

# The impact of ageing on aviation

Airnëth Report 3

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## Executive summary

The 'grey boom' at European airports is about to start. The share of older air travellers is growing quickly. At Amsterdam Airport Schiphol, 50+ travellers accounted for 24% of total origin-destination traffic in 2005. After 2010, a 50% share of older air travellers in origin-destination traffic will be the rule rather than the exception at many European airports. On top of that, the air transport industry itself will have to deal with an ageing workforce.

Older air travellers show different travel characteristics compared to younger travellers. In particular, they differ with respect to their propensity to fly, travel purpose, destination choice, access modes, airport dwelling time, perception of the travel product and the use of airport facilities.

The physical and mental conditions of people change with age. Eyesight and hearing become worse, mobility decreases and also mental changes such as anxiety may accompany age. Because of these changes, older travellers have difficulties with three issues in airport terminals: walking, waiting and way-finding (3 W's). Meeting their needs is both a social and an economic imperative. Therefore, each stakeholder in the air transport sector faces challenges to serve this growing market.

However, the current air transport industry does not always deal with the barriers for older air travellers adequately. Older air travellers face many physical barriers during their trip. In addition, they may suffer from lack of co-ordination between air transport service providers, insensitive/inappropriate communication, neglect and loss/ damage of mobility equipment.



In July 2006, the European Parliament and the Council accepted a new EC Regulation (No 1107/2006) concerning the rights of disabled persons and persons with reduced mobility when travelling by air. Managing bodies of airports must be responsible for ensuring that high quality assistance is provided. The European Civil Aviation Conference (ECAC) has produced Codes of Practice to help ensure that the regulation is implemented consistently and to an acceptable standard.

Ageing does not only have implications for air travel patterns and the organisation of the air transportation system, but also for the workforce of many stakeholders in the industry. Employers such as airlines and airports will increasingly face a lack of employees due to the increasing 'grey pressure'. In addition, employability changes with age due to changes in productivity.

However, there is a difference in the images of and the facts about older workers. Physical and mental health is not only influenced by age, but also by lifestyle and work factors. Often, only the weak points of the ageing workforce are taken into account and strong points are not exploited enough. In most cases, good human resource policies can prevent a decrease of performance when workers get older.

Airneth concludes that ageing is likely to have a substantial impact on the air transport industry. However, the knowledge about air travel behaviour of older age groups is limited. This is even truer regarding the air travel behaviour of older age groups in the future. Therefore, Airneth stresses the need to address the issue of ageing and air transport in research, in policy and in the air transport industry itself.



## 1. About Airneth

Airneth is an initiative to support aviation policy in The Netherlands using the most recent insights from academic experts from various disciplines. In addition, Airneth has the objective to address important policy issues in the academic world.

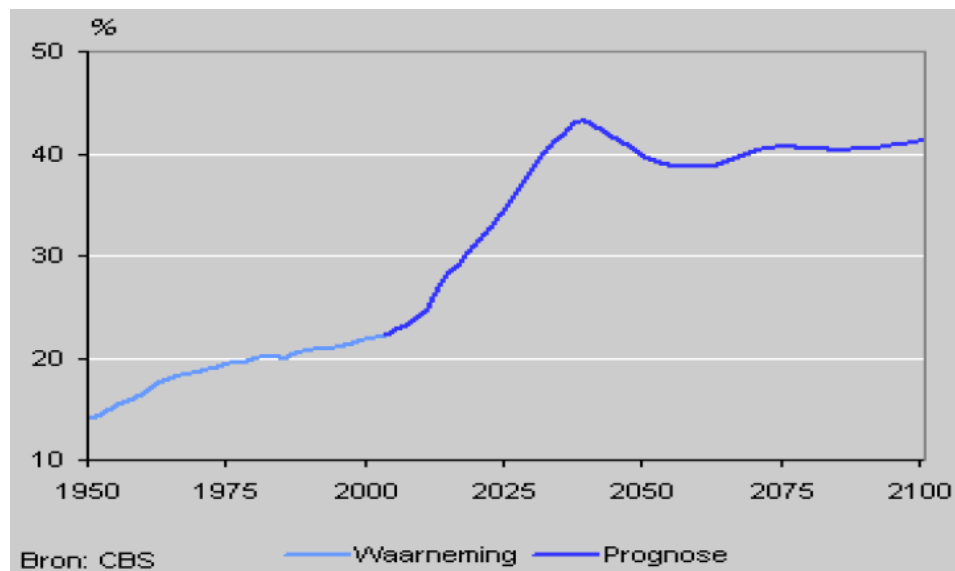
Airneth uses several tools to achieve its goals. In workshops, conferences, seminars and via the interactive website, Airneth stimulates the exchange of knowledge between academics and policy makers in the field of air transport.

