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Airports Council
International
European Region,
6 Square de Meeûs,
B-1000 Brussels, Belgium

Director General
Olivier Jankovec
-32 (0)2 552 09 71
olivier.jankovec@aci-europe.org

Senior Manager Membership & Commercial Services
Danielle Michel
-32 (0)2 552 09 78
danielle.michel@aci-europe.org

Communications Manager
Robert O’Meara
-32 (0)2 552 09 82
robert.omeara@aci-europe.org

PES Publications, 3a Gatwick Metro Centre, Balcombe Road, Horley, Surrey RH6 9GA, United Kingdom.
Tel: +(44) 1293 783 851, Fax: +(44) 1293 783 859,
email: post@pps-publications.com

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Amsterdam Airport Schiphol will handle more than 50 million passengers in 2012 – a record for the airport. It is focused on sustainable development, balancing the three Ps – People, Planet and Profit. Jos Nijhuis, CEO, Schiphol Group, outlined his strategic vision to Ross Falconer.

The Schiphol Group mission is to connect the Netherlands with the world’s major regional and urban centres, in partnership with its home carrier Air France-KLM and other airlines. The Netherlands has an international outlook and an open economy, and top connectivity is of critical importance. “That’s why we want our connections and frequencies to be best-in-class,” explained Nijhuis. “We also aim to offer excellent visit value, and function as an attractive hub for businesses, employees and visitors. Our objective is to generate long-term value for our stakeholders in everything we do. At Schiphol Group, that means not only being profitable, but also safeguarding sustainable development.”

The airport aims to offer its customers – both airlines and passengers – the best possible service. The quality of the passenger journey is central to this, and Schiphol is always in search of door-to-door solutions to ensure a comfortable travel process. “We aim to stand out by offering state-of-the-art passenger services, processes and products, and all at acceptable costs, because customers expect the best service for a reasonable price,” commented Nijhuis.

Passenger numbers increased by +3.7% to 23.9 million in the first half of 2012. Nijhuis expects that Amsterdam Airport Schiphol will exceed the 50 million passenger mark this year. “Given the extremely challenging economic conditions in Europe and the rest of the world, this is a respectable result that we are not unhappy with. Next year, passenger growth will probably be a little more modest, and cargo volumes are also expected to decline somewhat,” said Nijhuis.

New routes
The winter timetable, which runs to 30 March 2013, sees the network expanded with eight new destinations. KLM serves the Zimbabwean capital of Harare three times per week. Schiphol is also pleased to welcome new airline Blue Islands, which operates three
weekly flights to the Channel Islands. Transavia.com has also added new destinations, with Chambéry in France, Erbil in Iraq, and Kuusamo and Rovaniemi in Finland, while Corendon Airlines has added Bourgas in Bulgaria and Gazipasa in Turkey. This winter season also sees more flights to a number of existing destinations, thanks to the launch of new routes by airlines already operating at Schiphol, namely: Air Arabia Maroc to Casablanca, easyJet to Birmingham and Nottingham, and Transavia.com to Dubai and Sal. Eurolot has been operating more flights to Gdansk and Krakow since summer 2012. KLM will also be operating more flights on existing European and intercontinental routes. Alongside passenger growth, Schiphol has also seen revenue increase this year. Figures for the first half of 2012 show that revenue rose by +5.5% to €637 million. Spending in the shops beyond passport control increased by +7.8% to €16.48 per departing passenger. Last year, the renovation of a large retail area – Lounge 3 – put pressure on spending. The positive effects of this large-scale refurbishment and the changes in the retail offering, expanding the range of luxury and brand articles, are now noticeable. In addition, the variety of shops in Departure Lounge 4 has been substantially expanded and improved.

Nijhuis explained: “Despite the present economic downturn, the aviation industry remains a source of dynamic activity. Together with other sector parties, we have welcomed more passengers. The Mainport grows and we will reach the physical limits of the terminal in the years to come. As Europe’s preferred airport, Schiphol is working hard to maintain the desired capacity and quality levels in our operations, to serve both airlines and passengers. In this connection, we will continue to pursue a controlled development of airport charges.” Commenting on the growth in passenger numbers, he added: “First and foremost, we have our home carrier Air France-KLM and the other airlines to thank for that. They make sure that the number of passengers welcomed by Amsterdam Airport Schiphol continues to grow. We work side-by-side on quality services that aim to exceed passengers’ expectations. That means not just the trip itself, but all of the related facilities as well. People must perceive their time spent at Schiphol as quality time. Positive word-of-mouth advertising and messages on social media all benefit the reputation of our airport. That is why we always put the customer first.”

Enhancing the passenger journey
Amsterdam Airport Schiphol aims to give travellers as much control as possible over their own journey. To achieve this, it has introduced a large number of self-service facilities, from baggage drop-off to passport control.

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Enhancing the passenger journey
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Rijksmuseum, and an Airport Library offering books by Dutch authors and artists in dozens of languages.

“We pay attention to the specific needs of a variety of passenger groups. Parents with young children will find the Baby Care lounge at our airport, as well as plenty of places to play; business travellers have areas where they can work or relax in peace and quiet. Schiphol’s catering establishments offer all the choices of an international city: from a quick cup of coffee to a sumptuous four-course dinner,” said Nijhuis.

Social media contributes dramatically to Schiphol’s communication with its passengers and visitors. The airport is very active on Facebook and Twitter, and has its own YouTube channel with videos about the airport. There are now about 175,000 people following Schiphol on Facebook.

“In late-2010, we launched the Schiphol App, which has been downloaded around 700,000 times. The Chinese version is very popular among the target group. I am very pleased with the opportunities offered by social media; they provide valuable feedback that we can use to continually improve the range of facilities, services and products we offer,” commented Nijhuis. “Sometimes we receive heart-warming responses, such as recently when we opened the special bridge for premium passengers that runs directly from the car park to the gates. An enthusiastic passenger tweeted: ‘From Privium Parking to Gate C5 in just 6 minutes. Thanks for continuous improvement!’ I mean, that’s just great, isn’t it?”

Sustainability
Schiphol recognises that, as an aviation company, it serves a social need. “Schiphol can only grow and thrive if we incorporate the needs of people, the environment and the local region into everything we do. It is essential that we fulfil our corporate responsibility, as only then can we remain Europe’s Preferred Airport,” said Nijhuis. Sustainability is, therefore, at the heart of Schiphol’s activities. “We acknowledge our responsibility to climate-friendly aviation, accessibility, air quality and the scarcity of natural resources, as well as to sustainable employment and an attractive living and working environment,” added Nijhuis.

“We are active on all of these fronts. To me, it is important that Schiphol is at the vanguard and provides opportunities for innovation, such as the battery-changing station for electric taxis at our airport.”

Amsterdam Airport Schiphol uses thermal energy storage to heat and cool the terminal and offices, and has introduced LED lighting on a large scale. The airport is also collaborating with KLM on a biofuel breakthrough: on 19 June 2012, the longest biofuel-powered flight ever took off from Amsterdam Airport Schiphol. The KLM flight to Rio de Janeiro flew partly on fuel derived from spent deep-frying oil. Meanwhile, from 2014 Schiphol will start using electric buses to transport passengers to and from their aircraft.

“This represents an important new step towards reducing CO₂-emissions,” commented Nijhuis.

Looking ahead, Schiphol is switching to a central security system, with the decentralised security locations at the gates to be moved to a number of central locations and control posts.

