengers for drugs trafficking. Airlines are severely impacted from a financial, commercial and operational point of view: e.g. reduced aircraft utilisation, delays, passengers missing connecting flights etc.²⁶. There is a continuous dialogue between airlines and the authorities to ensure this process is performed as efficiently as possible. The Ministry of Foreign Affairs has already decided that support will be given for searching of the aircraft to take place at the origin of the flights.

Temporary security measures

²⁵ This is not completely within the scope of this study

²⁶ Airlines have changed their schedules to accommodate such checks. Martinair has seen its traffic drop significantly to one destination in Venezuela and believes it is directly related to this additional screening on arrival.

7.33 In response to a sudden security risk the Minister of Justice can make provisions for the financing of temporary security measures, similar to the situation at Frankfurt. Although this could be temporary, this reduces the cost burden on the industry and creates a competitive advantage, since in France and the UK airlines pay for this.

Financial aspects

Context

7.34 The AAE report concluded that differences in security costs between the benchmarked airports are smaller than differences in the other charges analysed. We believe the impact of security charges should therefore be put in the right context: security is only one part of the equation and not the part with the largest impact on the level playing field.

7.35 As other studies have identified, the financing of aviation security differs from country to country. Security expenses are either financed through a security tax (Paris), passenger charges (Heathrow and Gatwick) or a dedicated security charge (Amsterdam, Frankfurt, Madrid). However, the proportion of security costs recovered through the dedicated security charges varies. It is the view of both airport operators and airlines that there is a lack of transparency when it comes to the financing of security in the EU. It results from the absence of guidance in this respect from EU Regulation.

7.36 Airlines have been faced with increasing security costs. The EC report shows a total of €1.2 billion additional security costs for airlines in Europe in 2002. For example KLM had additional security costs of about €30 million (new systems, training and equipment etc). Airlines generally are in the weakest financial position of any stakeholder in the air travel value chain. This is illustrated in Appendix E. This does not mean therefore that security costs should be spread across the various parties in the value chain: the cost of security is only one part of the equation and many other elements impact on the financial situation of airlines. However, it adds weight to the question already raised by both airports and airlines of whether increasing security costs should be borne entirely or at all by the sector and a single player within, since the increased threats are not aimed at the sector specifically.

7.37 In conclusion, although there are differences in which services are provided by which stakeholder, and how each stakeholder is able to remunerate its costs, in general most European States work on the basis that the user (i.e. the passenger) ultimately pays. The most notable exception to this is Spain, where the government does shoulder some of the cost burden.

Transparency

7.38 The need for greater transparency in security costs is a general message given to us by airlines. Of all benchmarked airports, Schiphol has the most transparent financial system: all security related costs are part of a single budget from which the level of the security charge is derived on the basis of cost recovery, as recommended by ICAO.

7.39 Schiphol does not perform more security activities than benchmarked airports. From this perspective, Schiphol does not charge additional costs to its users compared to other airports. Across the board security costs have risen over the last few years, while at Schiphol after the airport operator took over responsibility for security activities, the security costs have actually been lower (in both 2003 and 2004). The majority of the revenues generated from the security charge in the Netherlands ends up with the Schiphol's security subcontractors.

Choice of airport by airlines

7.40 Except for easyJet, the airlines we spoke to felt that security had no significant impact on choosing an airport. easyJet, however, informed us that reducing its presence at Schiphol was a consequence of the cost base of the airport, and that the cost base included security charges. easyJet is concerned that it is too easy for governments to use a security charge as a "stealth tax". It is, though, certainly true that total security costs now represents a higher proportion of an airline's cost structure than in the past.

7.41 As discussed, easyJet appears to absorb part of the passenger charge for its passengers ex-Amsterdam since its charge (levied in addition to the air fare) for Amsterdam passengers is less than its payments to Schiphol. This is somewhat strange as the practice of separating certain costs/charges from the 'headline' air fare presumably is based on the hypothesis that when booking, customers pay attention only to the air fare and the 'add-ons' do not matter. This practice of easyJet's for its Amsterdam passengers will ultimately have an impact on its profitability, although all airlines apply market-based and not cost-based prices. However, airlines that do not have a low cost business model are unlikely not to serve Schiphol as a result of the security cost.

Cost recovery

7.42 During our discussions a number of parties indicated that there might be possible subsidies in relation to security costs from the government. However, in general we have not been able to substantiate this.

7.43 It has not become clear if the security charge at Frankfurt and Munich

recovers the cost incurred by the government in subcontracting passenger and baggage screening. It could be that there is a degree of subsidisation from the government if revenues do not cover costs.

7.44 The policy in relation to transfer passengers at the two German airports is different from Schiphol. As we discussed the security charge at Frankfurt is not paid by all transfer passengers on departure: only those transfer passengers that undergo screening need to pay this, and for these passengers it is Lufthansa's policy to absorb these charges. Lufthansa estimates that at Frankfurt the security charge has to be paid for about 20% of its transfer passengers. Lufthansa has an estimated 10 million departing transfer passengers at Frankfurt. This implies that Lufthansa absorbs about €19 million (20% of transfer passengers). However, for 80% of transfer passengers the security charge is not applicable. If costs are absorbed by the airline, this could make ticket prices more attractive via Frankfurt, although the cost will need to be recovered one way or the other. However, this is a commercial decision of the parties concerned and not a policy issue.

7.45 In Madrid, the Spanish government contributes to financing aviation security, which clearly gives the Spanish industry a competitive advantage.

7.46 In the UK, the economic regulatory regime applied to BAA allows the airport operator to pass on to users only 75% of the increase in security related costs in user charges. This means there is an incentive for the airport operator to minimise security related cost increases. Airlines contribute to police costs as well. Overall, the UK industry is unlikely to have an advantage over the Dutch industry since the industry and the passenger pays like in the Netherlands.

IMPACT OF COSTS ON PASSENGER DEMAND

7.47 From a theoretical point of view the relationship between air fares and passenger demand is determined by price elasticity. Price elasticity refers to the behaviour of consumers in response to a change in price. It is defined as the ratio of the percentage change in demand in response to the corresponding percentage change in price. It remains, however, very difficult to isolate this impact of price, since other factors are part of the equation.

7.48 The EC study concluded that there is no clear evidence of rising security taxes and charges negatively impacting air traffic demand.

7.49 To assess the possible impact of security and border control charges on passenger demand, we have undertaken a simple price elasticity analysis for the different market segments to determine the potential change in traffic at Schiphol

airport in relation to a change in ticket prices (including surcharges).

7.50 As discussed in Section 3, we were able to derive a breakdown for passenger market segments at Schiphol. We have assumed that the composition of traffic (i.e. business, leisure, VFR and other) is the same for all market segments²⁷, and using traffic statistics from the Schiphol report, we have estimated the nature of passenger demand in the different market segments as the starting point of our analysis²⁸.

7.51 We then estimated the average return fares based on an internet fares analysis, on airline passenger revenue data, and on our judgement. We have assumed that fares for transfer passengers are not higher than for O&D intercontinental passengers, on the basis that competitive prices are used to attract this transfer market, as confirmed by KLM, and on the basis that 42% of transfer passengers have an intercontinental origin or destination²⁹.

7.52 Different studies produce different values for price elasticity. This is not surprising since it depends on the specific market conditions. We have made use of a study comparing 11 sources of price elasticity for the purpose of this exercise³⁰. The price elasticities presented were based on industry best practice (including ICAO standards). From this source, and again applying some judgement, we have selected price elasticities for a relatively mature market like Schiphol and for the different market segments as shown in the exhibit below.

7.53 For the transfer market, we used a high price elasticity of -3.0 (in line with the AAE report). We have assumed the price elasticity for business transfer passengers to be an average of the O&D Europe and O&D intercontinental business passengers (i.e. -0.5). It is our judgement that the price elasticity could be lower, therefore we have included a scenario with a lower elasticity (see exhibit below).

²⁷ Market segments are: O&D Europe, O&D Intercontinental and transfer passengers.

²⁸ Leisure, VFR and other grouped together to be leisure; a further relevant breakdown for transfer traffic was not possible from data in the public domain.

²⁹ Percentage derived from traffic data in Schiphol Statistical Annual Review 2003

³⁰ Study commissioned by the Department of Finance in Canada (January 2003)

Exhibit 53: Traffic and fares estimates

		Pax (million)	Return fare (€)	Elasticity	Low	Base
O&D Europe	Business	6.4	600	Short haul business	-0.5	-0.7
	Leisure	11.9	300	Short haul leisure	-1.0	-1.5
	Total	18.3				
O&D Intercontinental	Business	1.8	1200	Long haul business	0.0	-0.3
	Leisure	3.4	600	Long haul leisure	-0.75	-1.0
	Total	5.2				
O&D total		23.5				
Transfer	Business	5.7	1200	Average of short and medium haul	-0.25	-0.5
	Leisure	10.6	600	Average of short and medium haul	-2.0	-3.0
	Transfer total		16.3			
Terminal		39.8				

Source: Schiphol Statistical Annual Review 2003 & SH&E analysis

7.54 Based on these assumptions, we have estimated the impact of a price increase. We have done this for an increase of €1 for the security charge for local and transfer passengers. On this basis, a €1 increase in the security charge could lead to a loss of about 73,000 O&D passengers and 111,000 transfer passengers, or a total passenger loss 184,000 per annum for all airlines at Schiphol. This would also produce a loss in airfares of €31 million. This loss in passengers would represent 0.5% of current terminal passengers at Schiphol, or about one month's growth at the average rate experienced over the last ten years.

7.55 For the low elasticity scenario, the total passenger loss would be about 120,000 per annum. These figures should be considered as the maximum number of passengers that could be lost, since they do not take into account the passenger perception of Schiphol (and we know from the Skytrax survey that Schiphol is ranked as number 1 airport in Europe), or its well established feeder network. Therefore, we consider that the actual loss in traffic as a result of a €1 security charge increase would be likely to be less than the 184,000 passengers calculated above, and probably significantly less.

7.56 The outcomes of the two scenarios are based on our price elasticity, airfares and airline security charge assumptions. As we mentioned earlier, it is very difficult to isolate the impact of price on passenger demand, since other factors are part of the equation. This of course limits the value of this theoretical exercise. It should also be noted that the impact of security charge changes will be different for individual airlines for a number of reasons. Airlines have different air fares and serve different market segments with different sensitivity to price changes. Airlines have different shareholders and different profitability

expectations, and may choose to absorb security cost (e.g. easyJet, see below).

Exhibit 54: Impact of a €1 security charge increase

		Return fare change	% change of base return fare	Elasticity	% change of pax	Pax lost (x1,000)	Lost revenues (€ million)
O&D Europe	Business	€ 1	0.2%	-0.7	-0.1%	-7.4	-2.2
	Leisure	€ 1	0.3%	-1.5	-0.5%	-59.5	-9.0
	Total					-67.0	-11.3
O&D Intercontinental	Business	€ 1	0.1%	-0.3	0.0%	-0.4	-0.2
	Leisure	€ 1	0.2%	-1.0	-0.2%	-5.6	-1.7
	Total					-6.0	-2.0
O&D total						-73.0	-13.3
Transfer	Business	€ 2*	0.2%	-0.5	-0.1%	-4.8	-1.4
	Leisure	€ 2*	0.3%	-3.0	-1.0%	-106.2	-15.9
Transfer total						-111.0	-17.3
Terminal						-184.0	-30.6

* Transfer passenger pays the security charge twice on a return journey

Source: SH&E Analysis

7.57 The analysis above shows the impact on Schiphol as a whole: the impact on individual airlines would be different. For example, Transavia estimated that its price elasticity is about -2.0. In its annual report, Transavia reported passenger revenues of €489 million (excluding taxes) for the financial year ending March 2004. The airline carried 4.2 million passengers. This gives an estimated average return fare of €232 (one-way fare of €116). An increase of the security charge of €1 represents 0.4% of the average ticket price. This implies that a €1 increase in the security charge with Transavia's assessment of elasticity results in a change in traffic of 0.8%: a decrease of about 35,000 passengers and loss in revenues of €4 million.

7.58 It should however be recognised that this assessment of elasticity has been made in relation to the potential loss or gain in passengers to Transavia and not necessarily to Schiphol – passengers could have changed to a different airline using Schiphol. The elasticity which we need to assess is the elasticity of passengers choosing either not to fly or to use a different airport. This elasticity intuitively will be lower.

7.59 easyJet is a special case at Schiphol. When booking an easyJet flight it appears the security charge is not additionally charged to the easyJet passengers, but absorbed by the airline. It charges a fixed charge of €7.5 per departing passengers from Amsterdam. This would include non-security related airport charges. The security charge represents about 9% of the average return ticket

(assuming an average return fare of EUR 122³¹). Changes of airport charges (including the security charge) could prompt easyJet to reconsider its presence at Schiphol, as has happened in September.