This report is based on the results of the seminar “The impact of ageing on aviation” on 23 November 2006 at Madurodam in The Hague, The Netherlands. Participants came from different academic, policy and industry backgrounds. The views expressed in this document are not necessarily those of Airneth.

## 2. Context and objectives

Ageing will be one of the major policy issues in the decades to come. The share of older adults in the total population is already increasing. In a few years time, the share of elderly in total population will start to grow even more radically (figure 2.1). Not only in Europe, but also in countries such as China and India.

Figure 2.1 ‘Grey pressure’ in the Netherlands (number of persons >65 years on 100 working persons)



Source: Gründemann 2006

The opportunities and challenges of ageing have been addressed in many fields, ranging from the housing market, the labour market to urban commuter behaviour. Yet, the relation between ageing and air transport remains largely unclear and undocumented, both in the academic world and in aviation policy. What will be the impact of ageing on the air transport industry and aviation policy?

Airneth has addressed this question in a seminar entitled ‘the impact of ageing on



aviation' since Airneth believes that the implications of ageing on aviation will be substantial. Airneth stresses the need to address the issue of ageing and air transport in the academic world, in policy and in the air transport industry itself.

The objective of the seminar was fourfold:

1. To gain insight into the characteristics of elderly and the travel behaviour of senior air travellers
2. To gain insight into the needs of older air travellers in the air transportation system
3. To gain insight into the implications of ageing for airlines and airports
4. To assess the opportunities and threats of ageing for policy-making

A number of speakers have shed their light on these issues, including:

- Ton van Egmond, NHTV Breda
- Hans Martens, Schiphol Group
- Rob Gründemann, TNO
- Harry Wolfe, Maricopa Association of Governments
- Ann Frye, chair of ECAC working group of people with reduced mobility
- Carmen van Casteren, KLM (participant panel discussion)
- Jaap de Wit, Airneth (participant panel discussion)

This seminar report includes the conclusions from presentations and discussions during the seminar as well as insights from the available literature in the field of ageing and aviation.

## 3. Air travel behaviour of the elderly

### 3.1 Older and younger adults, now and in the future

Older adults exhibit quite different characteristics compared to younger adults<sup>1</sup>. These different characteristics have implications for the air travel behaviour of elderly now and in the future as well as their needs in the air transportation system.

#### *The youth of the 2000s: hedonistic and idealistic*

The youth in the 2000s can be characterised as hedonistic, following the motto "having fun is compulsory!" They are restlessly searching for ever-new experiences in their hectic lives. Their life-worlds tend to be narrow, because of the increasing possibilities for personal communication (mobile phones/internet/chat/msn) without the need of face-to-face contacts. They are hedonistic but also idealistic.

#### *The senior of the 2000s: between hedonism and asceticism*

The seniors of the 2000s can be characterised as balancing between hedonism and asceticism. On the one hand, it is important to enjoy life ("here and now") and exploit the benefits of the modern consumer culture. They are less prepared than their parents to postpone the gratification of needs. On the other hand they value working hard. Doing nothing is 'not done'.

From a physical and mental perspective, individuals experience typical changes in human functioning as he or she ages<sup>2</sup>. Such changes include sensory changes (eyesight/hearing problems), physiological changes (dexterity, mobility problems) and mental changes (loss of cognitive skills, anxiety).

#### *The senior of the 2050s?*

Although many of the physical and mental changes will also accompany ageing in the future, the elderly of the future will certainly be different from elderly now. First of



all, elderly in the future are expected to be healthier than older people now. Second, the characteristics of elderly in 2050s are not quite clear. Their characteristics in relation to their travel behaviour will amongst other things depend on<sup>3</sup>:

- The question if early retirement options still exist (or do future seniors have to work till 67, 68, and 70?)
- The extent to which value is attached to the consumer culture or a trend break sets in.
- Will elderly of the future spend most of their time in small life-worlds with narrow horizons, facilitated by ICT? Or will they show wider interests?
- Interest in uniqueness or tourism highlights?
- A safe world or many safety issues?
- Virtual travel more attractive than physical travel?

### 3.2 (Air) travel behaviour of elderly

#### A different air travel pattern

Air travel behaviour of the older adults differs substantially from the air travel behaviour of the younger adults. The box below highlights some of the insights into air travel behaviour of older adults.