It is all part of Schiphol’s efforts to enhance the passenger journey through the airport – something that is at the heart of all of its activities.

Nijhuis: “We aim to stand out by offering state-of-the-art passenger services, processes and products, and all at acceptable costs, because customers expect the best service for a reasonable price.”
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Schiphol Group is recognised worldwide as an industry benchmark in quality. Its aim is to be ‘Europe’s Preferred Airport’ – valued for its quality, capacity and extensive network of destinations. Ad Rutten, Executive Vice President, shared Schiphol Group’s strategies for success with Amy Hanna.

Amsterdam Airport Schiphol enjoyed double-digit growth in passenger numbers in 2011 and this year expects modest growth. Significantly, this means that throughput will exceed 50 million passengers – a record for the airport. It is a notable achievement, particularly given the challenging economic conditions in Europe and the rest of the world.

“We wish to serve airlines, handlers, passengers and businesses as efficiently as possible, with well-equipped and modern facilities,” said Rutten. “We operate Schiphol as an AirportCity: a dynamic environment providing its users with everything they need, 24 hours a day. Schiphol aims to stand out by offering state-of-the-art services, processes and products. The way we do this is what makes Schiphol a successful hub, now with 313 destinations and nearly 50 million passengers per year.”

Award-winning strategy
At the 8th ACI EUROPE Best Airport Awards, which took place at the 22nd ACI EUROPE Annual Assembly in June, Amsterdam Airport Schiphol was recognised as the best airport in the over 25 million passengers category. It was also previously a winner in 2009 and 2011. The judges commended the airport’s delivery of excellent services and facilities, while also highlighting its consistent commitment to its corporate responsibilities. “As the employees and management of Schiphol, we were extremely proud. All the more so because we were also voted best in Europe by the 12 million passengers who took part in the Skytrax survey in April,” explained Rutten.

“Looking at the benchmarks, Amsterdam Airport Schiphol is renowned not only because it is so easy for transfer passengers to find their way around, but also on account of its many recreational, cultural and leisure facilities. We respond to the needs and expectations of business travellers, but we have also invested in our very youngest customers with facilities that include everything from a Baby Care Lounge to a Kids Forest play area.”

Enhancing the passenger experience
Amsterdam Airport Schiphol is focused on the quality of the passenger journey as a whole. Its aim is that passengers feel welcome and at ease, approaching things from a human perspective and with a personal touch. Rutten explained that Schiphol wants passengers to feel relaxed when they board their aircraft. “40% of passengers at Schiphol are transfer passengers. Between flights, we want to give them a taste of Holland. So we have infused our airport with a ‘sense of place,’” he commented. “With a satellite of the Rijksmuseum – celebrating 10 years at the airport this year, and also with Dutch design, an Airport Library, an Airport Park, our Holland Boulevard, etc. Well-known Dutch brands present themselves at the airport and add to the ‘sense of place’ that is so typical of Schiphol.”
The airport is renowned for its pioneering focus on innovation, as part of its efforts to give travellers as much control as possible over their own journey. To achieve this, it has introduced a large number of self-service facilities, from baggage drop-off to passport control. Meanwhile, its Privium passengers can take advantage of fast border passage with the iris scan. “In September, we opened a special premium bridge between the central parking garage and our BC corridor. This bridge offers a ‘shortcut’ for First & Business class, premium and Privium passengers who only have carry-on baggage. They can skip the departure hall and go almost directly to the gate,” said Rutten.

The airport is also investing in the 70 Million Bags programme in order to expand and renew its baggage handling system. It is currently completing the ‘Backbone’ – an advanced baggage transport system that connects the four baggage handling areas. The end result is a state-of-the-art baggage handling system.

**Airport Collaborative Decision Making**

An Airport Collaborative Decision Making (A-CDM) programme is being developed at Amsterdam Airport Schiphol. In collaboration with all parties involved, it will operate as a certified European A-CDM airport starting in 2013. The programme is based on collaboration between all airport stakeholders, including airport and aircraft operators, ground handlers, air traffic control and network operations. The project aims to improve the overall efficiency of operations, with a particular emphasis on the aircraft turnaround and pre-departure sequencing process.

“Increased traffic volumes within European air space and increasing complexity are making it harder and harder to handle air traffic at airports efficiently. Many parties are involved in the handling of aircraft, including the airport, air traffic control, airlines and handling agents. Each of these parties takes measures where possible to structure their own processes in a way that maximises efficiency. It is only possible to further improve the flight and ground handling process if there is an even further step-up in cooperation between all the partners in the chain. The sharing of operational information plays an essential role in this,” explained Rutten. “For instance, if an aircraft takes off from Cape Town two hours too late, it will arrive at Schiphol approximately two hours later than scheduled. This has repercussions for all partners in the chain, as it means, among other things, that the reserved gate does not need to be available until two hours later, and aircraft handling must also be delayed for two hours. Sharing operational information with all other parties as soon as possible increases the predictability of the ground handling process. This information is useful to all parties, as it can be used to deploy resources and the available infrastructure more effectively. It also makes it possible to respond quickly to changes in the operational situation, such as delays or special weather conditions.”

‘Competitive position’

Schiphol Group owns and operates Amsterdam Airport Schiphol and the regional Dutch airports of Rotterdam and Lelystad; it also has a 51% stake in Eindhoven Airport. Schiphol currently handles 420,000 air transport movements, and its ‘licence to grow’ is bound by certain agreements. The airport is permitted to expand to 580,000 air transport movements by 2020. Of this total, 70,000 non-Mainport flights are supposed to depart from Eindhoven and Lelystad, it also has a 51% stake in Eindhoven Airport. Schiphol and the regional Dutch airports of Rotterdam and the Hague Airport in New York, where our participating interest is now 100%. We also have interests in Australia, Italy, Hong Kong, Austria, Aruba and Sweden. The airports abroad contribute to revenue and to the net result.”

Looking forward to 2013, Amsterdam Airport Schiphol is preparing for a major renovation, as it is switching to a central security system. The decentralised security locations at the gates will be moved to a number of central locations and control posts. This will allow airlines to further streamline their passenger process. “It will benefit our customers’ travel and transit comfort as well. The ‘passenger journey’ remains at the heart of the way we think and do. We will also continue to further integrate Corporate Responsibility into our business processes,” concluded Rutten.
The number of bags handled at Amsterdam Airport Schiphol is set to increase in the coming years to 70 million and a major investment programme known as 70MB (70 million bags) is being implemented to expand baggage capacity. Mark Lakerveld, Senior Manager Baggage, outlined developments to Ross Falconer.

The 70MB programme has six clear objectives: to increase baggage handling capacity; improve baggage performance (in terms of less mishandled bags); improve working conditions for the handling employees; boost staff productivity (more bags with same amount of people); lower the cost per bag (from a sector point of view); and create more flexibility and robustness. The programme has seen the implementation of baggage robots to automate the process. "In the new baggage hall South, we introduced a new baggage handling concept: 'the pull concept'. The idea behind this concept is that all bags, local and transfer bags, first go to a buffer area (in the South buffer we can store 4,200 bags temporarily)," explained Lakerveld. When a batch is ready to fill one cart or container, the control systems send these bags to a baggage robot. This robot will fill the loading unit within 10 minutes and is ready to load the next one. With this 'pull concept', less space is needed for the makeup process.