Security charge to users

7.60 From a competitive point of view it is relevant to focus on what costs are finally charged to the users, instead of looking at the total cost for security provision, especially since total cost are difficult to compare (as discussed earlier). The level of charges levied to the passenger is what can create a competitive advantage. The charges that a passenger directly pays for, in addition to the air fare, can be broken down in the security charge (an airport charge) and the airline security surcharge. If either of these charges is increased this will increase the total ticket price and this will have an impact on the competitive position of airlines and therefore on passenger demand.

7.61 After the terrorist attacks of 11 September 2001 airlines decided to levy security surcharges, as their direct cost for security and insurance increased. The level of this surcharge depends on many factors (total cost base, profitability, required rate of return etc.). Such factors are different for every airline. Hence, for the purpose of the analysis discussed below, it goes too far to take such factors into account. We use the level of the airline security charge as they were in December 2004.

7.62 We obtained historic data on airline security surcharges in 2002 from the Amadeus reservation system. Determination of the current level of airline security surcharge surprisingly is less straightforward, since at the moment it is grouped with fuel surcharge in the CRSs. Since the current fuel surcharge for each airline is known, and we have assumed there is no other significant airline surcharge other than fuel and security, we derived the current airline security surcharge by subtracting the fuel surcharge from the total surcharge³².

Exhibit 55: Security surcharge

Airline	2002 (per segment)	2002 (€ per segment)¹	Dec 2004 (per segment)	Dec 2004 (€ per segment)²	Change (€)
Air France	€ 4.00	€ 4.00	€ 2.00	€ 2.00	Decrease of € 2.00
Alitalia	€ 6.00	€ 6.00			
British Airways	£ 2.50	€ 3.95	£ 2.50	€ 3.63	None ³
Iberia	€ 6.00	€ 6.00	€ 6.00	€ 6.00	None ³
KLM	\$ 8.00	€ 8.20	\$ 8.00	€ 5.96	None ³
Lufthansa	\$ 8.00	€ 8.20	\$ 8.00	€ 5.96	None ³

³¹ Derived from data in research report of Citigroup Smith Barney

³² We have taken the surcharge for ticket sales in the respective countries.

Airline	2002 (per segment)	2002 (€ per segment) ¹	Dec 2004 (per segment)	Dec 2004 (€ per segment) ²	Change (€)
SAS	\$ 6.00	€ 6.15			

(1) Exchange rate of 8 Aug 2002, (2) Exchange rate of 8 Dec 2004, (3) The change is a result of fluctuating exchange rate

Source: Amadeus

7.63 Our estimates of security charges are presented in the exhibit below. They consist of the airline security surcharges as discussed above and the relevant airport charges related to security. As noted in Section 4 at some airports there is no pure security charge, with security costs being recovered through a charge embracing other elements: in such circumstances we have used the estimates of the proportion of the charge represented by security costs (based on estimates given to us by airport operators and airlines).

7.64 We have assumed also that the additional costs an airline incurs for security related activities are either absorbed (not reflected in fares) or recovered through the security surcharge. The additional costs an airport operator incurs and does not charge to the passenger directly is assumed to be absorbed as well.

7.65 If we compare home carriers, we see that at Schiphol local (O&D) departing passengers are confronted with the highest total security charge for an international return journey (two segments) of about €22.5 (including airline surcharge), paid for directly through the ticket (this excludes security charges at the destination airport which would be the same for all airlines operating to that point from any European airport). Total security charges at Madrid are lowest with €13.2 for a similar journey. The average total security charge for an international return journey is €18.3 for the 8 airports, about €4.3 less than a return journey from Schiphol with KLM. If we exclude the airline surcharge the average security charge is €7.0.

Exhibit 56: Security charges for O&D passengers

Airport	Charge (% security related)	International departing local passenger charge ¹	Security charge (A)	Airline security surcharge two segments (B)	Security charge per passenger two segments: (A) + (B)
Charles de Gaulle and Orly	Airport tax (88%)	€ 8.20	€ 7.22	€ 4.00	€ 11.22
	Civil Aviation Tax (21%)	€ 15.20 ²	€ 3.19	€ 4.00	€ 7.19
	Total				€ 18.41
Frankfurt	Security charge (100%)	€ 8.98	€ 8.98	€ 11.92	€ 20.90
	Total				€ 20.90
Munich	Security charge (100%)	€ 6.44	€ 6.44	€ 11.92	€ 18.36
	Total				€ 18.36
Amsterdam	Security charge (100%)	€ 10.55	€ 10.55	€ 11.92	€ 22.47
	Total				€ 22.47
Madrid	Security charge (100%)	€ 1.15	€ 1.15	€ 12.00	€ 13.15
	Total				€ 13.15
Heathrow	Passenger charge (74%)	£10.40	€ 11.16	€ 7.25	€ 18.42
	Total				€ 18.42
Gatwick	Passenger charge (74%)	£7.15	€ 7.67	€ 7.25	€ 14.93
	Total				€ 14.93

(1) Source: IATA Airport and Air Navigation Charges July 2004

(2) In fact €7.6 per passenger (equivalent to €15.2 per departing passenger)

Source: SH&E Analysis and data collection

7.66 A similar exercise can be undertaken for transfer passengers. We have derived the security related charges by considering a passenger transferring from a non-EU origin to an international destination with the home carrier at each of their hub airports. We note that Amsterdam is the only airport with a different published security charge for transfer passengers than for local passengers³³.

7.67 If we compare home carriers, we see that at Schiphol transfer departing passengers are paying the third lowest security charge for an international return journey (two segments) of about €15.1, paid for directly through the ticket. Only Frankfurt and Munich are lower, as a result of Lufthansa's policy for transfer passengers. The average security charge for an international return journey is

³³ We have seen earlier that not all transfer passengers pay the security charge at Frankfurt, but the published charge is €8.98 per departing passenger without a differentiation between local or transfer passengers.

€20.4 for the 8 airports, about €5.3 more than a return journey via Schiphol with KLM. The security cost for transferring at Heathrow is twice the cost of Schiphol.

Exhibit 57: Security charges for transfer passengers

Airport	Charge (% security related)	International departing transfer passenger charge ¹	Security charge (A)	Airline security surcharge two segments (B)	Security charge per passenger two segments: (A) + (B)
Charles de Gaulle and Orly	Airport tax (88%)	€ 8.20	€ 14.43	€ 4.00	€ 18.43
	Civil Aviation Tax (21%)	€ 15.20 ³	€ 6.38	€ 4.00	€ 10.38
	Total				€ 28.82
Frankfurt	Security charge (100%)	€ 8.98	€ 0.00 ²	€ 11.92	€ 11.92
	Total				€ 11.92
Munich	Security charge (100%)	€ 6.44	€ 0.00 ²	€ 11.92	€ 11.92
	Total				€ 11.92
Amsterdam	Security charge (100%)	€ 1.60	€ 3.20	€ 11.92	€ 15.12
	Total				€ 15.12
Madrid	Security charge (100%)	€ 1.15	€ 2.30	€ 12.00	€ 14.30
	Total				€ 14.30
Heathrow	Passenger charge (74%)	£10.40	€ 22.32	€ 7.25	€ 29.58
	Total				€ 29.58
Gatwick	Passenger charge (74%)	£7.15	€ 15.34	€ 7.25	€22.60
	Total				€22.60

(1) Source: IATA Airport and Air Navigation Charges July 2004

(2) Lufthansa transfer passengers do not pay the airport security charge.

(3) In fact €7.6 per passenger (equivalent to €15.2 per departing passenger)

Source: SH&E analysis

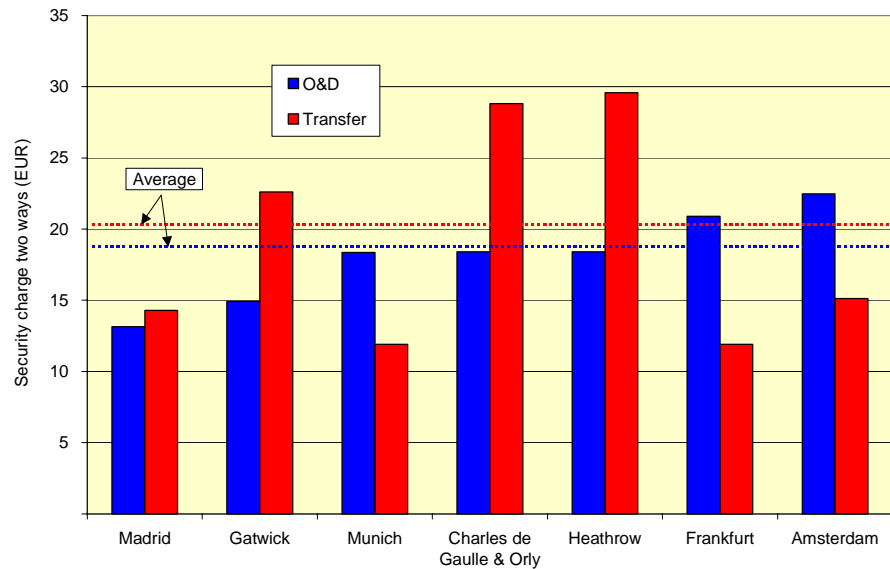
7.68 The average charges per passenger (two segments) are €18.1 for O&D passengers and €20.4 for transfer passengers. Schiphol is more expensive than the average for O&D passengers, but cheaper for transfer passengers. The total security charge (including airline security surcharge) for transfer passengers is the third lowest at Schiphol compared to the other main airports, and for O&D passengers it is the highest at Schiphol.

7.69 It should be recognised that the inclusion of Madrid, with the support given by the Spanish Government leading to lower charges there than would otherwise be the case, leads to Schiphol's performance against the average being worse than it should be. Additionally, Madrid is probably the airport that competes least

with Schiphol. Exclusion of Madrid would not only have considerable validity.

7.70 The exhibit below compares total security charges (airport plus airline charges).

Exhibit 58: Comparison of total security charge



Source: SH&E analysis

7.71 To assess the competitiveness of Schiphol from just the narrow perspective of charges for security³⁴, we have applied the elasticity analysis as discussed at the beginning of this section to charges at Schiphol assumed to be adjusted to the average charges for the sample of airports considered. If Schiphol's charges were adjusted to the average for the sample airports, there would be a decrease in the total security charge of €4.3 (€22.5 - €18.1) for O&D passengers but an increase of €5.3 (€20.4 - €15.1) for transfer passengers.

7.72 If we apply these illustrative changes in security charges for Schiphol to the elasticity analysis presented earlier (Paragraph 7.49 *et seq*), this would produce a marginal increase of 20,000 passengers (O&D: +314,000 and transfer: -294,000) at Schiphol, or less than 0.1% of its current terminal passengers (based on same assumption in relation to air fares and price elasticity). This analysis suggests that the Dutch industry enjoys a slight competitive disadvantage vis-à-vis its

³⁴ Schiphol's attraction derives from many other factors including air service network, KLM's transfer policy and supporting pricing strategy, the one-terminal concept, Schiphol's reputation as a passenger friendly and enjoyable airport to pass through, and the ease with which passengers are 'processed' through the airport. The security charge is likely to be one of the least important of the selection factors, and indeed the quality of the provision of the security service is likely to be of greater importance (assuming that security costs/charges are in line with those at competitor airports).

competing hubs, but the difference is not material. This is despite some airports, Madrid being the primary example, receiving some additional support from their governments.

7.73 Exclusion of Madrid as discussed above would have some validity, and would indicate that Schiphol currently enjoys some competitive advantage over its primary competitors for transfer passengers. This advantage may derive from cost advantages at Schiphol and/or from lack of transparent identification of security costs at other airports.

7.74 There are clearly many factors which influence the choice of airports by passengers, and especially transfer passengers. However, as one of the basic aims of this project is to inform government policy in this area, consideration of just this charging element is appropriate to this analysis. The importance of this exercise is not the precision of the results it produces, but rather that any reasonable range of values for the least certain parameter, the elasticities, leads to the same conclusion that Schiphol's competitive position is at the very least not materially weakened by its security costs.

CONCLUSIONS ON SECURITY

7.75 Since the Dutch implementation of security aspects is a direct implementation of EU Regulation 2320, the influence of the Dutch government on security in a competitive context is limited. The Dutch industry has no clear competitive disadvantage. In some areas there are some competitive advantages.

7.76 Since Regulation 2320 does not deal with aspects of responsibility, the responsibility for the provision of security services varies from one country to the other. This does not necessarily mean that there is not a level playing field, since different parties could provide a security activity service for the same price (e.g. a private security company could provide the screening of passengers and baggage for the same price and service level as the government).

7.77 EU Regulation 2320 leaves open the possibility for Member States to take stricter security measures, either through increased norms or through additional security measures. While in Spain and the Netherlands, Regulation 2320 is taken as the norm for security measures, increased norms are found in France, Germany and especially the UK (although details for the UK are confidential). This implies that there is not a level playing field, but to the advantage of the Dutch industry. The impact of this advantage is difficult to measure.

7.78 At all airports other security measures are taken (e.g. extra security high risk flights), and such measures at Schiphol are not substantially different from

other airports, except for the UK where it appears significantly more other measures are taken (but we have no details). This implies that there is not a level playing field with the UK, but again to the advantage of the Dutch industry. The influence of the Dutch government on the level playing field is therefore in the right direction.