#### Some insights on long-distance travel behaviour of elderly

\*The number of long-distance air trips per person for older people is generally lower than for young adults, although they tend to travel longer distances and spend more time at the destination. Increased time availability allows those in older age groups to undertake longer trips in length and duration<sup>4</sup> (US domestic travel). The mobility drop is larger for older elderly groups (>75 years).

\*There are substantial differences between older age categories. There are substantial differences between the age group of 65-74 and the age group of 75 years or more with respect to long-distance travel activities. Air travel expenditures increase until the age group of 45-55 and decline in older age categories. Yet, joint expenditures on air travel and package travel products are roughly constant between 45 and 75. It is not until 75 that travel drops<sup>5</sup> (Canadian household expenditures).

\*In relative terms, air travel becomes a more important transport mode for long-distance trips with increasing age, in particular for social visits (US domestic travel)<sup>6</sup>.

\*Older men and women travel by air at similar rates. This is in contrast to other modes of long-distance transport, where men generally travel more than women<sup>7</sup>.

\*Purposes of long-distance travel of seniors relate more to leisure and personal business (healthcare for example) than to business and commuting (like for younger adults)<sup>8</sup>.

\*As for all age groups, income is an important determinant for long-distance trip generation. However, the impact of income on long-distance travel is lower for seniors and much lower for older elderly: older elderly have physical and other limitations that prevent them from travelling long distances<sup>9</sup>.

Surprisingly, the number of studies on the impact of ageing on air travel is rather limited. This is in particular true when we compare the current body of knowledge on this issue with the vast amount of research carried out on ageing and person mobility. The studies that do exist focus primarily on the US situation. In short: ageing and air transportation is a field of research still to be explored.



#### Holidays of the aged in the 2000s

With respect to holidays of the aged, in the 2000s, the following characteristics can be mentioned<sup>10</sup>:

- Many holidays, but limited spending per holiday.
- Holidays must be “deserved” and educational elements are important.
- There’s a growth in city breaks, growth in nature- and culture-oriented travel and those holidays have tight travel schedules.
- Senior markets are very important because of early retirement entitlements, which include many healthy and wealthy seniors with a high propensity to fly.
- Regional airports can benefit from the ‘grey boom’. Dutch regional airports such as Groningen Airport Eelde and Eindhoven Airport thrive on older air travellers. Since the older air travellers are primarily leisure passengers, they attach a lower value to flight frequency offered at the larger airports. In addition, they prefer short walking distances and less complex airport layouts. Smaller airports can clearly benefit from ageing<sup>11</sup>.

#### Senior travel now differs from senior travel in the future

Although it is likely that ageing will have a dampening effect on the propensity to fly, the impact of ageing on the number of trips will be less severe than one would expect based on current air travel patterns of seniors. The number of elderly travelling and the number of travels the elderly make will increase in the future. Older people in the future will have better health, higher levels of education and higher incomes than older people now. They also expect higher levels of service than at present.

Although we expect an increase in the share and number of elderly travelling, one should not exclude air travel decline scenarios<sup>12</sup>:

- Growing environmental awareness; less prepared to use GHG (Green House Gas) producing energy.
- Decrease in interest in exploring/learning and growing comfort of virtual travel at home.
- Increasing insecurity and xenophobia.

### 3.3 The example of Amsterdam Airport Schiphol

#### The ‘grey boom’ at Schiphol

At Amsterdam Airport Schiphol<sup>13</sup>, the share of older origin-destination air travellers<sup>14</sup> (>50 years) has grown substantially between 1991 and 2005. In particular the group between 51 and 65 shows high growth figures. Until now, the growth of 65+ class was more modest, though above average.

The share of air travellers over 50 years accounted for about 24% of all passengers at the airport in 2005. The share of air travellers of 65 years old accounted for about 4%. The age distribution of Dutch passengers was roughly the same.

The travel purpose of seniors is mostly leisure oriented: about 80% of the Dutch older air travellers (>50) consisted of leisure travellers, while 20% were business travellers. After the year 2000, the gap between leisure and business segment increased for the Dutch 50+ passengers. Until 2000 the Dutch 50+ leisure passenger share accounted for 25% of total Dutch leisure passengers, in 2005 it had increased to 31% (“The grey boom”).

Compared to the younger adults (>50 years), Dutch older leisure travellers show a preference for destination countries such as Spain and Portugal, while Turkey and the UK are less popular destinations.