"We can lower the peaks by preloading, and can handle more bags per employee with improved working conditions. The robots do the physical hard labour, can work 24/7 and need no breaks," said Lakerveld. "With the finalisation of the Backbone - the line that connects all baggage areas - we are ready for the coming years to handle 70 million bags. In the coming years, we will sweat our new assets, increase efficiency and further improve working conditions."

Self-service bag drop
Amsterdam Airport Schiphol is one of the pioneers of self-service bag drop, which is currently available to KLM and SkyTeam passengers. KLM and its SkyTeam partners now use 19 Self Service Drop Off Points (SSDOPs) in Departure Hall 1 & 2. In Departure Hall 3, five SSDOPs are in use by two other airlines. "The benefits are clear; the passenger is more in control of the process, the airline needs less check-in personnel and the airport can use the infrastructure more efficiently," commented Lakerveld. On 4 December, Amsterdam Airport Schiphol introduced seven more SSDOPs in Departure Hall 1, which is in use by KLM. The airport would like, in the coming years, to expand in consultation with the airlines – the self-service bag drop facilities in its departure halls.

Last summer, Amsterdam Airport Schiphol conducted an offsite bag drop pilot. "The customer satisfaction was very high. We could lower the peaks at the check-in desks in the departure hall and proved the concept. As we speak, we are looking at how to follow-up this pilot. The main obstacle is that it is a costly service. However, I believe that with offsite bag drop, we can exceed passengers' expectations and can postpone investments in terminal (baggage) expansions," concluded Lakerveld.
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FOR SOME
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SPOT-ON PARKING MANAGEMENT
Amsterdam Airport Schiphol operates as an Airport City, integrating services in its unique formula for commercial success. Jacques Hoendervangers, Commercial Services and Media Director, explained how the airport is capitalising on its non-aeronautical revenues by keeping the needs of the passenger in mind. Amy Hanna reports.

Amsterdam Airport Schiphol is furnished with innovative, customised facilities for all passengers – from its Privium lounge for registered travellers to its Kid’s Forest play area for children. Designed to fulfil the needs of both the leisure and the business traveller, it operates as an Airport City, with a number of inventive initiatives in place to deliver the service level of a major city. Amsterdam Airport Schiphol is about much more than just arrivals and departures. “The feedback we received over the past year regarding facilities was overall very positive,” Hoendervangers said. “Sometimes our products and services were a reaction to customer needs, but in most cases we developed our own products and services such as the Airport Library and Airport Park.”

Schiphol is focused on maintaining the growth of its non-aeronautical revenues with development of its on-site real estate, improvement of airside passenger spend and enhanced convenience for the traveller at the centre of its rapidly expanding commercial world.

The Airport City formula
As well as offering banks, shops, restaurants, hotels and even modern art as aspects of its Airport City formula, Schiphol is setting an international industry example for real estate development at and around airports. Schiphol Real Estate has played an important role in the construction of the airport and its model is a significant source of income for Schiphol Group, with over a quarter of last year’s non-aeronautical revenue coming from property leases. Hoendervangers said: “The Airport City model drives the further development and sustainable renovation of real estate, and the surrounding outdoor space and infrastructure. It also drives the development of a range of flexible concepts and contracts.

Schiphol is focused on maintaining the growth of its non-aeronautical revenues with development of its on-site real estate, improvement of airside passenger spend and enhanced convenience for the traveller at the centre of its rapidly expanding commercial world.
for hiring office space according to the specific preferences of organisations that settle here. Whether they need their own office that will showcase their organisation, or cost efficient space, or temporary space for project teams, or additional work and meeting space.” Schiphol’s real estate leases are currently experiencing 90% occupancy, with Microsoft, Danone, Cargill and LinkedIn all taking up residence in the Schiphol metropolis. “The unique environment and the wide range of facilities and flexible solutions support organisations, their employees and guests to be successful and provides Schiphol Group with a consistent source of income,” commented Hoendervangers.

New challenges

Both opportunities and threats loom in the travel retail market, with factors such as the ‘one bag rule’ being implemented by some low-cost carriers and the proliferation of online shopping changing the way that travellers look at buying in airports. In response, Amsterdam Airport Schiphol has developed its new vision on retail: a unique approach to airside shopping that prioritises the needs of the passenger to achieve consistently escalating revenues. Hoendervangers explained that Schiphol aims to increase airside passenger spend by further improving convenience solutions for its passengers and building variation in its ranges, “incorporating more room for experience, unique concepts and brand stores”. He added: “More specialist and brand stores will be introduced alongside the See Buy Fly shops. And our own stores selling alcohol, tobacco and chocolate will adopt a differentiated product range.” Following its implementation in July last year with the opening of the new, fully renovated Departure Lounge 3, Schiphol’s new vision saw spend per passenger increase by +7.8% to €16.48 in the first half of 2012.

Retail innovation

Schiphol has developed a number of manoeuvres to maintain the growth of its commercial revenues. It is working closely with its concessionaires in joint marketing campaigns, as well as streamlining the duty free experience for travellers with its online Webshop, which enables them to peruse special offers and reserve items online before they depart for the airport. Schiphol is also tailoring its product ranges to up and coming markets, catering for the growing demand for luxury products among high-spending travellers from Russia and Asia with the introduction of new, high-end brand stores to its Departure Lounge 3. The recently upgraded Departure Lounge 3 is one aspect of Schiphol’s ‘sense of place’ initiative to give travellers a taste of the Netherlands within the airport. Hoendervangers said: “The renovation of Departure Lounge 3 represents an important step in the implementation of our new vision on retail. The development of specialty shops and brand stores, as well as the overall experience – alongside our familiar See Buy Fly shops – plays an important role in this regard.” The next phase in Schiphol’s retail upgrade is the plan to renovate Departure Lounge 2.

Social media

Amsterdam Airport Schiphol also operates an advanced social media strategy, pivoted around its mobile app. “We created a travel support solution for our customers,” Hoendervangers explained. “Our idea was to take away stress from travellers so they can enjoy their journey and turn their stay at Schiphol into a pleasant experience. Passengers should not wait at their gate because they are afraid to miss their flight. They should go and have a coffee, go to the museum, or get a massage. Check the map in our application to find out where. There is usually plenty of time to take advantage of the many facilities the airport has to offer. The Schiphol Mobile Travel Solution creates the opportunity to do so.” The app was winner of the 2011 Travelution Award for ‘Best Mobile Travel Application’. “The application greatly enhances communication between Schiphol and its visitors. It is the most direct way to inform customers about their flight and all the things to do at Schiphol,” added Hoendervangers. So far the app has had around 700,000 downloads and every month over 18,000 flights are monitored, with this number growing rapidly. “Our Chinese app has also been a huge success so far,” he commented. “One of the features of the Chinese app is an automated sign translator, which uses the camera on your mobile device to recognise and translate signs.” Schiphol has also received positive feedback from Facebook, Twitter and Youtube. “Our extensive web-care programme is aimed at raising our customer satisfaction and increasing customer engagement,” Hoendervangers concluded.
SCHIPHOL’S DEVELOPMENT FOR GROWTH

Amsterdam Airport Schiphol is growing. Consistently multiplying passenger numbers are at a record high, and its 420,000 annual movements is expected to see considerable increases in coming years. Overseeing processes airside and in the terminal, Birgit Otto, Director Airport Operations, is responsible for maintaining smooth operations in the rapidly expanding airport. Amy Hanna reports.

Otto: “We are continuously working to improve quality and the passenger experience for our passengers and airlines. This involves faster check-in procedures, shorter waiting times, more efficient baggage handling, and continuous innovation and optimisation of the integrated passenger process.”