7.79 The EU Regulation does not deal with the aspect of which party should undertake particular security activities. While we have seen that different parties are responsible for the same security measures at different airports, this would have no impact on the competitive conditions if the efficiency of security services and the method of financing were the same.

7.80 In terms of staff screening, Schiphol has a competitive cost advantage over the London airports, where 100% staff screening at any part of the airport where screened departing hold baggage is held, is already in place. However, this advantage will last no longer than 2009, when this will be required at all EU airports (EU Regulation 118/ 2004).

7.81 Lack of information and difficulty in comparing different cost breakdowns makes it impossible to draw clear conclusions in relation to the efficiency of security services at the different airports. However, with some caution we conclude that Schiphol is about €0.1 per terminal passenger more expensive than Heathrow and the Paris airports for screening of passengers and cabin baggage. This puts the Dutch industry at a small competitive disadvantage.

7.82 Few conclusions may be made in relation to the passenger perception of security processes, since no party was able to provide information. From discussions we understand that passengers have a high tolerance for security, provided that it appears to work in an efficient manner. This makes the quality aspect of security services (e.g. waiting time) less important from an airport competition point of view.

7.83 The methods of financing of security measures is where we see the most differences between airports. With the exception of Madrid and Rome Fiumicino, security charges to users have risen at all airports. It seems that only in Spain the State subsidises security measures.

7.84 Since the EU legislation does not deal with the method of financing, the Dutch government has influence on this by providing the necessary framework for Schiphol to charge its users for security services. At all the airports there is a regulatory framework in place to facilitate this. The check of Schiphol's security budget by the Ministry of Justice and subsequently the Ministry of Transport is generally similar to those at other airports, for example, in France, although in

Germany, the government determines the majority of the budget. The dynamics in Spain, where the security charge to users has not changed in 5 years, are not clear.

7.85 Unlike the Dutch, some governments require a charge for the background check of security staff. Schiphol has a slight advantage (no charge), especially compared to Germany where a charge is paid for a background check on an annual basis. The cost of ID badges at Schiphol is not significantly different from other airports.

7.86 The approach to aircraft security is very similar at the benchmark airports. However, in Spain the airlines have a competitive advantage since the government finances this (partly).

7.87 The mixing of arriving and departing passengers is a particular issue for Heathrow (to a lesser extent), Frankfurt, Munich and especially Schiphol as a result of the lay out of the terminal (no separate flows for arriving and departing passengers). EU legislation (e.g. the new security check for passengers from non-EU origin with EU destination) applies and the Dutch Government has no direct influence on this. The new requirement since 1 December 2003 puts pressure on the Minimum Connecting Time at Schiphol. Other airports have made significant investments to achieve the separation of certain passenger flows.

7.88 Schiphol is the only airport where the costs of the US requirement for passenger profiling before check-in and the secondary gate screening are spread over all airlines, irrespective of whether or not they fly to the USA. This makes Schiphol more attractive to US carriers than the other benchmark airports (Madrid being an exception), but obviously also marginally less attractive to all other carriers whose costs are higher than they would be with a different policy.

7.89 The lack of European guidance has led to different charging mechanisms for security measures. We consider that Schiphol is the most transparent in charging its users. If we take airline security surcharges into account as well, the total security charge for transfer passengers at Schiphol is the third lowest, making it attractive and competitive for connecting traffic. However, charges for O&D passengers are the highest.

7.90 Based on assumptions in relation to airfare, elasticity and airline security surcharge, we believe that (on average) from a price point of view Schiphol as a whole is not less attractive to passengers when compared to the other benchmark airports.

7.91 US and EU carriers face the same security charges on both sides of the

Atlantic. In this respect there is no distortion of competition. The US government's financial contribution to the US industry does lower the cost base of US carriers, and offers an advantage EU carriers do not enjoy. This clearly is to the US carriers' overall financial advantage, and gives them some competitive advantage (e.g. European carriers have had to pay themselves for reinforced cockpit doors). However, the Dutch government's only ability to change this position would be to similarly favour Dutch airlines.

BORDER CONTROL

Schengen Visa

7.92 An important difference between the Schengen visit visa and the UK visit visa is that the latter is valid for 180 days and the former for half of this period, which makes the latter more attractive from a period of stay point of view.

7.93 The UK's list of countries of which nationals need a visa to visit is longer than the list of the Schengen countries, which makes the UK less attractive for certain nationalities. Although many of these 22 countries are small islands there are some larger countries.

7.94 We have seen that the Dutch Schengen visa has one of the higher prices compared to other countries (the Netherlands seems to be the only country that has adopted Council Decision 454/2003). The Netherlands and France are the only countries where there is no price differentiation for longer stay visa. For those passengers wishing to travel around Schengen countries the Dutch visa would be slightly more expensive. The overall impact is likely to be limited, as many other factors come into play: availability of air service, passengers being able to compare visa prices etc.

7.95 The airlines we consulted consider that it can sometimes be the case that some foreign consulates process visas more quickly than the corresponding Dutch consulate. We did not explore this in detail, but analysing the London embassies it seems that at the Dutch embassy the application should be lodged at least three weeks before the journey, while other Schengen countries can process applications within a few hours. We do not have information about visa processing in other parts of the world.

Airport transit visa

7.96 There appears to be lack of harmonisation among the States studied in the area of airport transit visa requirements. Moreover, it seems prices and process times also vary, although by Council Decision visa prices should be harmonised by July 2005. While the EU legislation is applicable to all Member States, it leaves open possibilities for individual countries to make their own national provisions. There is no uniform treatment of airport transit visas as far as requirements are concerned.

7.97 There is a common requirement for transit visas when transferring in the EU Member States investigated for nationals of 12 countries: Afghanistan, Bangladesh, Republic of Congo, Eritrea, Ethiopia, Ghana, Iraq, Iran, Nigeria, Pakistan, Sri Lanka and Somalia. The Netherlands has an additional 6 countries

in addition to the common list.

7.98 There are Schengen countries that have countries on the transit visa requirement list, for which the Netherlands does not have such a requirement, and vice versa. Five of the 6 States studied have the same, or a larger, number of countries on this list. That implies the Netherlands does not have a clear disadvantage, although this should be looked at on a country by country basis.

7.99 An important difference between the Schengen States (and therefore the Netherlands) and the UK is that all passengers holding a valid US or Canadian visa, and having a ticket that includes a visit to the US or Canada, are exempted from the airport transit visa requirement in the UK. Moreover, on arrival in the UK a passenger may apply for a transit visa if they fulfil particular criteria. This appears not to be possible in the Schengen countries.

7.100 At the moment prices for airport transit visas vary as well between the Member States, where again the Netherlands seems to be relatively expensive (the Dutch airport transit visa is three times more expensive than the German version in London, but harmonisation should take place as of July 2005). As with Schengen visas, and perhaps of more relevance for competition, are the processing time and the requirements necessary to obtain these visas. These are critical aspects on which potential transfer passengers base their decision to select a specific hub (assuming fares are similar). We have not been able to check if all airport transit visas are actually checked by the airline or authorities. If in one country the airport transit visas are not checked, this could be a disadvantage for the Netherlands.

7.101 Concerns have expressed about the active role of the Dutch consulates and harmonisation between the Schengen countries in relation to the provision of visas. KLM illustrated this with the following examples of specific situations:

- In Nigeria the Dutch consulate has moved from Lagos to the capital Abuja for safety and manpower reasons, which means provision of visas has moved away from the commercial centre of the country. Nigerian salesmen will now find it much easier to go to another consulate in Lagos (for example the German consulate) than travel 500 km to Abuja.
- The requirements for Chinese nationals to get a visa for the Netherlands appears to have been stricter than at other consulates in China. Hence, KLM indicated that it loses potential Chinese customers to other carriers (e.g. Lufthansa). The Dutch requirements might be stricter to prevent a potential small percentage of Chinese nationals entering the Netherlands without proper documentation, but it has made it more attractive for Chinese nationals to travel via other hubs. We have not been able to

check this or analyse this in further detail. We did understand from the Dutch Immigration and Naturalisation Department that, in light of the Approved Destination Status agreement between the Netherlands and China, the ‘voorlegplicht’ has been cancelled for the purpose of tourism. This allows Chinese people travelling in groups to travel to the EU if they book through designated Chinese travel agents.

7.102 The Ministry of Foreign Affairs responded to the above situations by pointing out that the number of foreign locations with Dutch representation has increased the last few years. Moreover the Ministry mentioned that the fact that a passenger has chosen a non-Dutch consulate or embassy does not mean this passenger will not choose to fly via Schiphol or will not fly with KLM. The Ministry of Foreign Affairs indicated that further harmonisation could only be achieved if existing legislation is harmonised, which in its view is not possible in the short term (further comments and explanation could not be provided to us, but can be gathered through official channels between the Ministries). We have not been in a position to analyse this in detail.

7.103 KLM indicated that German consulates, in co-operation with Lufthansa, have been more flexible in granting visas than the Netherlands. The Dutch consulate in Berlin indicated that it could not substantiate this. This consulate does find it a very important area, which needs to be explored through the proper government channels (i.e. between DGL and the Ministry of Foreign Affairs (‘DPV’)). We have not been in a position to analyse this in detail.

7.104 The economic impact of visa requirements should not be underestimated. Although it is difficult to measure this impact, especially for individual Member States, we know that in the USA visa delays had a large impact on profits two years ago. The Financial Times reported in 2003 that continued visa delays for business travellers, especially from India, China and Russia, because of security concerns, resulted in a loss of more than \$30 billion in US corporate profits. This estimate includes revenue losses of \$25 billion and indirect costs of \$5 billion. Government delays meant that foreign business travellers had the greatest difficulties obtaining timely visa processing from the United States authorities³⁵.

Rejected foreign nationals

7.105 It appears that the countries for which we have information have adopted all guidelines from ICAO Annex 9 (11th Edition). However, when it comes to levying penalties, there are differences. In Belgium and the Netherlands (KLM

³⁵ This was based on a survey sponsored by eight trade associations; including the Association for Manufacturing and Technology, the National Foreign Trade Council and the US-China Business Council

only) some airlines have an MoU in place, which sets a threshold for the number of rejected foreigners for which no penalties are levied. This is an advantage available to KLM and Belgian carriers only, although KLM paid high penalties before the introduction of the MoU (penalty of almost €5 million in 2000).

7.106 The penalties vary from country to country, from €1,000 in Germany (for a first incident) to €3,750 in Belgium. It appears not all Member States have yet adopted Directive 2001/51. In all Member States for which we have information the airline is responsible for returning the rejected foreign national. Furthermore, in all Member States the costs for the government are staff and overheads in dealing with persons refused entry. There does seem to be a level playing field in this respect.

7.107 Since only KLM in the Netherlands has an MoU and other airlines do not have this, there seems to be a degree of unfairness within the Netherlands, although not all airlines are interested in this. According to the Dutch IND it is possible for any airline to sign an MoU, although it is not attractive for all given the scale of their operations. However, Martinair would be interested in signing an MoU, despite the much smaller scale of its operations compared to KLM. As an illustration of the amounts that other airlines pay per year for rejected foreign nationals, British Airways paid about £1 million in the UK³⁶. From the Dutch government we understood British Airways has an agreement in place with the UK government, which allows the airlines to prevent penalties from being levied if it achieves certain standards for passport control at designated airports. KLM has not had a penalty since the MoU has been in place, which clearly is a competitive advantage. It can serve as a good example where government and industry co-operate together.

7.108 Although we do not have a complete picture it seems the cost of transportation and possible security escort is normally a responsibility of the airlines. The cost of detention is more varied. Dutch airlines currently have an advantage over airlines in the UK, Belgium and Germany, where it is the responsibility of the airline. This situation will change as of April 2005, when the Netherlands will implement Directive 2001/51.

Passport control

Performance

7.109 With limited response from stakeholders on staff numbers and costs it is difficult to draw conclusions in terms of efficiency. We do know that

³⁶ Plus a similar amount for detention costs. Although it should be noted that detention cost is not part of the MOU that KLM has signed with the Dutch government. All airlines serving Schiphol are responsible for detention cost in line with Directive 2001/51.

governments bear the majority of costs (staff) for border control, and airport operators generally do not charge for facilities.

7.110 Waiting time targets are only used at Schiphol and the London airports. The actual waiting times may differ from the targets, which could mean for example that Frankfurt could achieve better waiting times than Schiphol, despite having no agreement on service levels. In the absence of actual waiting times, no conclusions can be drawn.

7.111 The Schiphol community should benefit from having a Service Level Agreement (SLA), but in practice airlines believe the targets are not met, and the performance is decreasing. However, on arrival the SLA is achieved. The non-achievement of SLA can be the result of different factors (e.g. deployment of staff or lack of infrastructure due to construction). The British targets are less demanding, but passengers rank the arrival immigration at 4 out of 5 points.