#### A different trip 'preparation pattern'

Older air travellers show a different air trip 'preparation pattern' than passengers below 50 years.

With respect to airport access, older passengers (50+) are more often going by taxi to the airport. Younger adults show a greater preference for public transport.

With respect to airport dwelling time, the Dutch 50+ passengers stay significantly longer at Amsterdam Airport Schiphol than younger travellers. Total minutes spent by Dutch 50+ passengers are 167. For <50 Dutch passengers it is 155 minutes. Total O&D passengers globally spend on average 146 minutes at the airport. So the older passengers go earlier to the airport, where they spend more time in the lounge. In addition, older air travellers tend to minimise uncertainty and go earlier to the gate.

#### Older air travellers have greater information needs

There is a greater need for information from Dutch senior passengers before arriving at Amsterdam Airport Schiphol. Older air travellers want to get as much information about their trip as possible, so they will not feel uncomfortable about their trip. Accordingly, older air travellers are more frequent users of airport information desks.

#### ..but adopt new technologies if airport pushes right button

In general, older age categories are characterised by a lower readiness for new technologies, such as self-service check in at airports. However, older air travellers at Schiphol use self-service check in almost at the same rate as younger people do. Condition is that older air travellers are introduced to the new technology in the right way.

Another striking thing is that older Dutch passengers (50+) shop less than the <50 Dutch passengers. They consider the services offered and delivered by airlines and airport of a lower value for money.

#### ..and are quite satisfied with the airport's quality

In general older Dutch passengers (50+) are more satisfied about quality key issues at Schiphol airport, such as ambience, cleanliness, efficiency and waiting comfort than younger travellers. However, they are not that much satisfied with the long walking distances at the airport. In addition, they show a somewhat lower overall perception of the airport, compared with younger adults. Older air travellers results to be very keen on getting value for money. Yet, prices in the terminal area are above average.

#### Certainty seekers, exclusivity claimers and ambience enjoyers

Schiphol divides all passengers in six target groups based on their needs:

- Active fun seekers: seek for a lot of fun and also freedom, less functionality and certainty.
- Trendy shoppers: seek for a lot of freedom and also fun, less functionality and certainty.
- Exclusivity claimers: seek for freedom, but are also functionality, less fun and certainty.
- Successful functionals: are extremely functional and look also for freedom, less fun and certainty.
- Ambience enjoyers: seek for certainty, but also fun. Less freedom and functionality.
- Certainty seekers: seek mostly for certainty. It must also be functional. Less fun and freedom.

According to Hans Martens<sup>15</sup>, younger Dutch leisure passengers at Schiphol are



predominantly 'active fun seekers', 'ambience enjoyers' and 'certainty seekers'. They attach more value to the fun element at the airport.

Above 50 years, travellers tend to attach a relatively high value to certainty and functionality, compared to younger passengers. In other words, they want to feel 'in control' and want value for money. Leisure passengers between 50 and 65 years can be categorised to a smaller extent as 'active fun seekers', but to a larger extent as 'successful functionals' and 'ambience enjoyers'. Above the age of 65, the certainty and functional element tend to become more and more important. 'Successful functionals', 'ambience enjoyers' and 'certainty seekers' dominate among Dutch leisure passengers.

### 3.4 Conclusions by Airneth

#### The 'grey boom' at European airports is about to start

The share of older air travellers at European airports is growing quickly. Yet, the real 'grey boom' is about to start around 2010. Older air travellers exhibit different travel characteristics compared to younger air travellers, in particular with respect to their propensity to fly, travel purposes, access modes, airport dwelling times, perception of the travel product and the use of airport facilities.

#### Research lags behind

Airneth concludes that the knowledge about air travel behaviour of older age groups is limited or at least fragmented. Relatively few academic studies have paid attention to air travel behaviour of seniors. This is even truer regarding the air travel behaviour of older age groups in the future, for which major uncertainties exist with respect to their air travel behaviour. In addition, the group of older adults is far from homogeneous in terms of their travel behaviour. Differentiation in additional age categories is needed.