As an intercontinental gateway, Schiphol has seen escalating traffic from emerging economies consistently expand its network of destinations, while with throughput expected to exceed 50 million this year and passenger numbers increasing, Amsterdam Airport Schiphol is experiencing unwavering levels of growth. The airport’s existing runway system has the capacity to handle 600,000 air transport movements a year, and based on current forecasts could be managing that number as early as 2020. In response, Schiphol’s structural developments have been centred around ensuring smooth operations. The streamlining and acceleration of its processes both in the terminal and at airside are crucial to maintaining passenger flow as it grows to accommodate the 70 million passengers that it could be handling annually in less than a decade.

Otto said: “Growth is a prerequisite for remaining competitive, and for continuing to facilitate our extensive network of connections and fulfilling an important role in aviation worldwide. In conjunction with airlines, we are investigating how the airport infrastructure needs to be adapted and expanded in order to safeguard the competitive position of Mainport Schiphol.”

Schiphol’s new baggage handling hall is part of the airport’s 70 Million Bag programme. It has been designed to handle the expected further growth in passenger and baggage flow at Amsterdam Airport Schiphol.
Smarter baggage handling
The implementation of innovative processes and advanced technologies has played a significant role in steering Schiphol for the impending increase in its operations. Last year the airport began work on its first-of-its-kind smarter baggage handling system, which was designed to enhance capacity and improve the flow of baggage as part of Schiphol’s 70 MB programme – established to renew and expand the airport’s baggage handling capability to 70 million bags, with the completion of its South Baggage Hall and construction of the Backbone.

“Boasting an innovative and unique baggage handling concept, South Baggage Hall is the world’s most state-of-the-art baggage hall, where fully-automated robots handle baggage and load the baggage carts and containers,” Otto explained. “Together with our suppliers, we have won several innovation awards in recognition of our efforts. The Backbone is an advanced baggage transport system that connects the four baggage handling areas. The end result is an integrated, flexible and reliable baggage handling system. The Backbone is the final element of the 70 MB programme and was completed in December 2012.”

Schiphol has also instigated new initiatives to precipitate faster check-in, installing 90 new advanced check-in kiosks, and setting in motion its pilot project, ‘drive and check-in’ at the long-stay Park & Travel P3 in summer of this year. “Passengers flying with transavia.com and Arkefly could check-in and at the same time drop-off their luggage. The aim of the pilot was to experience with ‘remote baggage drop-off’, outside of the terminal,” commented Otto. Meanwhile, members of its Privium registered traveller programme need not pass through the departure hall at all, but can walk directly to their gate via the newly opened footbridge between Privium Parking P2 and Piers B and C. “We are continuously working to improve quality and the passenger experience for our passengers and airlines,” Otto added. “This involves faster check-in procedures, shorter waiting times, more efficient baggage handing, and continuous innovation and optimisation of the integrated passenger process.”

Self-service technology
Furthering the time saving measures taken to ease passenger flow through the terminal, Schiphol has initiated the use of self-service technology in many aspects of the passenger process. Since the start of this year, 12 Self-Service Drop-Off Points (SSDOPs) have been installed in Departure Hall 2. Amsterdam Airport Schiphol and its main partner Air France-KLM are among the first in the industry to implement such technology on this scale, and airlines such as Arkefly and easyJet have also begun to adopt the revolutionary system. “In addition to achieving cost savings for the airlines, these SSDOPs also increase overall capacity in the departure halls, allowing us to offer a more passenger friendly and efficient infrastructure. The SSDOPs, which can be used simultaneously by multiple airlines (in clusters), will be further expanded in consultation with the airlines.”

Schiphol has also been running a pilot study since March this year to investigate the feasibility of self-service passport control. “The security gates use facial recognition technology to compare passengers with their digital photos,” Otto explained. “The system also checks for counterfeit passports and people on wanted lists. All passengers from EU countries that are over the age of 18 and have a passport with a chip can opt to use self-service passport control. There are now 12 self-service gates at the airport.”

Increasing capacity
An important step in adapting to growing passenger traffic involves changes to security in the non-Schengen area of Schiphol. “We intend to have the security checks performed centrally, before passengers and staff enter the lounges and piers,” explained Otto. “This is only possible if we separate departing from arriving passengers. Without this separation, costs will dramatically increase as the result of future regulations and security requirements.”

Additional corridors and levels in certain piers will generate the extra space in the existing terminal to accommodate the expected increase in passenger numbers, and will also create the conditions for one-stop security, eliminating the need for transfer passengers to be screened more than once. “This improves services for passengers and streamlines the flow of traffic, thereby also increasing the capacity of the terminal,” Otto added. As well as taking measures to prevent terminal congestion, Amsterdam Airport Schiphol is ensuring the predictability and smooth operation of its ground-handling operations, with the implementation of Airport Collaborative Decision Making (A-CDM).

A collaboration of airport stakeholders, A-CDM collates operational information from parties involved in the handling of aircraft for more seamless movements.

“A-CDM allows for the processing and identification of (scheduled) flight times to be standardised at the European level. As a result, airports and their ground handling processes can be integrated into the European Air Traffic Management network. Thanks to A-CDM, all parties have simultaneous access to the same operational information, allowing for the optimal deployment of equipment, people and infrastructure (aircraft, handling facilities and gates).”

Schiphol will operate as a European A-CDM airport from 2013.
As part of the ongoing development of Amsterdam Airport Schiphol, there is a focus on ensuring flexibility in terms of the IT infrastructure in order to support the changes that are taking place. Kees Jans, Chief Information Officer, Schiphol Group, outlined some of the IT innovations to Ross Falconer.

The fast pace of change at Amsterdam Airport Schiphol means the IT infrastructure must similarly evolve quickly and be flexible. It is a strategy that has proven successful for the airport. A significant project is the 70 Million Bags (70MB) investment programme, which is being implemented to expand baggage capacity. The airport is cooperating with airlines and handling agents on the 70MB programme, in which it plans to invest nearly €800 million in the period between 2002 and 2013. The programme will allow Amsterdam Airport Schiphol to handle 70 million baggage items per year and will help increase the capacity and flexibility of the baggage system, improve the quality of baggage handling and working conditions in the baggage halls - through, for example, mechanisation – and reduce the costs per baggage item for airlines. The innovative, state-of-the-art technology used to reach these goals is unique. “The whole idea of designing flexible IT infrastructure started with the 70MB project. We saw a huge requirement for flexibility and reliability – those were the two main components,” explained Jans.

The next major project is the new central security project, which will have an impact on all operational IT systems. As part of this, the airport CCTV system has been completely digitised over this past year and adapted to the requirements of the new central security area. “There are a lot of new demands from an IT perspective to give the passenger more control, more information about waiting times and what to expect during the security process at Schiphol,” said Jans. “We must ensure that we have the flow management systems in place. It is about enhancing the experience of the passengers and the airport workforce – staff also need to have the feeling that they are in control.” Amsterdam Airport Schiphol is a pioneer in terms of mobile technology and utilises this as part of its strategy to put the passenger in control. “Passengers want information at the time, the place and on the device that they choose. Smartphones and Tablets are the logical choice for the passenger,” commented Jans. Following the success of the Schiphol App, a Chinese version was launched, which is becoming increasingly popular. It is a visible, successful result of Schiphol’s cooperation with Aéroports de Paris. Amsterdam Airport Schiphol is maximising its terminal space by utilising common use and self-service technologies where appropriate. Like other major hubs in Europe, the airport has different functionalities for its home carrier – Air France-KLM. “There are different demands, as there is more need for branding with the huge volume of Air France-KLM passengers at Schiphol,” explained Jans. He added: “We’re really focusing on common use equipment in those areas where it’s a logical choice. From an economic point of view, sharing resources is logical in terms of reducing costs.” The airport has received excellent feedback on its self-service bag drop facility. Ultimately, Schiphol is striving to develop best practice in its IT infrastructure, developing functionality to enhance the passenger experience and helping to create a standardised airport process.