7.112 Stakeholders believe better deployment of border control staff can be achieved. The fact that the planning horizon for adjusting staff numbers is 2 years is not beneficial. Nevertheless, since 2002 the growth in staff capacity has been roughly in line with the growth of Schiphol. We have not been able to discuss this with the border control authorities.

Automatic Border Control

7.113 The use of biometrics for passenger facilitation including automatic border control will be very beneficial to the stakeholders, since passengers can be handled more conveniently and quickly. However, there is no international standard for biometrics, which makes a harmonised approach difficult (there is however an ICAO standard for travel documents). Different technologies are used at the various airports. For a number of reasons the speed of implementation of biometrics has been slow. Schiphol is in the forefront of using biometrics, although it is dedicated to premium traffic and therefore does not (yet) capitalise on the advantages it could bring if ABC were available to the wider public.

7.114 A number of airlines are very interested in ABC, but consider the Privium programme too expensive for their customers. Since there is limited space at border control, airlines are unable to develop their own alternatives. It is perceived that there is a task for government here. The Dutch government pointed out that ABC is already available for cost price.

7.115 The UK will probably soon have the biggest advantage when in early 2005 the government financed IRIS project will be introduced, allowing non-EU passengers to pass through immigration on arrival. The waiting times for non-EU nationals in peak periods are anticipated to decrease dramatically to 45 seconds

for those passengers making use of IRIS.

7.116 In the UK there is no immigration control for departing passengers, but resources are focused on arriving passengers. The airlines in the Netherlands would favour a similar situation in the Netherlands.

CONCLUSIONS BORDER CONTROL

7.117 In general border control is an area where airlines at Schiphol have a combination of competitive advantages and disadvantages. The influence of the government ranges from very direct (e.g. passport control) to very limited (e.g. separation of Schengen/ non-Schengen).

7.118 The Schengen states are not completely harmonised in their approach to visa requirements. This means there is no level playing field. Prices of a Schengen (airport transit) visa are different from the different consulates. Although this difference should disappear from July 2005 and other competitive elements play a role as well, the relatively high price for a Dutch visa can only work against the interest of airlines serving Schiphol. From July 2005, of course, the Dutch government will no longer have an influence on this.

7.119 More importantly, stakeholders have the impression that Dutch consulates are not always as active as their Schengen counterparts, despite an enlargement of Dutch presence abroad. Caution is required with this conclusion, since we have not been able to research this thoroughly. However, if indeed non-Dutch consulates are more pro-active than the Dutch in the provision of visas (through quicker or more flexible provision of visas), this would work against the interest of airlines serving Schiphol as well. This will happen if passengers find it easier to obtain a visa from a non-Dutch consulate, and results in their flying via a competing European hub. Quantification of the impact is very difficult. The Dutch government's influence lies with the Ministry of Foreign Affairs, not with the Ministry of Transport.

7.120 With 6 more countries (in addition to the Schengen common list), whose nationals require an airport transit visa to travel via Schiphol, the Netherlands scores in the middle of the other Schengen countries part of this benchmark (Italy the lowest and France the highest). The impact of this is potentially low, given the other elements that play a role (air fares, air services etc.) and the size of the markets to and from these 6 countries, but every additional constraint compared to competing hubs is a step in the wrong direction. The Dutch government's influence lies with the Ministry of Foreign Affairs.

7.121 All Schengen countries are disadvantaged vis-à-vis the UK, since

passengers travelling via the UK do not need an airport transit visa if they are in possession of a valid US or Canadian visa. This makes travelling via the UK more attractive (no additional visa cost and no trip to consulate required) vis-à-vis Schengen hubs. The Dutch government has no influence on this.

7.122 Member States have different approaches in relation to rejected foreign nationals, since penalties to carriers vary. So far Dutch penalties have been in line with EU legislation (legislation changed in September 2004³⁷) and were lower than the UK and Belgium, which is an advantage for the Dutch industry, but shows there is not a level playing field. Dutch and Belgium airlines are able to benefit from a Memorandum of Understanding (it lowers their cost), although the advantage is enjoyed by KLM only in the Netherlands. The MoU can serve as an example to other countries.

7.123 There is a level playing field among Member States for the requirement for carriers to be financially responsible for returning rejected foreign nationals (based on Schengen legislation). However, carriers serving Schiphol have two financial competitive advantages compared to other some other airports: carriers do not pay for possible security escort (as in Germany) and detention costs are not levied to airlines on a structural basis. This situation will change as of April 2005, when the Netherlands will implement Directive 2001/51 and cost of detention and personnel cost of security escort can be claimed from the carriers.

7.124 Schiphol is the only airport with a Service Level Agreement with the authorities for waiting time for passport control. Although not all waiting time targets are achieved at Schiphol, we have no insight in actual waiting times at other airports, so a direct comparison could not be made. From talking to airport operators, airlines and the government we do understand it is an area where improvements can be made. The impact on the competitive position is not expected to be significant, but every step in the right direction is helpful. In the Netherlands the government's direct influence lies with the Royal Marechaussee, the party responsible for border control.

7.125 Despite ICAO recommending to using face recognition as the standard biometrics technology, there has been implementation of different technology across Member States. This will not have an impact on the level playing field or competitive position of airports, since different technologies can achieve similar efficiency. Schiphol is a frontrunner in the use of ABC, albeit with a small member group. Heathrow and Gatwick will soon make use of ABC for a wide public free of charge, which is expected to improve the passport control process significantly. This will be a competitive advantage for airlines serving the UK.

³⁷ Maximum penalty is now € 11,250

Airports can create a competitive advantage by anticipating on the biometrics developments in relation to the future EU passports. Governments have influence on this by being closely involved in ABC pilots.

7.126 From an airport process point of view the UK benefits from the lack of an outbound border control. This makes the passenger journey through the airport easier and reduces cost. The Netherlands is bound by Schengen legislation, which requires an outbound border control. Hence, there is not a level playing field in this respect.

7.127 The separation of Schengen and non-Schengen passengers has had an competitive impact, since there will have been different costs of modifying infrastructure at different airports. As a single terminal airport, Schiphol has had to make more adjustments to infrastructure and therefore incur significantly higher investments to facilitate separation, than have other airport operators. This has been a disadvantage for Schiphol, but is not in the scope of future influence of government. In the end the passenger pays for this at the benchmark airports.

7.128 No significant changes to infrastructure have been made at the benchmark airports as a result of last year's EU enlargement. Potential benefits and disadvantages will be similar at the different benchmark airports. In general the enlargement of Schengen countries is too far in the future (2007 earliest) for airports to have made clear plans to accommodate this.

INTRODUCTION

8.1 In this section we give recommendations in relation to security and border control.

8.2 Based on the benchmark we conclude that from a high level the Dutch air transport industry has no clear competitive disadvantage, and in some areas enjoys a competitive advantage. However there is room for improvement in certain areas. We have categorised our recommendations into the following:

- Recommendations directly within the scope of the study i.e. relevant for government policy and based on the benchmark and the competition analysis (type I); and
- Recommendations not directly within the scope of the study, but closely linked to the research questions (not all of these findings were compared systematically and in detail and need further investigation), but they are important for the aviation industry to implement (type II).

SECURITY I

8.3 Since the Netherlands has taken EU Regulation 2320 as the norm, the users are not charged for additional security measures. Hence, there is no reason to recommend changes to the security measures.

8.4 It has become clear that the financing of security in Europe varies widely from country to country. The responsibility for provision of security measures differs from country to country and even within countries from airport to airport. This highlights the need for a harmonised approach for financing aviation security, at least to the extent of improving transparency. The Dutch government may wish to encourage this on a European level, especially since the Netherlands seems to have the most transparent charging system.

8.5 At an airport security charges are more likely to be higher when there is no transparency, since users would not be able to discuss or dispute the charging system (although transparency is no guarantee for reduced security costs). It is possible that this very transparency at Schiphol has led to costs being lower at the airport, and greater transparency elsewhere would result in efficiencies at other airports, so improving their competitive position relative to Schiphol.

SECURITY II

8.6 The air transport industry has advanced arguments that while security is necessary for the protection of its passengers and employees, it is also a matter of national concern. The costs of security have increased significantly since the terrorist attacks of September 2001, and could continue to increase if measures are tightened and standards raised. Consequently, airlines and airport operators want governments to take more, if not full, financial responsibility. US airlines would appear to enjoy some competitive financial measures over European carriers. The Dutch government may wish to explore opportunities on a European level for greater government financing of security in all its various guises. The support could take various forms, e.g. investments in research and development or in screening equipment.

BORDER CONTROL I

Visas

8.7 It would be useful to reconsider the airport transit visa requirement on a country-by-country basis for the countries on the Dutch list, but neither required by EU legislation (i.e. not the common list), nor needed by some other Schengen countries.

Rejected foreign nationals

8.8 In relation to rejected foreign nationals we believe allowing all airlines to have an MoU with the Dutch government should level the Dutch playing field, although the scale of KLM's operations makes this a far more realistic possibility than it might be for other airlines.

BORDER CONTROL II

Visas

8.9 We have not had the opportunity to discuss the role of the consulates with the Ministry of Foreign Affairs, but based on our interviews with airlines it is possible that closer co-operation between them might be beneficial. While contact at a working level and on a case-by-case basis undoubtedly happens currently, a policy review to assess the relative importance of the Dutch air transport industry to the many factors which the Ministry of Foreign Affairs needs to consider, could provide staff with a framework within which to work. This could start with a thorough assessment of the efficiency of consulates vis-à-vis consulates of other countries, which takes into account the applicable EU legislation in relation to visa and other factors influencing the efficiency. If improvements can be made,

this might then lead to a joint approach to protect the economic interest of the Netherlands. The Ministry and local consulates might then have a more active role in support of the airlines. At the very least the Dutch visa requirements and visa processing times should not work against the interest of the airlines serving Amsterdam.

8.10 Given the lack of harmonisation and different interpretations among Schengen countries, the idea of establishing EU or Schengen consulates in third countries could be put on the agenda in Brussels. This would prevent national economic interests driving visa requirements, and fits well in a harmonised EU with a level playing field. We recognise, however, that there are more important considerations to this than merely facilitating/encouraging travel through Schiphol.

Passport control

8.11 The future of border control is with biometrics technology and not with increasing staff levels or more passport desks. The Schiphol community should therefore continue to develop Automatic Border Control using biometrics technology for application to more than just premium passengers. As in the UK, the Dutch government could play a major role in this, including financial support if the idea is to make ABC available for the wider public. This could improve airport processes and reduce the workload of the border police.

8.12 An important role for government in relation to ABC would be to further encourage the establishment and use of internationally agreed standards to facilitate and encourage greater world wide use of ABC. Given the techniques developed to support Privium at Schiphol, the Government might consider this as part of an industrial strategy to export technology and expertise to other countries, perhaps supporting further research and development programmes.

8.13 Continuous attention should be given to better matching supply (staff) and demand (passengers), especially at peak periods to reverse the trend of deteriorating waiting times (we have not analysed actual waiting time, but base this on views from stakeholders). One element of this is close co-operation with the airlines to forecast demand more accurately, perhaps with more sophisticated planning tools, and certainly harnessing the information gathered through the schedule co-ordination process in the medium term and airport operational systems for on-the-day fine-tuning. Process improvements such as application of better queue management techniques and ensuring that there are sufficient dedicated desks for EU nationals (with shorter processing times), improve competitiveness. As far as such recommendations are already implemented, the different parties involved should be encouraged to optimise the agreements and

activities.

8.14 We consider that it would be worthwhile to review the value of the outbound border control. We understand the revenues (outstanding parking tickets, tax criminals etc.) collected at outbound border control points are no more than €3 million per year. This control takes a significant amount of manpower, adds to the number of interfaces at the airport and can create tension in the departure hall. Lessons can be learned from the UK and in the USA, especially in relation to the absence of a visa expiration check and new pilots with automatic outbound control (US). This review should entail more than revenues and costs only, since there are legal requirements following from the Schengen agreement. Moreover it should be noted that passport control also deals with protection of civil rights and combating crime.

8.15 Government may also wish to explore how, in the not too distant future, passenger check-in, border control and security can be integrated, so keeping Schiphol as an industry leader with state-of-the art systems.

ANNEX

1. DEFINITIONS

1. "Accompanied hold baggage": Baggage accepted for carriage in the hold of an aircraft, on which the passenger who checked it in is on-board.
2. "Airside": The movement area of an airport, adjacent terrain and buildings, or portions thereof.
3. "Aircraft Security Check": An inspection of the interior of an aircraft to which passengers may have had access and an inspection of the hold for the purpose of discovering prohibited articles.
4. "Aircraft Security Search": A thorough inspection of the interior and the exterior of the aircraft for the purpose of discovering prohibited articles.
5. "Background check": A check of a person's identity and previous experience, including any criminal history, as part of the assessment of an individual's suitability for unescorted access to security restricted areas.
6. "Cabin baggage": Baggage intended for carriage in the cabin of an aircraft.
7. "Commercial Flight": A scheduled or non-scheduled flight or flight activity rendered for hire to the general public or private groups for valuable consideration.
8. "Co-Mat": Abbreviation of air carrier company materials, shipped within its network of stations.
9. "Co-Mail": Abbreviation of air carrier company mail, shipped within its network of stations.
10. "Continuous Random Checks": Checks conducted during the entire period of activity, whilst those checks are to be conducted on a random basis.
11. "General Aviation": Any scheduled or unscheduled flight activity not offered or available to the general public.
12. "EDS" - Explosive Detection System. A system or combination of different technologies which has the ability to detect, and so to indicate by means of an alarm, explosive material contained in baggage, irrespective of the material from which the bag is made.