Questions that should be considered are:

- How does the propensity to fly exactly relate to age? *The* older air traveller does not exist. Instead, the group of older air travellers is quite heterogeneous and should be differentiated.
- How do older travellers make their choice out of the available air travel options? What is the role of airport quality and airport accessibility, airline, price, frequency and direct versus indirect travel options in the air travel behaviour of seniors?
- How do older travellers choose between different long-distance travel modes such as air, high-speed train, bus and car?
- To what extent will ageing lead to a shift in seasonal patterns (more off-season traffic) at airports?
- What are feasible scenarios for the air travel behaviour of seniors on the short-term, mid-term and long-term?
- To what extent are these scenarios sufficiently included in strategic aviation foresight studies of policymakers?
- To what extent are current airline network concepts feasible in an ageing society?
  - Given the fact that older air travellers tend to negatively value long walking distances and search for certainty, the question is to what extent the time-critical hub-and-spoke system suits the needs of the older passenger.
  - Given the high seating densities and limited leg room at low-cost carrier flights and associated risks of deep-vein thrombosis, to what extent is the low-cost carrier product compatible with an ageing society. Are seniors forced to buy superior but more expensive products (more leg room, full-service flights)?<sup>16</sup>



Given the growing 'grey pressure', the travel characteristics of elderly air travellers at for example Amsterdam Airport Schiphol and the known differences from existing US studies, Airneth advocates more research in this field.

## 4. Challenges for the air transportation system

### 4.1 Older air traveller different from the disabled air traveller

The physical and mental conditions of people change with age. Eyesight and hearing become worse, mobility decreases and also mental changes may accompany age (for example, increasing anxiety). However, older adults are different from disabled people. "They don't want a wheelchair, they would like to be able to walk!"<sup>17</sup>

Because of the physical and mental difficulties that come with age, there are large opportunities but also challenges for each stakeholder to serve this ageing market. Some of them are already taking action. For example, aircraft manufacturers address assist handles, design easier-to-use seat belts, better aisle illumination and cabin layouts (e.g. Boeing's 'ageing project'). Measures are taken to reduce risks of deep-vein thrombosis during long-haul flights. Some airlines are giving guided airport tours to seniors at US airports. In this way older people get to know how the process is of travelling by air. Airlines but also airports should seek partnership with other stakeholders such as advocacy groups, advisory committees and hospitals in order to better serve the needs of older adults.

### 4.2 Difficulties for older travellers at airports

Older travellers have difficulties with three issues in airport terminals (3 W's):

- Walking
- Waiting
- Way-finding

Almost on each large airport walking distances are too long for seniors. For that reason, older travellers may prefer secondary airports, which have shorter walking distances and can be better overviewed. In traversing horizontally, a solution at larger airports would be more moving sidewalks, electric carts, automatic people movers and more resting areas along concourses. In addition, the journey to the gate often involves moving from one terminal level to another. The use of steps with thresholds clearly marked), escalators and most preferably, elevators, can help to overcome these problems.

For each flight passengers have to wait: for check in, for security, at the gate and for their luggage. In particular older adults would like to rest while they are waiting. Most of the time there are not enough seats for everyone. A solution would be to increase the number of seats at each stage of the process.

Older travellers find way-finding most important. Because they are not quite certain about their trip, at least they want to know where to go. There are not only informational signs at the airport, but also commercial ones (like hair salons for example). This can be confusing. Facilitation of way-finding could be improved by signage, technology, but also by human touch.



Because of these 3 W's older travellers (50+) seem to have a preference for direct flights. It is not clear if older travellers have the same tendency to transfer as younger travellers<sup>18</sup>. For hub-airports this could be an important issue, given the extensive walking distances between connecting flights at many hub airports such as Chicago O'Hare and Amsterdam Airport Schiphol.

In summary:

- The older air traveller is a significant force
- Older air travellers are different from people with reduced mobility.
- Because of the physical and mental difficulties that come with age, there are large opportunities but also challenges for each stakeholder to serve this ageing market.
- In adapting the air transportation system to an ageing society, Harry P. Wolfe<sup>19</sup> makes the following policy recommendations:
  - Involve the relevant stakeholders in adapting the air transportation system
  - Conduct cost-benefit analysis with respect to these adaptations
  - Partner with FAA, ECAC and ICAO
  - Conduct research on the travel behaviour of elderly.

## 5. EC Regulation 1107/2006

### 5.1 Older and disabled air travellers: what goes wrong?

There is a close correlation between age and disability. About two thirds of disabled people are over the retirement age. Almost half of the population aged over 75 has some kind of disability. On the other hand, older people in the future will have better health than older people now. They expect higher levels of service. At the same time, they open up new market opportunities<sup>20</sup>.

Older and disabled people face barriers in the air transportation system (see also section 4): they have a lack of confidence, experience attitudinal barriers as well as physical barriers (inside the airport, airport access, organisational).