FLEXIBLE, RELIABLE IT INFRASTRUCTURE

As part of the ongoing development of Amsterdam Airport Schiphol, there is a focus on ensuring flexibility in terms of the IT infrastructure in order to support the changes that are taking place. Kees Jans, Chief Information Officer, Schiphol Group, outlined some of the IT innovations to Ross Falconer.
For several years, Fast Time Simulation of passenger, aircraft and airside vehicle traffic has been an essential part of state-of-the-art strategic airport planning. Reduced costs for infrastructure and operations, quick and enhanced decision making, higher customer satisfaction and reliable long-term planning are some of the main elements making simulation a standard tool for any airport.

Driven by the demands of the aviation industry, however, a further important application field has evolved: The prediction based short and medium-term planning and management.

- How does the schedule for the upcoming season work with the existing air and landside infrastructure? Is adaptation required?
- What is the impact of security screening for the high-load holidays? Has the staff planning to be adapted?
- Will the stand allocation work with the construction measures planned for next month?
- How will construction measures during operations influence taxi times and runway punctuality?
- Does the stand and gate allocation work for the next week? Will there be any problems?
- Does the resource planning for the next day meet the quality requirements?
- How will construction measures during operations influence taxi times and runway punctuality?

These and many similar questions determine the daily work of the various stakeholders at an airport and the proven reliability of the answers to these questions is crucial. The difficulty in answering these questions lays in the complex interdependency of the various airport system components; an isolated analysis of parts is, therefore, often not successful. Quite often there is only partial, fragmented information about the areas available, and an overview is missing.

A permanently available simulation model of the airport provides the relevant progress. It represents the airport with all its relevant operational components, thus providing a test environment always available for various questions to be asked. This may concern the short and medium-term future, or both, pointing to the overall (e.g. expected performance) or any logical or physical part (for instance, the occupancy of a specific terminal area).

In order to provide a suitable tool for this task, the Airport Research Center GmbH (Aachen, Germany) has equipped the simulation software CAST with appropriate interfaces and analysis functions. This allows a very time-efficient generation and distribution of information – a baseline for quick decisions. Dependent on specific stakeholder needs, the relevant system parts of airside and landside are considered.

The described approach can be implemented step by step, thus remaining expandable at any time. First benefits can be generated in the short-term, without huge initial investments, and a short-term ROI is guaranteed.

For more information, please contact ARC - Airport Research Center GmbH, Aachen, Germany: e-mail: info@cast-simulation.com, internet: www.cast-simulation.com
SAFETY, SECURITY, ENVIRONMENT

From recycled asphalt to electric airside buses, ecological efficiency and sustainability are central to every element of Amsterdam Airport Schiphol’s operation. Ron Louwerse, Safety, Security and Environment Director, explained to Amy Hanna how Schiphol Group is developing the airport’s environmental strategy as a “win-win situation in favour of People, Planet and Profit”.

Schiphol Group’s commitment to achieving a more sustainable airport is visible in all aspects of its development as an industry leader in environmental efficiency. Intensive and innovative measures have been put in place to reduce the ecological impact of the Airport City, fulfilling Schiphol’s aim to deliver performance in which consideration for stakeholders and regard for the traveller parallels attentiveness to energy consumption and carbon emissions.

Schiphol’s strategy for sustainable business incorporates enhancement not only of its own on-site operations, but also those of third parties over which it has control. By engaging every element of the airport’s inner workings in its Energy Strategy 2020, Schiphol is on course for instigating effective long-term change. “Schiphol’s objective concerning CO2 emissions is twofold,” Louwerse explained. “Firstly, we aim for our own activities at Schiphol to be CO2-neutral by 2012. Secondly, by 2020 the CO2 emissions of all Schiphol-based activities must be reduced to 70% of the 1990 levels.”

In addition to this, the Neighbour Day initiative has been developed to strengthen the airport’s ties with the local community. The operator has also embraced green transport, having installed the Netherlands’ first powering station for electric taxis to reduce air pollution to and from the airport, as well as within its grounds.

Eco-centric energy

At the forefront of Schiphol’s green thinking is the reduction of energy consumption and the introduction of more a sustainable means of powering the airport. Louwerse said: “The main sources of CO2 production at Schiphol are energy consumption (heating, cooling, lighting) and mobility (fleet, commuting). We are helping to reduce the greenhouse effect by decreasing our energy and fuel usage, through the more efficient use of energy and by applying sustainable energy sources and fuels. We are taking part in the Airport Carbon Accreditation programme established by ACI EUROPE. This benchmark helps provide insight into airports’ efforts to reduce CO2 emissions.”

Schiphol’s goal is to achieve the highest level of accreditation – ‘Neutrality’ – by the end of the year, and it is also establishing energy creating innovations to produce sustainable power. “Amsterdam Airport Schiphol aims to generate 20% of its energy in a sustainable manner by 2020. Over the past few years we have researched and applied a number of technologies for sustainable energy, such as solar panel systems installed on a small scale. The percentage of energy generated in 2011 stood at 1.25%.”

Louwerse: “Heat and cold storage in the ground and roof solar panel systems have already been installed on a small scale. The percentage of energy generated in 2011 stood at 1.25%.”

Amsterdam Airport Schiphol implemented Airport Collaborative Decision Making in 2010. Louwerse: “A-CDM is a way to work ‘lean and green’ – a win-win of less waiting time and less wasted emissions.”
Energy generation. Heat and cold storage in the ground and roof solar panel systems have already been installed on a small scale. The percentage of energy generated in 2011 stood at 1.25%,” commented Louwerse.

International impact
Schiphol is taking a collaborative approach to its development. Indeed, in 2010 it implemented Airport Collaborative Decision Making (A-CDM). Various airport processes join forces as one entire chain, enabling fluid communication that permits reliable and sustainable mobility in the air and on the ground. “Thanks to A-CDM, all parties have simultaneous access to the same operational information. It gives best possible insight on the current situation and it shares the latest forecasts. This allows us to make the ground operations more efficient,” said Louwerse. He explained that the collaborative verdict on when to start vehicle and aircraft engines reduces the release of carbon. “In the next stage, A-CDM will be linked to the European network. This will bring the greatest environmental and economic benefits because network planning can accurately foresee where airspace will be congested, aircraft can wait for their slot on the ground. A-CDM is a way to work ‘lean and green’ – a win-win of less waiting time and less wasted emissions.”