13. "EDDS" - Explosive Device Detection System. A system or combination of different technologies which has the ability to detect, and so to indicate by means of an alarm, an explosive device by detecting one or more components of such a device contained in baggage, irrespective of the material from which the bag is made.
14. "Hold Baggage": Baggage intended for carriage in the hold of an aircraft.
15. "Known Consignor": (a) For Cargo: The originator of property for transportation by air for his own account and who has established business with a regulated agent or air carrier on the basis of criteria detailed in this Annex.
- (b) For Mail: The originator of mail for transportation by air for his own account and who has established business with a regulated postal authority/administration.
16. "Landside": The area of an airport which is not airside and includes all public areas.
17. "Mail": Despatches of correspondence and other objects tendered by and intended for delivery to postal administrations. A postal authority/administration is defined by Member States.
18. "Prohibited article": An object which can be used to commit an act of unlawful interference and that has not been properly declared and subjected to the applicable laws and regulations. An indicative list of such prohibited articles is found in the Attachment.
19. "PEDS": Primary Explosive Detection System. A system or combination of different technologies which has the ability to detect, and so to indicate by means of an alarm, explosive material contained in baggage, irrespective of the material from which the bag is made.
20. "Regulated Agent": An agent, freight forwarder or other entity who conducts business with an operator and provides security controls that are accepted or required by the appropriate authority in respect of cargo, courier and express parcels or mail.
21. "Security Restricted Area": Airside areas of an airport into which access is controlled to ensure security of civil aviation. Such areas will normally include, inter alia, all passenger departure areas between screening points and aircraft, ramp, baggage make-up areas, cargo sheds, mail centres and airside cleaning and catering premises.
22. "Security Controls": Means by which the introduction of prohibited articles

can be prevented.

23. "Screening": The application of technical or other means which are intended to identify and/or detect prohibited articles.

24. "Unaccompanied hold baggage": Baggage accepted for carriage in the hold of an aircraft, on which the passenger who checked it in is not onboard.

25. "Terminal": The main building or group of buildings where the processing of commercial passengers and freight and the boarding of aircraft occurs.

26. "TIP": Threat Image Projection, a software programme, which can be installed on certain x-ray machines. The programme projects virtual images of threat articles (e.g. a gun, knife, improvised explosive device) within the x-ray image of a real bag under examination, and provides immediate feedback to the x-ray machine operator on the operator's ability to detect such images.

27. "Trace Detection Equipment": Technology system or combination of different technologies which has the ability to detect very small amounts (1/billion of a gram), and so to indicate by means of an alarm, explosive materials contained in baggage, or other articles subjected for analysis.

2. AIRPORT SECURITY

2.1. Airport Planning Requirements

The design or layout of airports, passenger and cargo terminals and other buildings having direct airside access shall take into account the essential requirements relating to:

- (a) security controls applied to passengers, baggage, cargo, courier and express parcels, mail and air carrier catering stores and supplies;
- (b) the protection and control of access to airside, security restricted areas and other sensitive airport areas and facilities;
- (c) the efficient use of security equipment.

2.1.1. Airside/Landside Boundaries

Boundaries shall be established between landside and airside areas at airports.

2.1.2. Security Restricted Areas

Security Restricted Areas shall be established at each airport.

2.2. Access Control

2.2.1. Security Restricted Areas and Other Airside Areas

(i) Access to security restricted areas and other airside areas shall be controlled at all times to ensure that no unauthorised person enters these areas and that no prohibited articles can be introduced into security restricted areas or aircraft.

(ii) All staff requiring access to security restricted areas shall be subjected to a minimum 5-year background check. The check shall be repeated at regular intervals not exceeding 5 years.

(iii) All staff requiring access to security restricted areas shall also receive regular training in aviation security (see point 12.3) including the risks to aviation security and be instructed to report to the relevant authority any incident which may pose a threat to aviation security.

(iv) Airport identification cards shall be issued to all personnel working in the airport or visiting it frequently, (including airport and air carrier employees and employees of other organisations). The airport identification card shall carry the name and photograph of the bearer. It shall be valid for a limited period only. The relevant authority shall determine when a permanent airport identification card shall be issued to frequent visitors.

(v) The airport identification card shall be worn in a visible place, at all times while its holder is on duty.

(vi) Vehicles which need to be used airside shall remain airside to the extent practicable.

(vii) Vehicles requiring to move between landside and airside areas shall be issued with a pass specific to the vehicle and fixed to it in an easily visible place. Other vehicles requiring airside access shall be admitted only after having been inspected and issued with a temporary pass. Vehicles on emergency missions may be exempt from these requirements.

(viii) Airport identification cards and vehicle passes shall be checked at all airside and security restricted area checkpoints.

2.2.2. Terminal Areas

Surveillance shall be maintained over all terminal areas accessible to the public.

Terminals shall be patrolled and passengers and other persons kept under surveillance by security staff.

2.2.3. Other Public Areas

The means of controlling access to public areas which are close to aircraft movement areas, (spectator terraces, airport hotels and car parks), shall be provided. Other public areas which shall require supervision are, but are not limited to, facilities which are always located landside including patron and other public parking areas, terminal and public access roadways, rental car facilities, taxi and ground transportation staging areas, and any on-airport hotel facilities.

Arrangements shall also be made to ensure that such public areas may be closed at short notice in the event of an increase in threat. Security staff shall patrol these areas when open to the public.

2.3. Screening of Staff, Items Carried and Vehicles

(a) All staff, including flight crew, together with items carried shall be screened before being allowed access into security restricted area. Where this is not practicable, then persons and items shall be subjected to continuous appropriate random screening at a frequency indicated by risk assessments conducted by the competent authority in each Member State; random screening shall be extended to all items carried onboard aircraft by any services including cleaning, duty free, and other parties with aircraft access.

One year after the entry into force of this Regulation, all staff, including flight crew, together with items carried shall be screened before being allowed access into the critical parts of security restricted areas, as identified by the competent authority of each Member State.

By 1 July 2004, the Commission will adopt appropriate implementing measures for a common definition of the critical parts of security restricted areas in accordance with Article 4(2) of this Regulation. Such measures shall be fully applicable at the latest five years after their adoption by the Commission, without prejudice to Article 6 of this Regulation.

The screening procedure shall ensure that no prohibited article is carried and the methods used shall be the same as for screening passengers and cabin baggage.

(b) Vehicles and supplies being conveyed airside or to other security restricted areas shall be inspected on a random basis.

2.4. Physical Security and Patrols

(a) Aprons and other parking areas shall be adequately illuminated, and, in particular, the lighting provided shall illuminate vulnerable areas of the airport.

(b) Technical and maintenance areas shall be protected by fencing, guards, patrols and access to these areas controlled by means of airport identification cards and vehicle passes. Similar measures shall be taken to protect the perimeter and such airport-based installations as power supplies, electrical sub-stations, navigational facilities, control towers and other buildings used by the air traffic control services, and fuel and communications facilities. Special precautions shall be taken against attempts to sabotage fuel and communications facilities.

(c) The perimeter fence and adjacent areas to security restricted areas, other airside areas outside this fence, including those in the immediate vicinity of the runway threshold and taxiways, shall be subjected to surveillance by patrols, closed circuit television or other monitoring measures. Strict challenging procedures for persons without airport identification displayed, and persons accessing areas for which they are unauthorised shall be implemented.

(d) Access to airside and security restricted areas via airport tenant offices, maintenance hangars, cargo facilities, other service and facility buildings shall be restricted to the minimum required.

3. AIRCRAFT SECURITY

3.1. Searching and Checking Aircraft

1. All aircraft shall be searched as follows:

(a) aircraft not in service shall be subjected to an "aircraft security search" immediately before or immediately after being taken into a security restricted area for a flight: aircraft may be searched other than immediately before being taken into a security restricted area but shall be secured or guarded from the commencement of the search until departure; if searched after entry into a security restricted area it shall be secured or guarded from the commencement of the search until departure;

(b) aircraft in service, during turn-around, or transit stops, shall be subjected to an "aircraft security check" immediately after passenger disembarkation or as late as possible before passenger boarding and baggage/cargo loading as appropriate.

2. All aircraft security searches and aircraft security checks shall be conducted once all service providers (caterers, cleaners, duty-free and others), other than

those involved in the security function, have left the aircraft and sterility shall be maintained until and throughout the boarding process and pre-departure.

3.2. Protection of Aircraft

1. Responsibility shall be established for controlling access to parked aircraft and executed as follows:

(a) for aircraft in service, access shall be controlled from the start of the aircraft security check until departure, in order to maintain the integrity of the check;

(b) for aircraft not in service which have been searched and brought into a security restricted area, access shall be controlled from the start of the aircraft security search until departure, in order to maintain the integrity of the search.

2. Each aircraft in service shall be placed under surveillance sufficient to detect unauthorised access.

3. Access to aircraft not in service shall be controlled as follows:

(a) cabin doors shall be closed;

(b) air bridges and/or ventral stairs shall be secured, withdrawn or retracted as appropriate; or

(c) tamper evidence applied to aircraft doors.

4. In addition, when all staff are not screened for access into security restricted areas, each aircraft shall be visited at least once every 30 minutes by a foot or mobile patrol or placed under surveillance sufficient to detect unauthorised access.

5. Aircraft shall, wherever possible, be parked away from perimeter fences or other easily penetrable barriers and in well-illuminated areas.

4. PASSENGERS AND CABIN BAGGAGE

4.1. Screening of Passengers

1. Other than as referred to in point 3 below, all departing passengers (i.e. originating and transfer passengers, unless previously screened to the standard detailed in this Annex), shall be screened to prevent prohibited articles from being introduced into the security restricted areas and on board an aircraft. Passengers shall be screened by the following methods:

(a) searched by hand; or

(b) screened by Walk-Through-Metal-Detection equipment. Where Walk-Through-Metal-Detection equipment is used there shall also be a continuous random hand search of screened passengers. Such hand searches shall be carried out on all passengers who cause the equipment to alarm, as well as a continuous random search which shall be carried out on those passengers who do not cause the equipment to alarm, and if:

(i) the alarm is activated, the person shall be required to be screened again with Walk-Through-Metal-Detection equipment; or

(ii) searched by hand where the support of a hand held metal detector may be employed.

2. Where Walk-Through-Metal-Detection equipment is used, it shall be calibrated to such a level as to reasonably ensure that small metallic items are detected.

3. Appropriate authorities may create categories of persons that shall be subject to special screening procedures or exempted from screening.

4. Security provisions shall be developed for potentially disruptive passengers.

4.2. Separation of Passengers

Screened departing passengers shall not mix with arriving passengers who may not have been screened to the standard detailed in this Annex. Where these passengers cannot be physically separated then the security objective shall be achieved by the application of compensatory measures in accordance with the assessment of the risk by the competent authority.

4.3. Screening of Cabin Baggage

1. The cabin baggage of all departing passengers (i.e. originating and transfer passengers, unless previously screened to the standard detailed in this Annex), shall be screened prior to being allowed into security restricted areas and on board an aircraft. Any prohibited articles shall be removed from the passenger's possession or the passenger denied access into the security restricted area or the aircraft as appropriate. Cabin baggage shall be screened by one of the following methods:

(a) a full hand search of the content of each bag, with each bag being examined for suspicious signs such as inconsistent weight etc; or

(b) screened by conventional x-ray equipment with hand searching of screened bags also being conducted on a continuous random basis, where the percentage of persons so searched is not less than 10 %, including those about which the operator has concerns; or

(c) screened by High Definition x-ray equipment fitted with TIP installed and employed. Only those bags about which the operator has concerns need be searched by hand but the hand search may be supported by use of Trace Detection Equipment.

2. Cabin baggage of those parties listed under point 4.1 paragraph 3 may be subject to special screening procedures or exempted from screening.

4.4. Screening of Diplomats

Subject to the provisions of the Vienna Convention on Diplomatic Relations, diplomats and other privileged persons and their personal baggage, except "diplomatic bags", shall be liable to screening for security purposes. Air carrier staff responsible for receiving diplomatic bags shall make sure that they have, in fact, been sent by duly-appointed officials of the missions concerned. Diplomatic couriers and their personal baggage are not exempted from screening.