The air transport service providers do not always deal with these barriers in an adequate way:

- There is lack of co-ordination between the different air service providers with respect to the handling of older and disabled air travellers (airport, airline, etc)
- There is poor communication with older and disabled travellers (insensitive, inappropriate communication)
- Neglect: being left for long periods without information
- Loss of or damage of mobility equipment

### 5.2 New EC regulation

In July 2006, the European Parliament and the Council accepted a new EC Regulation (No 1107/2006) concerning the rights of disabled persons and persons with reduced mobility when travelling by air. This regulation says that assistance should be provided at the airport as well as on board aircraft to meet the needs of disabled persons and persons with reduced mobility. The persons concerned should receive assistance without additional charge. Requirements on refusal of carriage come into effect in July 2007 and other requirements come into effect in July 2008.



Managing bodies of airports are responsible for ensuring that high quality assistance is provided. Assistance must be provided by a central body. Airports can provide the assistance themselves or can contract a third party, including an airline.

Assistance should be available from the designated arrival area at the airport to the point at which the person with reduced mobility (prm) is seated on board the aircraft and vice versa. Appropriate equipment is needed to assist the prm and should be provided when necessary.

#### The ECAC Codes of Practice

The European Civil Aviation Conference (ECAC) has produced Codes of Practice to help ensure that the regulation is implemented consistently and to an acceptable standard. These codes cover:

- Ground handling
- Staff training

The ground handling service provided must be:

- Seamless
- Mutually agreed by all stakeholders
- Regularly monitored
- Reviewed annually
- Subject to all service level agreements

Guidelines for staff training cover disability awareness and disability equality training for all airport and airline staff dealing with the travelling public. Staff that has an understanding of disability and its diversity, and the types of barriers people with disability experience in society, will be better able to provide a high quality service that respects the safety, independence and dignity of each passenger.

### 5.3 Opportunities for stakeholders

For each stakeholder there are opportunities and challenges to serve this ageing market.

#### For policy makers

- Older and disabled people are a large and growing part of the population.
- Meeting their needs is both a social and an economic imperative.
- It's about changing attitudes and cultures.

#### For airports and airlines

- Recognise and welcome older and disabled passengers as a growing market sector.
- Remember that older and disabled people now have the force of law behind them.
- Use the codes of practice and integrate them into your own training programmes.
- Use them as part of tender requirements for ground handling contracts.
- Involve older and disabled people in your planning.

#### For air travellers

- Know your rights
- Offer to work with airports/airlines on training etc
- Demand good service
- Complain when you do not receive it.



## 6. Labour participation of older workers

Ageing does not only have implications for air travel patterns and the organisation of the air transportation system, but also for the workforce of many stakeholders in the industry. Employers such as airlines and airports will increasingly face a lack of employees due to the increasing 'grey pressure'. In addition, employability changes with age due to changes in productivity.

### 6.1 Ageing and labour participation

Ageing does not only take place in The Netherlands, but also in the rest of Europe and in many other countries of the world such as China and India. Although ageing is a world-wide phenomenon, the growth in The Netherlands has been higher than in other EU-countries (see figure 2.1).

In The Netherlands, labour participation of older workers (55-64 yrs) has risen more quickly than in other EU-countries. Some striking numbers are:

- Number of older workers more than doubled between 1993 and 2003 from 345.000 to 709.000. In October 2006 this was already 858.000.
- The average retirement age in The Netherlands rose from 59,5 yrs to 62,2 yrs.
- Labour participation of older workers increased from 24% in 1993 to 38% in 2003 and 42% in October 2006. Compared with the Lisbon goal, 40% in 2007 and 45% in 2010, The Netherlands are already above it.
- The average EU labour participation of older workers is 41%.
- The number of people of 65+ yrs in The Netherlands will increase from 2 mln in 2005 to 4 mln in 2040. In contrast, the labour population (18-64 yrs) will decline from 8,3 mln in 2005 to 7 mln in 2040.

### 6.2 Policies of the Dutch national government

The Dutch national government has developed some policies in reaction to the ageing problem:

- Reintroduction of the obligation to apply for jobs for people older than 57,5 yrs.
- Abolition Occupational Disability Insurance Act- (WAO-) premium employers for employees with age >55 yrs.
- Introduction law against age discrimination in 2004.
- Abolition of tax advantages early retirement and pre-pensions in 2005.
- Grant scheme of the Ministry of Social Affairs and Employment: 21 mln for age management projects at the workplace.