Concrete measures
In order to improve its long-term environmental performance, Schiphol conceived a series of specific initiatives in conjunction with external organisations whose values correspond with Schiphol's stringent eco-centric criteria. The operator is in partnership with KWS Infra – the Netherlands’ leader in road construction and developer of the world’s first 100% recycled asphalt. Its HERA system re-uses asphalt from the 1980s, saving a large amount of raw materials and creating new surfaces without polluting during manufacture or compromising on road quality. “This is not the first such project Schiphol has been involved in; we also used recycled asphalt in the renovation of Pier C. Old asphalt is pulverised on our own premises and then mixed with new asphalt, after which it is re-used. But to-date, using 100% recycled asphalt was a bridge too far,” Louwerse explained. “We are proud that the first test lane using fully recycled asphalt was laid at Schiphol. The next step is to give this method a chance to prove itself in practice. All of this fits in perfectly with our desire to act as a breeding ground for innovation.”

Environmental innovation
Revolutionary processes are transforming every cog in the Amsterdam Airport Schiphol machine. One in five departing passengers is transported to the aircraft by bus. Though currently its 40-bus fleet is run on diesel, electrically-powered replacements better suited to short travel distances will replace them in 2014, seeing the airport set a benchmark by becoming one of the first to utilise electric airside transport. Schiphol’s green modernisations have been acutely formed to accommodate passenger, profit and environmental considerations. Louwerse said: “They emit less CO2 or other noxious fumes, which is of considerable benefit to the air quality at the airport, contributing to a healthier and more pleasant environment for our staff and passengers. It’s true that electrically-powered buses are more expensive, but this is earned back in time through the lower fuel and maintenance costs.” Within airport doors, a project commenced in the spring of 2012 to replace flight information screens with energy-efficient Edge LED technology, which has enabled the airport to save the amount of energy consumed by 1,000 households every year. Meanwhile, detection systems monitor activity at various airport locations and adjust ventilation and lighting to suit the number of people present. While Schiphol has taken a number of steps to ensure the airport’s development as a leading industry example of environmental efficiency, Louwerse said that plans are still underway for further provision of long-term solutions. “The primary focus area of an airport is connections. Not only by air, but also on the ground,” Louwerse said. “We are continually seeking ways to do things better: more efficiently, or more environmentally-friendly, or by using fewer raw materials, in an effort to create even more sustainable value for the Netherlands.”

Louwerse: “Schiphol’s objective concerning CO2 emissions is twofold. Firstly, we aim for our own activities at Schiphol to be CO2-neutral by 2012. Secondly, by 2020 the CO2 emissions of all Schiphol-based activities must be reduced to 70% of the 1990 levels.”

Louwerse: “We are taking part in the Airport Carbon Accreditation programme established by ACI EUROPE. This benchmark helps provide insight into airports’ efforts to reduce CO2 emissions. In 2011, the airport received level 3 accreditation – ‘Optimisation’ – for its CO2 emissions.”
Enhanced security experience

In the present situation, all passengers departing from Schiphol to a non-Schengen destination go through the security process at their departure gate. However, Schiphol is changing over to central security to non-Schengen destinations, so security equipment will no longer need to be installed at the gates, creating more space in the waiting area. “This will contribute, in turn, to the comfort of our passengers,” commented Louwerse.

Currently, departing passengers who have gone beyond passport control have access to the same lounge as arriving passengers. Schiphol plans to split up passenger flows travelling to non-Schengen destinations. “In the future, transfer passengers do not need to undergo another security check when, in accordance with the current EU policy, these passengers have undergone similar inspection in their country of origin. We expect passenger numbers to non-Schengen destinations to increase in future,” explained Louwerse. Amsterdam Airport Schiphol uses security scans with millimetre wave technology and this will continue to be a permanent component of the security process in the future. At present, over 70 security scans are in operation at Schiphol. The Ministry of Security and Justice, which is the government body responsible for civil aviation security in the Netherlands, has given Amsterdam Airport Schiphol permission to use the security scan after approval for this was issued by the European Union. “The security scan has many advantages. Taking into account the new methods employed by terrorists, the security scan can make a positive contribution to airport security, not only in terms of effectiveness, but also in efficiency,” said Louwerse. “The security scan is capable of detecting a vast array of other items in addition to metal objects. The security scan is also customer-friendly. Using it results in more targeted body searches. As a result, passengers can pass through security checks more quickly and with less hassle. This is essential to Amsterdam Airport Schiphol because it contributes to our goal of being a hospitable and efficient airport.” Schiphol makes use of biometric technology. Employees of the airport have an iris scan taken which is linked to their Schiphol Pass. This pass is used to access the airport’s security-restricted areas. Privium members also enjoy fast border passage with iris recognition. Their iris details are placed on a chip in their Privium Card.

Effective safety strategy

Safety has top priority at Amsterdam Airport Schiphol. “We collaborate closely with a range of government bodies to ensure compliance with the latest safety regulations. Prevention of accidents and other calamities is of paramount importance,” said Louwerse. Schiphol is at the ready 24 hours a day to take effective action should an emergency situation arise. Employees in specific posts receive operational safety training with regard to fire risks, the environment, emergencies, safety and security. “With regard to safety, our specific focus areas include: Safety on main runways, preventing bird strikes, traffic safety on airport grounds, safety (including fire safety) in the terminal, external safety (for the areas surrounding Schiphol), safe working conditions and prevention of infectious diseases,” concluded Louwerse.
As the third-largest cargo airport in Europe, Amsterdam Airport Schiphol’s logistical operations play a key part in Schiphol Group’s strategy. Enno Osinga, Senior Vice President Cargo, shared the airport’s cargo developments with Amy Hanna.

Europe’s third-largest individual cargo airport has 23 freighter operators, which account for 55% of all cargo through the airport. Air France-KLM and its SkyTeam partners are the largest cargo carriers, while increasingly cargo and passenger operations are integrated, with 50% of all air cargo carried in the bellies of passenger aircraft. Schiphol is focused on building the marketplace by increasing logistic flows through the airport; a recent example being in the pharmaceutical market, where it has attracted significant flows from India through Amsterdam.

Despite continuing nervousness in the European and US consumer markets and its impact on global trade flow, Schiphol’s cargo operations are performing well. Osinga said: “At present, we are 3.1% below 2011 cargo levels, and if that trend continues until the year ends, we should handle around 1.47 million tonnes of cargo. In this very volatile market we have seen some airlines reducing frequencies or even stopping altogether. However, since cargo is very flexible, that cargo is then quickly transferred to other carriers, who in some cases increased their capacity or started new services. I think it’s fair to say we are continuing to outperform our closest rivals, in a difficult market.”

Innovative operations
Schiphol employs a number of specific initiatives in its air cargo process to streamline operations, as well as stay abreast of new developments in security and customs requirements. A focus on e-freight ensures a paperless process, while its Seamless Connections programme encompasses a number of concepts designed to speed up all procedures at the airport, minimising waiting times and reducing congestion around the entire Amsterdam region. As a major airport linking Europe with the whole world, Schiphol’s cargo profile is as diverse as its range of destinations, and is composed mainly of high-value, low-bulk commodities such as perishable goods, pharmaceuticals and consumer electronics. “But we also cater for, and handle, special cargo such as equine and bloodstock movements,” Osinga added. “In fact, we are about to see the opening of a second equine handling centre, which should stimulate this specialised business and make Schiphol a European gateway for such traffic. The recent transfer of a group of small giraffes through the airport was definitely special,” he continued. “But while unusual items tend to attract publicity, it is the constant flow of goods with great commercial or even life saving value that make us enjoy our role in world trade.”
Schiphol Group is dedicated to delivering an environmentally efficient Amsterdam Airport Schiphol, and consideration for its ecological impact is evident throughout its operations. In collaboration with innovative research facilities and suppliers, the group has made it its goal to reduce the airport’s climactic impact on the local area and beyond. Its focus now is on finding sustainable working solutions that come at the right time, the right cost and with the right partner organisations. “Schiphol conducts business with respect for people, environment and community,” Ornstein explained. “We consciously seek to achieve a balance between people, planet and profit in our day-to-day operations and choices for the future. Corporate responsibility is intrinsic to all our considerations and essential to all our actions.”