5. HOLD BAGGAGE

5.1. Reconciliation of Hold Baggage

1. Hold baggage shall not be placed on board an aircraft unless the following measures are taken:

(a) hold baggage shall be properly marked externally to permit identification with relevant passengers; and

(b) the passenger to whom such baggage belongs shall be checked in for the flight on which it is to be carried; and

(c) prior to loading, hold baggage shall be held in an area of the airport to which only authorised persons have access; and

(d) all items of baggage taken into the custody of an air carrier for carriage in the hold of an aircraft shall be identified as either accompanied or unaccompanied. The process of identification shall be achieved either by manual or automated means.

2. Measures shall be established to ensure that if a passenger checked in for a

flight, who has placed baggage in the custody of the air carrier, is not onboard the aircraft, such hold baggage shall be removed from the aircraft and shall not be carried on that flight.

3. A hold baggage manifest or an alternative means of providing evidence which confirms the identification and screening of unaccompanied hold baggage shall be drawn up.

5.2. Screening of Hold Baggage

1. Accompanied Hold Baggage. All items of accompanied hold baggage (both originating and transfer hold baggage, unless previously screened to the standard detailed in this Annex), shall be screened by one of the following methods before being loaded onto an aircraft:

(a) hand search; or

(b) conventional x-ray equipment with at least 10 % of screened baggage also being subjected to either:

(i) hand search; or

(ii) EDS or EDDS or PEDS; or

(iii) conventional x-ray equipment with each bag being viewed from two different angles by the same operator at the same screening point; or

(c) conventional x-ray equipment with TIP installed and employed; or

(d) EDS or EDDS; or

(e) PEDS; or

(f) Trace Detection Equipment on open pieces of baggage.

2. Unaccompanied Hold Baggage. All items of unaccompanied baggage, both originating and transfer hold baggage, shall be screened by one of the following methods, before being loaded onto an aircraft:

(a) EDS; or

(b) a multi-level PEDS, where at Level 2 the images of all bags are viewed by the operators; or

(c) conventional x-ray equipment with each bag being viewed from two different angles by the same operator at the same screening point; or

(d) hand search supplemented by the application of Trace Detection Equipment on open pieces of baggage,

unless the unaccompanied baggage, which has been previously screened to the standard detailed in this Annex, has been separated due to factors beyond the passenger's control, and the unaccompanied baggage has been within the care of the air carrier.

5.3. Protection of Hold Baggage

1. Hold baggage to be carried on an aircraft, shall be protected from unauthorised interference from the point at which it is accepted into the care of the carrier until departure of the aircraft on which it is to be carried. The following measures shall be taken in protecting hold baggage:

(a) Prior to being loaded, hold baggage shall be held in the baggage make-up area or other storage area of an airport to which only authorised persons may have access.

(b) Any person entering a baggage make-up or storage area without authorisation shall be challenged and escorted out of the area.

(c) Originating and transfer hold baggage shall not be left unattended on the ramp or plane side prior to being loaded on aircraft.

(d) Tail-to-tail transfer hold baggage shall not be left unattended on the ramp or plane side prior to being loaded.

(e) Access to lost-and-found offices in the terminal shall be restricted to prevent unlawful access to baggage and materials.

6. CARGO, COURIER AND EXPRESS PARCELS

6.1. Application

All cargo, courier and express parcels intended to be carried on passenger or all-cargo aircraft shall be subjected to the security controls detailed hereunder before being placed on board the aircraft.

6.2. Qualifications for a Regulated Agent

Regulated agents shall be:

- (a) designated, approved or listed by the appropriate authority;
- (b) subject to specified obligations, as defined by the appropriate authority.

6.3. Security Controls

1. Cargo, courier and express parcels shall only be carried by air where the following security controls have been applied:

- (a) the reception, processing and handling of cargo shall be performed by properly recruited and trained staff;
- (b) cargo shall be:
 - (i) searched by hand or physical check; or
 - (ii) screened by x-ray equipment; or
 - (iii) subjected to simulation chamber; or
 - (iv) subjected to other means, both technical and bio-sensory, (e.g. sniffers, trace detectors, explosive detection dogs etc.)

so as to reasonably ensure that it does not contain any prohibited article as listed in points iv and v of the Attachment, unless it has been declared and properly subjected to applicable safety measures.

Where none of the above means and methods of security control can be applied owing to the nature of the consignment, the appropriate authority may specify a storage period.

2. Once security controls have been implemented, including controls on cargo from known consignors, whether on or off airport grounds, sterility of the shipments shall be maintained until such time as it is placed onboard aircraft and maintained until the departure of the aircraft.

3. The security controls detailed in paragraph 1 need not be applied in respect of:

- (a) cargo received from a known consignor;
- (b) transshipment cargo;

(c) cargo whose origin and handling conditions ensure that it presents no security threat;

(d) cargo which is subject to regulatory requirements providing for an appropriate level of security protection.

6.4. Criteria for a Known Consignor

1. A regulated agent or air carrier may only recognise a consignor as a known consignor by:

(a) establishing and registering the identity and address of the consignor and the agents authorised to carry out deliveries on his behalf; and

(b) requiring the consignor to declare that he:

(i) prepares consignments in secure premises; and

(ii) employs reliable staff in preparing the consignments; and

(iii) protects the consignments against unauthorised interference during the preparation, storage and transportation; and

(c) requiring the consignor to:

(i) certify in writing that the consignment does not contain any prohibited articles as listed in points (iv) and (v) of the Attachment; and

(ii) accepts that the package and contents of the consignment may be examined for security reasons.

6.5. Carriage on All-Cargo Aircraft

Where consignments can be positively identified for carriage only on all-cargo aircraft, the criteria detailed in point 6.4 need not apply provided that the known consignor:

(a) has a confirmed bona fide business address; and

(b) has previously shipped with the regulated agent or air carrier; and

(c) has an established business relationship with the regulated agent or air carrier; and

(d) ensures that all consignments are protected from unauthorised access until taken into the custody of the air carrier.

6.6. Transhipment Cargo

Transhipment cargo arriving by air need not have the security controls detailed in point 6.3. paragraph 1 applied to it provided that it is protected against unauthorised interference at the transit point. Other transhipment cargo, such as land or rail cargo, not being submitted to security controls at the point of departure or en route shall be screened in accordance with point 6.3 paragraph 1(b) and protected from unauthorised interference.

7. MAIL

7.1. Application

Mail carried on passenger, all-cargo and all-mail aircraft shall be subjected to security controls before being placed on board an aircraft.

7.2. Qualifications for Regulated Postal Authority/Administration

7.2.1. Each regulated postal authority/administration submitting mail to an air carrier for carriage shall meet the following minimum criteria:

- (a) it shall be designated, approved or listed by the Appropriate Authority;
- (b) it shall fulfil the obligations towards air carriers to apply the required security controls;
- (c) it shall employ properly recruited and trained staff; and
- (d) it shall protect mail from unauthorised interference while in its custody.

7.3. Security Controls

1. Time Sensitive Mail. Time-sensitive mail (i.e. up to 48 hour delivery) shall only be carried by air where the following security controls have been applied:

- (a) the reception, processing and handling of mail shall be performed by properly recruited and trained staff;
- (b) mail shall be:

- (i) searched by hand or physical check;
- (ii) screened by x-ray equipment;
- (iii) subjected to simulation chamber; or
- (iv) subjected to other means, procedural, technical or bio-sensory, (e.g. sniffers, trace detectors, explosive detection dogs, etc.);

so as to reasonably ensure that the mail does not contain any prohibited articles;
and

(c) flight details and aircraft routing on which the mail is to be carried shall remain confidential.

2. Other Mail. Mail which is not time-sensitive may be carried by air provided that the measures detailed in paragraph 1(a) and (b) have been applied. The security controls detailed in paragraph 1(b) need only be applied to a random proportion of mail.

3. The security controls detailed in paragraph 1(b) need not be applied in respect of:

- (a) mail received from a known consignor;
- (b) letters under a specified weight or thickness;
- (c) bona fide consignments of life saving materials;
- (d) high value goods which have been secured to a standard at least equal to that detailed in paragraph 1(b);
- (e) mail which is to be carried on all-mail flights between Community airports;
- (f) transshipment mail.

7.4. Criteria for a Known Consignor

Regulated postal authority/administration may only recognise a consignor as a known consignor by:

- (a) establishing and registering the identity and address of the consignor and the agents authorised to carry out deliveries on his behalf;

(b) requiring the consignor to declare that he protects the consignment against unauthorised interference during preparation, storage and transportation; and

(c) requiring the consignor to:

(i) certify in writing that the mail consignment does not contain any prohibited articles as listed in points (iv) and (v) of the Attachment;

(ii) accept that the packaging and contents of the mail consignment may be subjected to the security controls detailed in point 7.3.

7.5. Transshipment Mail

Transshipment mail arriving by air need not have the security controls detailed in point 7.3 applied to it provided that it is protected against unauthorised interference at the transit point. Other transshipment mail, such as land or rail mail, not being submitted to security controls at the point of departure or en route shall be screened in accordance with point 7.3 paragraph 1 and protected from unauthorised interference.

8. AIR CARRIER MAIL AND MATERIALS

8.1. Application

Air carrier company mail and materials carried on its own aircraft shall be subjected to security controls before being placed on board an aircraft.

8.2. Definitions

Mail and materials shall mean internal dispatches of correspondence and materials, such as but not limited to, documentation, supplies, maintenance spares, catering and cleaning supplies and other articles, intended for delivery to its own or contracted organisation for use within air carrier operations.

8.3. Security controls

Any air carrier shipment of company mail ("co-mail") or company materials ("co-mat") shall be subject to the following measures:

(a) it shall be controlled and security screened to ensure that no prohibited article has been introduced into company shipment; and

(b) it shall not be left unattended prior to being loaded onboard an aircraft.

Air carriers shall ensure that any other co-mail or co-mat shipment made on behalf of the carrier by a contract organisation such as, but not limited to, catering equipment and stores, cleaning supplies and other materials handled by contracted service providers, is screened prior to loading on board aircraft.

9. AIR CARRIER CATERING STORES AND SUPPLIES

9.1. Application

Air carrier catering, stores and supplies on board aircraft shall be subjected to security controls to prevent any prohibited article being taken on board an aircraft.

9.2. Security Controls

1. Suppliers of air carrier catering stores and supplies shall implement security controls to prevent the introduction of prohibited articles into such stores and supplies intended to be carried on board aircraft. These measures shall include the following:

- (a) the appointment of a security officer responsible for the implementation and supervision of security in the company;
- (b) high standards of reliability when employing staff;
- (c) all staff who have access to security restricted areas shall comply with background checks and security instructions issued by the airport authority;
- (d) the company shall prevent unauthorised access to its facilities and supplies;
- (e) if the company is located outside the airport, all supplies shall be transported to the aircraft in locked or sealed vehicles; and
- (f) processing and handling of stores and supplies shall be carried out by properly recruited and trained staff.

2. After delivery, stores and supplies shall be screened on a random basis.

3. Stores and supplies from a company which has not been subject to measures listed under paragraph 1 shall not be taken on board an aircraft.

10. AIR CARRIER CLEANING, STORES AND SUPPLIES

10.1. Application and objective

Measures shall be taken by air carriers and cleaning companies to ensure that air carrier cleaning, stores and supplies taken on-board do not contain any prohibited articles that could endanger the safety of the aircraft.

10.2. Security controls

1. Suppliers of air carrier cleaning services, stores and supplies shall introduce security measures necessary to prevent the introduction of prohibited articles into cleaning supplies to be taken on-board.

The following security measures shall taken:

(a) the appointment of a security officer responsible for the implementation and supervision of security in the company;

(b) high standards of reliability when employing staff;

(c) all staff who have access to restricted areas shall comply with background checks and instructions issued by the airport authority;

(d) the company shall prevent unauthorised access to its facilities;

(e) if the company is located outside the airport, cleaning supplies shall be transported to the aircraft in locked or sealed vehicles;

(f) processing and handling of cleaning supplies shall be carried out by properly recruited and trained staff; and

(g) the screening of cleaning supplies shall take place before co-mailing the supplies to other destinations.

2. After delivery, cleaning supplies shall be screened on a random basis.

3. Supplies from a company which does not comply with the security control measures in paragraph 1 shall not be taken on board an aircraft.

11. GENERAL AVIATION

11.1. Security Controls

1. General aviation aircraft at airports shall not be parked in close proximity to aircraft which are used for commercial flights in order to avoid breach of security measures applied to those aircraft, baggage, cargo and mail to be carried on-board.

2. Provisions to separate screened passengers of commercial flights from occupants of general aviation aircraft shall be implemented, based on the following criteria:

(a) at major airports, physical arrangements and/or security controls shall be introduced to prevent mixing of departing and arriving occupants of general aviation aircraft with passengers who have been already security screened;

(b) if possible, departing and arriving occupants of general aviation aircraft shall pass through a separate general aviation terminal and, also, when embarking or disembarking on the apron, shall either be separated from security screened passengers, or be transported in a special bus or car, or be under constant surveillance;

(c) if no separate terminal is available, occupants of general aviation aircraft shall either:

(i) pass through a separate part of the terminal building and be escorted or transported by bus or car to and from their aircraft;

(ii) be subject to security screening prior to entering the security restricted area, if passing through security restricted areas of the terminal building is unavoidable; or

(iii) be subject to other security controls achieving the same effect depending on local circumstances.