### 6.3 Health problems

There is a difference in the images of and the facts about older workers. Ageing leads to more physical complaints (hearing/vision, less fitness, less power (strength), more chronic diseases) and increases the risk for long time absenteeism and disability. However, physical health is not only influenced by age, but also by lifestyle and work factors (work demands). In addition, in most jobs decreasing physical health does not or hardly influence performance. Many jobs can be easily adapted to physical disabilities. Only in very heavy physical jobs, decreasing physical health results in a substantial reduction of productivity as workers age. In these jobs,



various problems frequently come together such as heavy work, unhealthy lifestyles, low incomes, low education and very long-term job careers.

The decrease of cognitive abilities (memory and concentration) for older workers is small. In fact, mental health is often increasing. Older people do not learn less, but in a different way. Older workers often compensate physical limitations by using tools and smarter work strategies. The negative effect of ageing on productivity will be compensated by a positive effect of experience. This productivity-effect is often counterbalanced by higher wages.

In short, employers should not look at age, but also at each individual person. Not every person is the same. In addition, physical and mental health is not only influenced by age, but also by lifestyle and work factors. Often, only the weak points of the ageing workforce are taken into account and strong points are not exploited enough. In most cases, good human resource policies can prevent a decrease of performance when workers get older.

#### 6.4 Some implications for airlines

Ageing is also a challenging opportunity for many stakeholders in the airline industry, such as KLM<sup>21</sup>. The airline experiences ageing problems mostly at maintenance and baggage service. Maintenance work is done by highly technically skilled workers. In addition, specific maintenance jobs are often bound to only a few specialists. The average age in that part of the company is 53 to 55 years. Many of these workers will retire in the near future. Ageing will pose a substantial challenge to KLM for this part of the company, since the airline has not invested in multifunctional career paths.

Work at the baggage service is mostly heavy physical work. There is a bigger chance that someone needs to be replaced, when he or she has done heavy physical work for a long time. In this case it does not matter that someone is older or not. It depends more on the time period that he or she has done heavy physical work than on age.



## 7. Conclusions, research agenda and policy recommendations

### 7.1 Conclusions

The 'grey boom' at European airports is about to start. The share of older air travellers is growing quickly. At Amsterdam Airport Schiphol, 50+ travellers accounted for 24% of total origin-destination traffic at Amsterdam Airport Schiphol in 2005. After 2010, a 50% share of older air travellers in origin-destination traffic will be the rule rather than the exception at many European airports. The air transport industry itself will have to deal with an ageing workforce.

Older air travellers exhibit different travel characteristics compared to younger travellers. In particular, they differ with respect to their propensity to fly, travel purpose, destination choice, access modes, airport dwelling time, perception of the travel product and the use of airport facilities.

The physical and mental conditions of people change with age. Eyesight and hearing become worse, mobility decreases and also mental changes such as anxiety may accompany age. Because of these changes, older travellers have difficulties with three issues in airport terminals: walking, waiting and way-finding (3 W's). Meeting their needs is both a social and an economic imperative. Therefore, each stakeholder in the air transport sector faces challenges to serve this growing market.

However, the current air transport industry does not always deal with the barriers for older air travellers adequately. Older air travellers face many physical barriers during their trip. In addition, they may suffer from lack of co-ordination between air transport service providers, poor (insensitive/inappropriate) communication, neglect and loss/damage of mobility equipment.

In July 2006, the European Parliament and the Council accepted a new EC Regulation (No 1107/2006) concerning the rights of disabled persons and persons with reduced mobility when travelling by air. Managing bodies of airports must be responsible for ensuring that high quality assistance is provided. The European Civil Aviation Conference (ECAC) has produced Codes of Practice to help ensure that the regulation is implemented consistently and to an acceptable standard.

Ageing does not only have implications for air travel patterns and the organisation of the air transportation system, but also for the workforce of many stakeholders in the industry. On top of that, Employers such as airlines and airports will increasingly face a lack of employees due to the increasing 'grey pressure'. In addition, employability changes with age due to changes in productivity.

However, there is a difference in the images of and the facts about older workers. Physical and mental health is not only influenced by age, but also by lifestyle and work factors. Often, only the weak points of the ageing workforce are taken into account and strong points are not exploited enough. In most cases, good human resource policies can prevent a decrease of performance when workers get older.

### 7.2 Research agenda

Older air travellers exhibit different travel characteristics compared to younger air travellers. Airneth concludes that the knowledge about air travel behaviour of older age groups is limited or at least fragmented. Relatively few academic studies have





paid attention to air travel behaviour of seniors. This is even more true regarding the air travel behaviour of older age groups in the future.