A common goal Schiphol Group has joined forces with a number of external organisations, pooling resources and generating approaches to sustainability with institutions that share its values, and its vision for a greener airport. “It is crucial that the partners keep each other sharp and focused. Corporate responsibility is achieved through critical and constructive dialogue,” Ornstein said. “Schiphol actively engages in that dialogue. We invite our suppliers to come up with concrete initiatives and innovations in the realm of corporate responsibility. Schiphol expects its suppliers and partners to have corporate responsibility pulsating through their veins. In our procurement process, sustainability is an important factor. We expect of our suppliers that they keep the interests of the people and the community in mind, while doing business. We also expect of them demonstrable efforts to implement environmentally friendly business practices.” Schiphol’s approach to corporate responsibility accommodates its impact on the national economy, the local economy, and the local environment.

**GREEN THINKING**

Covering nearly 11 square miles, Amsterdam Airport Schiphol is an Airport City of countless composite businesses, initiatives and ideas. Its environmental strategy is a meeting of ingenuity and responsibility, which utilises corporate partnerships to minimise Schiphol Group’s environmental impact. Marijn Ornstein, Senior Manager of Safety, Environment & Fire Brigade and Corporate Responsibility Coordinator, discussed Schiphol’s environmental collaborations with Amy Hanna.

Among Schiphol’s array of measures for enhanced sustainability is its Energy Strategy 2020 for the reduction of energy consumption and carbon emissions.
Ornstein: “Corporate responsibility is achieved through critical and constructive dialogue. Schiphol actively engages in that dialogue. We invite our suppliers to come up with concrete initiatives and innovations in the realm of corporate responsibility.”

community and the needs of its 62,000 employees, as well as environmental factors. “We are proud that we work in union with numerous companies and organisations that also want to be frontrunners in sustainability. Collaboratively we are able to put into effect concrete measures, making the Mainport more sustainable and the region as a whole a more attractive place to live and work in. This is something Schiphol and its suppliers and business partners want to continue doing,” explained Ornstein. Amsterdam Airport Schiphol is Airport Carbon Accredited at level 3 - ‘Optimisation’. This means that the airport has not only been successful in reducing its own CO₂ emissions, but has also prompted other relevant parties at the airport to follow suit.

The application of new technologies, such as LED lighting, also contributes significantly to energy conservation. LED lighting is used in the Departure and Arrival halls, as well as various locations in the terminal lounges.

Amsterdam Airport Schiphol aims to generate 20% of its energy requirements in a sustainable manner by 2020. The roofs of the TransPort, Schiphol Group head office and Cargo 19 buildings have been fitted with solar panels. Meanwhile, a charging lane for electric taxis was opened in summer 2012, and in 2011, 13,864 tonnes of waste were collected and recycled.

theGROUNDS
Paving the way as a breeding ground for environmental innovation, Schiphol has initiated theGROUNDS, an interactive platform that comprises the Delft University of Technology, Wageningen University and Research Centre, Imtech and the Netherlands Organisation for Applied Scientific Research. Designed as an incubator for ideas, theGROUNDS promotes outside-of-the-box concepts for fully sustainable airport operations. Ornstein said: “We have a testing environment where new products, technologies and solutions can be tested. This is the idea behind theGROUNDS: a testing ground that provides companies and knowledge institutions with an opportunity to jointly develop innovative applications for a sustainable airport.”

TheGROUNDS connects revolutionary technologies with inventive business models, and facilitates the coming together of companies, knowledge institutions and government agencies. Schiphol is currently in partnership with Imtech in the co-development of a Sustainable Energy Service Company for Schiphol. “Together with businesses and knowledge centres, we seek ways to speed up sustainable developments or to further integrate achievements. theGROUNDS is very important because of its open approach, and therefore functions as the entrance for knowledge institutions,” added Ornstein.

Centre for knowledge
Reinforcing the environmental efficiency of Schiphol’s Mainport is the Knowledge and Development Centre (KDC), a collaboration between AMS, Dutch aviation partners KLM and Air Traffic Control, The Netherlands (LVNL). Ornstein explained that the KDC’s task is to find valuable, integrated schemes for sustainable development of the technical and operational aspects of Schiphol, such as international air traffic management.

Elemental initiatives
As well as environmentally streamlining operations on the ground and in the air, Schiphol is focusing on its long-term approach to sustainable water management. The Water Vision 2030 framework encompasses every facet, from water quality and quantity to spatial planning and organisation. “The water vision aims to combine the different long-term development plans being implemented by local, regional, national and transnational authorities, with the long-term development plans of the airport itself. In short, the vision is designed to enable the transition of Amsterdam Airport Schiphol into the sustainable airport of the future from a water perspective,” Ornstein said.

Among Schiphol’s array of measures for enhanced sustainability is its Energy Strategy 2020 for the reduction of energy consumption and carbon emissions. Though limitation of third party carbon impact is still in progress, Ornstein said that its aim to be climate-neutral within its own onsite activities will be achieved by the end of March next year.
A BREEDING GROUND FOR INNOVATION

There is evidence in every aspect of Amsterdam Airport Schiphol’s development that sustainability and environmental efficiency are at the forefront of Schiphol Group’s strategy. Steering its ecological revolution is theGROUNDS, a networking platform that acts as an incubator for new ideas on sustainable airport operations. theGROUNDS’ Managing Director Jonas van Stekelenburg explained how a diverse range of new ideas is the key in turning Schiphol into the airport of the future. Amy Hanna reports.

theGROUNDS is an innovation platform that seeks to develop workable solutions for a more sustainable Amsterdam Airport Schiphol. Serving as a forum for discussion, theGROUNDS is a collaboration of government agencies and academic institutions, comprising Delft University of Technology, Wageningen University and Research Centre, Imtech and the Netherlands Organisation for Applied Scientific Research (TNO). Combining an entrepreneurial approach with a sense of social responsibility, it is designed to further facilitate the partnerships that will accelerate Schiphol’s transformation into a sustainable airport by integrating the ideas of Schiphol, its key stakeholders and industry experts to find effective, tailor-made applications for the airport of the future.

Van Stekelenburg said: “For all parties this is important. Innovation is helped by different people, with different backgrounds all having clear challenges in their field of work. This is what attracts the universities, authorities and companies working together with theGROUNDS. This diversity is not itself a guarantee of success, but it does help.”