12. STAFF RECRUITMENT AND TRAINING

12.1. National Aviation Security Training Programme

Each Appropriate Authority shall develop and implement a National Aviation Security Training Programme to enable aircrew and ground personnel to implement aviation security requirements and to respond to acts of unlawful interference with aviation.

12.2. Security Staff

1. The National Aviation Security Training programme should include selection, qualification, training, certification and motivation of security staff. People who are deployed to undertake security duties either as all or part of their employment shall fulfil the following requirements as specified by the appropriate authority:

(a) managers developing and conducting security training for security and air

carrier and airport ground staff shall possess necessary certification, knowledge and experience which shall as a minimum include:

- (i) extensive experience in aviation security operations;
- (ii) certification approved by national appropriate authority, or other equivalent approval issued by the national appropriate authority; and

(iii) knowledge in following areas:

1. security systems and access control;
2. ground and in-flight security;
3. pre-boarding screening;
4. baggage and cargo security;
5. aircraft security and searches;
6. weapons and prohibited articles;
7. overview of terrorism; and
8. other areas and measures related to security that are considered appropriate to enhance security awareness.

(b) managers and instructors involved in and responsible for security training of security and airport ground staff shall undergo annual recurrent training in aviation security and latest security developments.

2. Training of Security Staff

Security staff shall be trained to undertake the duties to which they will be assigned; such training shall include, but not be limited to, the following security areas:

1. screening technology and techniques;
2. screening check point operations;
3. search techniques of cabin and hold baggage;

4. security systems and access control;
5. pre-boarding screening;
6. baggage and cargo security;
7. aircraft security and searches;
8. weapons and restricted items;
9. overview of terrorism; and
10. other areas and measures related to security that are considered appropriate to enhance security awareness.

The scope of training may be increased subject to aviation security needs and technology development. The initial training period for screening staff shall not be shorter than the International Civil Aviation Organisation (ICAO) recommendation.

3. Certification of Security Staff

Security screening staff shall be approved or certified by the national appropriate authority.

4. Motivation of security staff

Appropriate measures shall be promoted to ensure that security staff are highly motivated so as to be effective in the performance of their duties.

12.3. Other staff

Flight crew and airport ground staff Security Training and Awareness training programme shall be conducted on initial and recurrent basis for all airport and air carrier flight and airport ground staff. The training shall contribute towards raised security awareness as well as improving the existing security systems. It shall incorporate the following components:

1. security systems and access control;
2. ground and in-flight security;
3. pre-boarding screening;

4. baggage and cargo security;
5. aircraft security and searches;
6. weapons and prohibited articles;
7. overview of terrorism; and
8. other areas and measures relating to security that are considered appropriate to enhance security awareness.

The security training course for all airport and air carrier ground staff with access to security restricted areas, shall be designed for a duration of at least 3 hours in the classroom and a 1 hour field introduction.

13. GUIDELINES FOR EQUIPMENT

Equipment used in support of aviation security shall be approved by the appropriate authority in accordance with the guidelines outlined in this section.

13.1. Metal Detection Equipment

1. Walk-through metal detectors

Walk-through metal detectors used in passenger screening at airports shall fulfil the following requirements:

(a) Security

- (i) equipment shall be capable of detecting small items of different metals, with a higher sensitivity for ferrous metals in all foreseeable conditions;
- (ii) equipment shall be capable of detecting metal objects independently of their orientation and location inside the frame;
- (iii) the sensitivity of the equipment shall be as uniform as possible inside the whole frame and should remain stable and be checked periodically.

(b) Operating requirements

The functioning of the equipment shall not be affected by its environment.

(c) Alarm indication

Metal detection shall be indicated automatically, leaving nothing to the operator's discretion (go/no go indicator system):

(d) Controls

(i) Equipment shall be capable of being adjusted to meet all specified detection requirements, as well as the volume of the audible alarm.

(ii) Controls for adjustment of detection levels shall be designed to prevent unauthorised access. The settings shall be clearly indicated.

(e) Calibration

Calibration procedures shall not be made available to unauthorised persons.

2. Hand-held metal detectors

Hand-held metal detectors used in passenger screening shall fulfil the following requirements:

(a) Equipment shall detect small quantities of metal without being in direct contact with the object in all foreseeable conditions.

(b) Equipment shall detect both ferrous and non-ferrous metals.

(c) The detector coil shall be designed to pinpoint the position of detected metal easily.

(d) Equipment shall be fitted with audible and/or visible alarm indicators.

13.2. Standards and Testing Procedures for X-ray Equipment

1. Applicability

(a) Equipment

These requirements and guidelines for X-ray security equipment shall be applicable to any X-ray-based screening equipment that provides an image for an operator to interpret. This includes conventional X-rays as well as EDS/EDDS used in indicative mode.

(b) Items

Similarly, these requirements and guidelines for X-ray security equipment shall be

applicable to every item being screened, whatever its type or size. Any item going on board an aircraft, if it has to be screened, has to be screened to the standards contained in this Annex.

2. Performance requirements

(a) Security

The X-ray equipment shall provide for the necessary detection, measured in terms of resolution, penetration and discrimination, to ensure that prohibited articles are not carried on board aircraft.

(b) Tests

Performance shall be assessed using appropriate test procedures.

(c) Operational requirements

The X-ray equipment shall display a complete image of any item fitting into the tunnel. There shall be no corner cut-off.

Distortion of the item displayed shall be kept to a minimum.

The belt of the machine shall be marked to indicate where bags are to be placed on the belt to obtain optimum images.

Contrast sketching: the X-ray equipment shall have the ability to display groups of grey levels (scan a smaller range).

The image of any part of the item being screened shall be displayed on the screen for at least 5 seconds. In addition, the operator shall have the ability to stop the belt and, if necessary, reverse the belt when further examination is required.

Screen size: the monitor's screen shall be sufficient in size for the operator's comfort (typically 14 inches and above).

Screen characteristics: the screen shall be flicker-free and have at least 800 lines (typically 1024 × 1024 pixels, i.e. high-resolution monitors).

Where dual monitors are used, one shall be monochrome only.

The X-ray equipment shall indicate visually materials it cannot penetrate.

The X-ray equipment shall provide organic and inorganic stripping.

The systems shall provide automatic threat recognition to facilitate the operator's search.

3. Maintenance

No unauthorised changes, including maintenance or repair, shall be made. There shall be no change in the hardware or the software of the machine without verifying that it does not adversely affect image performance.

The composition of the belt material shall not be changed without verifying that this induces no change in image performance.

If modem access for maintenance or upgrades is available, access shall be controlled and monitored.

Country	UK	Schengen	Country	UK	Schengen
Afghanistan	Y	Y	Dominica		Y
Albania	Y	Y	Ecuador	Y	Y
Algeria	Y	Y	Egypt	Y	Y
Angola	Y	Y	Equatorial Guinea	Y	Y
Antigua and Barbuda		Y	Eritrea	Y	Y
Armenia	Y	Y	Ethiopia	Y	Y
Azerbaijan	Y	Y	Fiji	Y	Y
Bahamas		Y	Gabon	Y	Y
Bahrain	Y	Y	Gambia	Y	Y
Bangladesh	Y	Y	Georgia	Y	Y
Barbados		Y	Ghana	Y	Y
Belarus	Y	Y	Grenada		Y
Belize		Y	Guinea	Y	Y
Benin	Y	Y	Guinea Bissau	Y	Y
Bhutan	Y	Y	Guyana	Y	Y
Bosnia Herzegovina	Y	Y	Haiti	Y	Y
Botswana		Y	India	Y	Y
Bulgaria	Y		Indonesia	Y	Y
Burkina Faso	Y	Y	Iran	Y	Y
Burma	Y	Y	Iraq	Y	Y
Burundi	Y	Y	Ivory Coast	Y	Y
Cambodia	Y	Y	Jamaica	Y	Y
Cameroon	Y	Y	Jordan	Y	Y
Cape Verde	Y	Y	Kazakhstan	Y	Y
Central African Republic	Y	Y	Kenya	Y	Y
Chad	Y	Y	Kirgiztan	Y	Y
China	Y	Y	Kiribati		Y
Colombia	Y	Y	Korea (North)	Y	Y
Comoros	Y	Y	Kuwait	Y	Y
Congo (Brazaville)	Y	Y	Laos	Y	Y
Croatia	Y		Lebanon	Y	Y
Cuba	Y	Y	Lesotho		Y
Democratic Republic of Congo	Y	Y	Liberia	Y	Y
Djibouti	Y	Y	Libya	Y	Y
Dominican Republic	Y	Y	Macedonia	Y	Y

Country	UK	Schengen	Country	UK	Schengen
Madagascar	Y	Y	Serbia and Montenegro	Y	Y
Malawi		Y	Sierra Leone	Y	Y
Maldives		Y	Somalia	Y	Y
Mali	Y	Y	South Africa		Y
Marshall Islands		Y	Sri Lanka	Y	Y
Mauritania	Y	Y	Sudan	Y	Y
Mauritius		Y	Surinam	Y	Y
Micronesia		Y	Swasiland		Y
Moldova	Y	Y	Syria	Y	Y
Mongolia	Y	Y	Taiwan	Y	
Morocco	Y	Y	Tajikistan	Y	Y
Mozambique	Y	Y	Tanzania	Y	Y
Nauru		Y	Timor (East)		Y
Namibia		Y	Thailand	Y	Y
Nepal	Y	Y	Togo	Y	Y
Niger	Y	Y	Tonga		Y
Nigeria	Y	Y	Trinidad and Tobago		Y
Oman	Y	Y	Tunisia	Y	Y
Papua New Guinea		Y	Turkey	Y	Y
Palau		Y	Turkmenistan	Y	Y
Pakistan	Y	Y	Tuvalu		Y
Peru	Y	Y	Uganda	Y	Y
Philippines	Y	Y	Ukraine	Y	Y
Qatar	Y	Y	United Arab Emirates	Y	Y
Romania	Y		Uzbekistan	Y	Y
Russia	Y	Y	Vanuata		Y
Rwanda	Y	Y	Vietnam	Y	Y
Saint Kitts and Nevis		Y	West Somoa		Y
Saint Lucia		Y	Yemen	Y	Y
Saint Vincent and Grenadines		Y	Zambia	Y	Y
Salamon islands		Y	Zimbabwe	Y	Y
Sao Tome e Principe	Y	Y	Former Yugoslavia	Y	Y
Saudi Arabia	Y	Y			
Senegal	Y	Y			
Seychelles		Y			

Country	Belgium	Denmark	France	Germany	Italy	Netherlands	Spain	United Kingdom
Afghanistan	√	√	√	√	√	√	√	√
Albania			√					√
Algeria								√
Angola	√		√	√		√	√	√
Bangladesh	√	√	√	√	√	√	√	√
Belarus								√
Burma								√
Burundi								√
Burkina Faso			√					
Cameroon			√					√
Colombia								√
Congo	√	√	√	√	√	√	√	√
Cuba							√	
Ecuador								√
Eritrea	√	√	√	√ ¹	√	√	√	√
Ethiopia	√	√	√	√	√	√	√	√
Gambia	√			√		√		√
Ghana	√	√	√	√	√	√	√	√
Guinea	√		√			√	√	
Haiti			√				√	
India		√ ²	√	√ ¹			√	√
Iraq	√	√	√	√	√	√	√	√
Iran	√	√	√	√	√	√	√	√
Ivory Coast			√				√	√
Jordan				√				
Kenya								√
Lebanon				√				√
Liberia			√				√	√
Libya			√					
Mali			√				√	
Macedonia								√
Moldova								√
Nepal								√
Nigeria	√	√	√	√	√	√	√	√
Pakistan	√	√	√	√	√	√	√	√
Palestinian Authority			√					√
Rwanda								√
Senegal			√		√		√	√
Serbia & Montenegro								√
Sierra Leone	√		√			√	√	√
Sri Lanka	√	√	√	√	√	√	√	√

Country	Belgium	Denmark	France	Germany	Italy	Netherlands	Spain	United Kingdom
Somalia	√	√	√	√	√	√	√	√
Sudan	√		√	√		√		√
Syria	√		√	√		√	√	
Tanzania								√
Turkey				√ ¹				√
TRNC								√
Uganda								√
Vietnam								√
Yugoslavia								√
Total	18	13	28	20	12	18	23	42

(2) Not required if in possession of valid visa for Canada, Switzerland or USA

(3) Not required for Indian nationals if in possession of valid visa for EU or European Economic Area country, Canada, Switzerland or USA