Questions that should be considered are:

- How does the propensity to fly exactly relate to age? *The older air traveller does not exist.* Instead, the group of older air travellers is quite heterogeneous and should be differentiated.
- How do older travellers make their choice out of the available air travel options? What is the role of airport quality and airport accessibility, airline, price, frequency and direct versus indirect travel options in the air travel behaviour of seniors?
- How do older travellers choose between different long-distance travel modes such as air, high-speed train, bus and car?
- To what extent will ageing lead to a shift in seasonal patterns (more off-season traffic) at airports?
- To what extent are current airline network concepts feasible in an ageing society? Given the fact that older air travellers tend to negatively value long walking distances and search for certainty, the question is to what extent the time-critical hub-and-spoke system suits the needs of the older passenger.

### 7.3 Relevant issues and questions for policymakers

- Older and disabled people are a large and growing part of the population.
- Meeting their needs is both a social and an economic imperative.
- Implementation of the new EC Regulation and ECAC Codes of Practices plays a major role in this.
- Ageing means different air travel behaviour now and in the future
- Ageing may open up new opportunities for regional airports
- However, knowledge about air travel behaviour of older age groups now and in the future is limited.
- What are feasible scenarios for the air travel behaviour of seniors in the future?
- To what extent is ageing included in strategic aviation foresight studies in policy?



## 8. Registered participants

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Ann Frye*	European Civil Aviation Conference (ECAC)
Michiel van Goor	Schiphol Group
Hugo Gordijn	RPB
Rob Gründemann*	TNO
Milan Janic	Technical University Delft
Bram Kaashoek	Dialogic Innovatie & Interactie BV
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Judith Wildbret	Airneth
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- <sup>1</sup> Ton van Egmond, NHTV Breda  
<http://www.airneth.nl/documents/VanEgmondfinal.pdf>
- <sup>2</sup> Harry Wolfe, Maricopa Association of Governments  
<http://www.airneth.nl/documents/HarryWolfefinal.pdf>
- <sup>3</sup> Ton van Egmond, NHTV Breda  
<http://www.airneth.nl/documents/VanEgmondfinal.pdf>
- <sup>4</sup> Georggi, N.L. & R.M. Pendyala (1999). Analysis of long-distance travel behavior of the elderly and low income. Transportation Research Circular E-C026.
- <sup>5</sup> Tretheway, M. & D. Mak (2006). Emerging tourism markets: ageing and developing economies. In: Journal of Air Transport Management, vol. 12, 21-27.
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- <sup>7</sup> Georggi, N.L. & R.M. Pendyala (1999). Analysis of long-distance travel behavior of the elderly and low income. Transportation Research Circular E-C026.
- <sup>8</sup> Georggi, N.L. & R.M. Pendyala (1999). Analysis of long-distance travel behavior of the elderly and low income. Transportation Research Circular E-C026.
- <sup>9</sup> Georggi, N.L. & R.M. Pendyala (1999). Analysis of long-distance travel behavior of the elderly and low income. Transportation Research Circular E-C026.
- <sup>10</sup> Ton van Egmond, NHTV Breda  
<http://www.airneth.nl/documents/VanEgmondfinal.pdf>
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- <sup>12</sup> Ton van Egmond, NHTV Breda  
<http://www.airneth.nl/documents/VanEgmondfinal.pdf>
- <sup>13</sup> Section largely derived from the presentation of Hans Martens (Manager Market Research, Schiphol Group) 'Older air travelers at Amsterdam Airport Schiphol'
- <sup>14</sup> Results in this section only for origin-destination passengers. Connecting traffic not included.
- <sup>15</sup> Section largely derived from the presentation of Hans Martens (Manager Market Research, Schiphol Group) 'Older air travelers at Amsterdam Airport Schiphol', unless otherwise indicated.
- <sup>16</sup> Jaap de Wit, Airneth/ University of Amsterdam
- <sup>17</sup> Section 4 is largely based on the presentation and work of Harry Wolfe, Maricopa Association of Governments <http://www.airneth.nl/documents/HarryWolfefinal.pdf>, unless otherwise indicated.
- <sup>18</sup> Guillaume Burghouwt, Airneth
- <sup>19</sup> Section 4 is largely based on the presentation and work of Harry Wolfe, Maricopa Association of Governments <http://www.airneth.nl/documents/HarryWolfefinal.pdf>, unless otherwise indicated.
- <sup>20</sup> Section 5 is largely based on the presentation of Ann Frye, Ann Frye Consulting <http://www.airneth.nl/documents/AnnFryefinal.pdf>, unless otherwise indicated.
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