Source: National authorities (Belgium, UK) and London embassy websites

Airport	Charge per departing passenger	Jul 2001	Sept 2001	Feb 2002	Jun 2003	Aug 2003	Oct 2003	Apr 2004	Jul 2004	Comments
AMS	Local (O&D)	NLG 10.75	NLG 10.75	NLG 6.16	EUR 10.80	EUR 10.80	EUR 10.80	EUR 10.55	EUR 10.55	Dedicated security charge
	Transfer passenger	NLG 0	NLG 0	NLG 0	EUR 1.60	EUR 1.60	EUR 1.60	EUR 1.60	EUR 1.60	
LHR	International	GBP 7.67	GBP 7.67	GBP 7.67	GBP 9.30	GBP 9.30	GBP 9.50	GBP 10.40	GBP 10.40	Included in Passenger Charge
	Republic of Ireland	GBP 6.42	GBP 6.42	GBP 6.42	GBP 7.95	GBP 7.95	GBP 7.95	GBP 7.90	GBP 7.90	
	Domestic	GBP 4.30	GBP 4.30	GBP 4.30	GBP 5.60	GBP 5.60	GBP 5.60	GBP 6.10	GBP 6.10	
LGW	International	GBP 6.47	GBP 6.47	GBP 6.47	GBP 6.80	GBP 6.80	GBP 6.80	GBP 7.15	GBP 7.15	Included in Passenger Charge
	Rep. Of Ireland	GBP 5.22	GBP 5.22	GBP 5.22	GBP 5.45	GBP 5.45	GBP 5.45	GBP 5.75	GBP 5.75	
	Domestic	GBP 4.20	GBP 4.20	GBP 4.20	GBP 4.45	GBP 4.45	GBP 4.45	GBP 4.70	GBP 4.70	
CDG/ ORY	Airport tax	FF 18	EUR 2.74	EUR 2.74	EUR 8.05	EUR 8.05	EUR 8.05	EUR 8.2	EUR 8.20	Dedicated to security
FRA	All passengers	DEM 10.40	DEM 10.40	EUR 5.71	EUR 6.58	EUR 7.61	EUR 7.61	EUR 9.84	EUR 8.98	Dedicated security charge
MUC	All passengers	DEM 9.40	DEM 13.50	EUR 4.90	EUR 6.35	EUR 6.35	EUR 6.35	EUR 7.20	EUR 6.44	Dedicated security charge
MAD	International	EUR 0.90	EUR 0.90	EUR 1.00	EUR 1.13	EUR 1.13	EUR 1.13	EUR 1.15	EUR 1.15	Dedicated security charge
	Domestic	EUR <0.90	EUR <0.90	EUR <1.00	EUR <1.13	EUR <1.13	EUR <1.13	EUR <1.15	EUR <1.15	
FCO	All passengers	ITL 3500	ITL 3500	ITL 3500	EUR 3.86	EUR 1.81	EUR 1.81	EUR 1.81	EUR 1.81	Dedicated security charge
CPH	Not specified									
BRU	Local (O&D)	BEF 150	BEF 150	EUR 3.72	EUR 4.17	EUR 6.17	EUR 6.17	EUR 6.28	EUR 6.28	Dedicated security charge
	Transfer passenger	BEF 150	BEF 150	EUR 3.72	EUR 3.99	EUR 5.91	EUR 5.91	EUR 6.02	EUR 6.02	

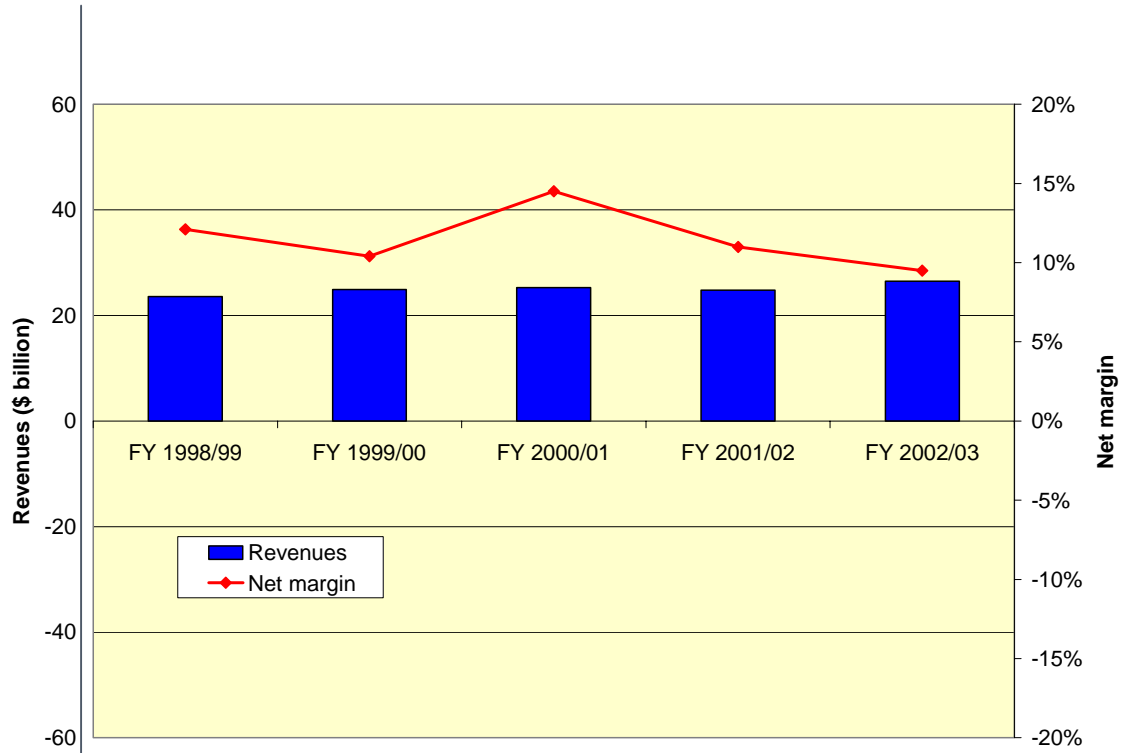
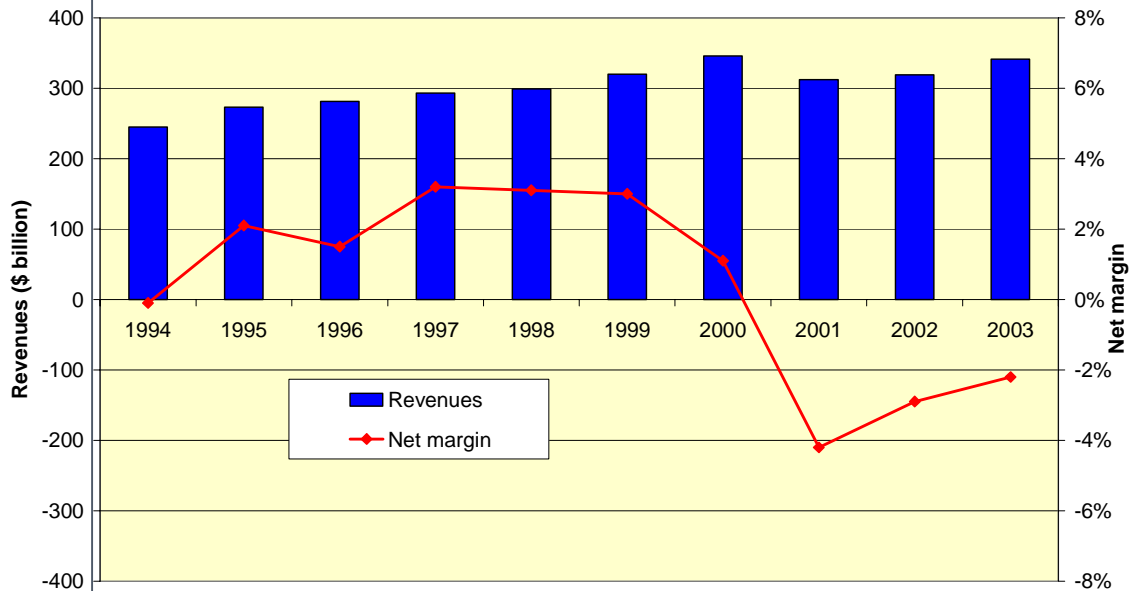


Exhibit 59: Airport profitability

Source: SH&E analysis and Airline Business

Exhibit 60: Airline profitability



Source: SH&E analysis and Airline Business

Security

- A breakdown and specification of the security tasks and laws and regulations: a systematic overview of tasks, responsibilities and regulations in each airport/country, which also indicates how the rules laid down in EU Regulation 2320/2002 are interpreted and how and to what extent they are implemented and enforced in the various countries.
- Special attention will have to be given to the obligation to separate departing and arriving passengers ('clean area'). This obligation will have consequences for the 'one stop security' concept at Schiphol, which is important for the quality of the transfer product.
- A breakdown and specification of additional contingency security measures since 11 September 2001: a systematic overview of tasks, responsibilities and any laws and regulations relating to these measures for each airport/country.
- Special attention will have to be given to the question of how the various countries deal with temporary contingency measures. Are temporary measures adopted or not? If so, what are those measures? For what periods are they implemented and what criteria are adopted for implementing temporary contingency measures? What parties are responsible for and finance these temporary contingency measures?
- A breakdown and specification of the costs and revenues: an overview, as far as possible, of the costs and revenues for each task as well as the method of financing them (by the airport, airlines or government? Via levies, airport charges, subsidies, general funds or a combination?)
- A breakdown of the costs and revenues into those arising from the obligations under the EU Regulation and from additional contingency measures; a calculation of the costs and revenues per passenger; clustering of the costs, for example into operating and investment costs or aviation-related and terrorism-related costs. Are there also differences in the regulations concerning security levies and charges?
- A comparison of the service levels for the various security tasks and measures.
- A comparison between the countries of important changes since 2000 with respect to tasks, responsibilities, laws and regulations and their implementation, tariffs/costs and service levels.

Border Control

(Transit) visas

- Are there differences between the countries in the laws and regulations

governing visas and airport transit visas?

- Nationals of which countries are required to have (airport transit) visas in the countries concerned?
- To what extent does this have an impact on the competitive position of Schiphol because travellers are influenced by visa rules in their choice of a destination or transit airport?

Rejected foreign nationals

- How do the different countries implement the duty on airlines to carry rejected foreign nationals back to their own country?
- For which categories of rejected foreign nationals are the carriers actually made responsible for returning them to their own country? And for which categories of rejected foreign nationals are the airlines made responsible for the costs of accommodation, etc?
- For which costs incurred by the government for rejected foreign nationals are airlines made responsible? Are these costs passed on in the ticket prices? Does this influence the decision of airlines to opt for a particular airport?

Passport control

- What are the waiting times at passport control at the different airports and what standards have been adopted for them? What is the average length of time that a passenger waits in line before his passport is checked?
- Have agreements been made on waiting times between the governments and the airports, and if so what are these agreements? Who bears what costs? What are the consequences for the airport and for the airlines?
- To what extent are the differences in waiting times so great that they affect the airports' competitive position? How do passengers feel about passport control at the different airports? Do passengers regard the way passport controls are carried out as an important aspect in the choice of a particular (transit) airport?
- Do all airports offer the option of automatic border passage? What is the government's role in permitting /preventing automatic border passage, who finances it and to what extent does it influence the airport's competitive position?

Separation of Schengen/ non-Schengen-EU/non-EU passengers

- What are the consequences of the obligations under the Schengen treaty in terms of changes to the infrastructure and the associated costs and benefits for the different airports?

- What rules have the different governments introduced with respect to separation of Schengen, non-Schengen-EU and non-EU passengers? Who pays the associated costs? Are they passed on to passengers? To what extent does this affect the competitive position?

Enlargement of EU/Schengen:

- What is the influence of the recent enlargement of the EU and of the future increase in the number of Schengen countries as regards passport control (efficiency) and changes to infrastructure at the different airports?
- What rules have the governments prescribed in this respect? What are the consequences of these rules and to what extent do they differ from one airport to another?
- Who is responsible for the associated costs? Are they passed on to passengers?

AAE, Benchmark Government Influence on Aeronautical Charges, November 2003

ACI, Financing Civil Aviation Security Cost in Europe, 19 May 2003

DG Transport and Energy, Study on Civil Aviation Security Financing, Summary of Final Report, April 2004

ECAC, Document 30, Part I, 9th edition, July 2003

EU legislation Security:

EU Regulation 2320/2002, 16 December 2002

EU Regulation 622/2003, 4 April 2003

EU Regulation 1217/2003, 4 July 2003

EU Regulation 1486/2003, 22 August 2003

EU Regulation 68/2004, 15 January 2004

EU Regulation 849/2004, 29 April 2004

EU Regulation 1138/2004, 21 June 2004

EU legislation Border Control:

EU Regulation 539/2001, 15 March 2001

EU Directive 2001/51, 28 June 2001

EU Directive 2004/84, 29 April 2004

IATA, Airport and Air Navigation Charges Manual, July 2004

ICAO, Annex 17, Security, 7th edition, April 2002

ICAO, Annex 9, Facilitation, 11th edition, July 2002

Schiphol Group, Benchmark Security Charge 2003

Schiphol Group, Statistical Annual Review 2003, April 2004