Cutting-edge initiatives
The ultimate goal of theGROUNDS is to realise the targets defined in Schiphol’s Climate Plan. “Value creation is central in theGROUNDS’ strategy,” van Stekelenburg explained. “theGROUNDS focuses on mobility, logistics and scarce (natural) resources such as building materials, energy and waste. The activities are various, such as setting up projects and initiating new ventures; all require the capacity to think out of the box, and require an entrepreneurial approach: pursuing plans without yet controlling the needed resources.”

theGROUNDS is pioneering acting as a testing ground for innovation, new products, technologies and solutions are studied at theGROUNDS for their suitability to Schiphol’s day-to-day operations. It provides companies and knowledge institutions with an opportunity to jointly develop innovative applications for a more sustainable airport.
cutting-edge initiatives to achieve Schiphol’s sustainability aims, and so far has experienced industry-influencing success with projects such as the development of Amsterdam Airport Schiphol’s electric taxi service, in which the airport launched the Netherlands’ first battery-switching station for the sustainably-powered vehicles in September this year. It also spearheaded an industry benchmark in efficiency by making Amsterdam Schiphol the first airport to lay a test lane made of fully recycled asphalt. Upon the launch of theGROUNDS in 2010, Schiphol Group expressed its ambition become carbon-neutral in its own operations by 2012 and to generate 20% of all its energy requirements sustainably by 2020. theGROUNDS’ focus is now on studying renewable energy solutions for use in the hub’s day-to-day operations.

The AirportNEXT! seminar
In June this year the first airportNEXT! seminar was held at Amsterdam Airport Schiphol to instigate some of the newest developments in the sustainability sector. Schiphol Group and theGROUNDS, in association with the European Climate-KIC, invited guests from airports, academic bodies and businesses to discuss and co-create on the environmental challenges facing the aviation industry. In anticipation of the seminar, Schiphol launched its NWO, Better Region, aimed at assessing the key factors for successful and sustainable metropolitan airport regions. Following discussions at the event, a consortium was formed with Air-France-KLM, DSM, the University of Utrecht and Imperial College for a Supply Chain initiative for Amsterdam Airport Schiphol surrounding new generation, renewable fuel for its aircraft. Schiphol also reached out to the participants for its Green Terminal Initiative, van Stekelenburg explained. He said: “In this initiative we work together with companies VolkerWessels, Imtech, NACO and RAU in looking for a more optimal terminal set-up. The study results are impressive. A more efficient, less costly and passenger-friendly terminal is possible which – in addition to that – uses only 60% of the current footprint. A challenging project which we hope will materialise.”

Testing renewable energy
Schiphol utilises theGROUNDS as a testing environment in which to examine the effectiveness of sustainability solutions, providing the parties involved with an opportunity to develop innovative applications for an environmentally efficient airport together. In pursuit of renewable power, theGROUNDS is examining the practicalities of biomass energy and energy from waste streams, and has also instigated a trial of photovoltaic cells, which convert solar rays into electricity. Put in place by a partnership between Schiphol and Imtech – a company specialising in green technologies – the panels occupy an area of 9,500 square metres, and are expected to generate 440,000 kilowatt-hours of energy a year – enough to power 120 homes. Van Stekelenburg said: “Dutch aviation authorities wanted to first test the deployment of PV-cells at airports; this is a testing possibility we created with theGROUNDS. Also, we attracted third party funding. With the result that it’s more clear that Schiphol Group can indeed deliver on its promise to generate 20% of all its energy requirements sustainably by 2020. Both contributions of theGROUNDS are small breakthroughs, but they help Schiphol Group in pursuing its sustainability goals.”
theGROUNDS is also focusing on Schiphol’s breakthrough new terminal concept for efficient airport operations – iport. The iPort model incorporates sustainable functioning and enhanced convenience for airport and passenger. Its construction and parts are made of entirely reusable materials and it utilises brand new initiatives such as bringing in aircraft on a giant conveyor belt.

Mainport Innovation Fund
In addition to its on-site testing, Schiphol also explores third-party inventions and supports up-and-coming aviation start-ups through its seed-capital investment scheme, Mainport Innovation Fund, established in connection with Air France-KLM, TU Delft and Rabobank. The fund will invest €8 million in environmentally efficient enterprises over the next eight years, with primary candidates being entrepreneurs making a sustainable impact upon the aviation industry. “So far, we have invested in five start-ups, including Robin Radar, a business in bird monitoring and Casper, a noise monitoring company and A-CDM tool. These companies have successful products; we hope they will also be successful investments,” van Stekelenburg commented. In October, the fund invested in Ampyx Power – a leading company in the emerging airborne wind energy trade. “The Fund is a business case in itself,” van Stekelenburg said. “We aim that (a few of) the 10 ventures in which we will invest seed-capital in the coming years will deliver on their promise by giving us a good overall return-on-investment. Also, the fund gives us the possibility to explore the techno starter market and it will support us developing our airports. Moreover, the Mainport Innovation Fund is making the Schiphol Group organisation more ‘business-savvy’. Last but not least, the fund cements our relationship with our biggest partner Air France-KLM and with Rabobank and the University of Delft,” he concluded.
Schiphol Group hosted this year’s ACI Airport Exchange in November. The event was, once again, held in collaboration between ACI EUROPE and ACI Asia-Pacific. Bringing together delegates from Europe and Asia, the event attracted an attendance of more than 1,500.

Jos Nijhuis, CEO, Schiphol Group, commented: “Given our ambition to be and remain Europe’s Preferred Airport, it is essential that we look to the future and respond to the latest market trends and developments. Airport Exchange is an excellent catalyst, generating new inspiration through the exchange of knowledge and experience. Amsterdam Airport Schiphol aims to be a frontrunner in modernisation and sustainable innovation in this industry.”

This year’s agenda saw four conferences running concurrently – Security Summit, Airport Operations Conference, Airport Development Conference, and new this year, Future Travel Experience Europe. Each was addressed by a broad range of high-level speakers, with representatives from key industry stakeholders, including airport operators, airlines, air navigation service providers, regulators and government agencies. New at this year’s Airport Exchange were the Schiphol Interactive Forums, led by Schiphol staff and the airport’s partner network, which were designed to give delegates an insight into the Schiphol approach. The three Interactive Forums focused on Baggage, Airport Planning, and Sustainability and Innovation.

Crucially, Airport Exchange 2012 also provided a key networking platform, with Schiphol Group hosting a spectacular Welcome Reception at the Amsterdam Arena, and a Gala Dinner at the Stedelijk Museum Amsterdam. The conference programme was complemented by the largest ever exhibition at ACI Airport Exchange, in which many of the industry’s leading suppliers showcased the latest innovations in equipment, technology and services. Meanwhile, the conference stage on the exhibition floor saw leading suppliers outline their visions of the airport of 2020, covering four key areas: Development and Environment, IT & Systems, Security, and Baggage Advancements.

Airports 2020
Airport Exchange 2012
Amsterdam, 26–28 November

Tim Hardy, Airside Director, London Heathrow Airport, addressed the Airport Operations Conference. He participated in a session entitled: ‘How can Europe achieve a truly efficient system for capacity by 2020, and how should airports be integrated into the future aviation network?’

Sean Carney, Head of Design, Philips, delivered an enlightening keynote address entitled ‘Putting the consumer first – Understanding the needs of the passenger, and the role of technology in meeting them’.
Bertrand Piccard, Founder and Chairman, Solar Impulse, delivered an inspirational keynote address in the Airport Development Conference, focusing on the world’s first intercontinental flight in a solar-powered plane.

Marjeta Jager, Director for Policy Coordination and Security, DG MOVE, European Commission, delivered a keynote address in the Security Summit. She focused on the long-term aviation security models being studied by the EU to address existing and emerging terrorist threats.

Pieter Elbers, Managing Director & COO, KLM, delivered an enlightening keynote address to the Future Travel Experience Conference, focusing on airports, airlines and customers expectations, towards 2020. He explained that the relationship between airports, airlines and passengers is constantly and structurally changing.

ACI Airport Exchange 2013, Doha, Qatar

ACI Airport Exchange 2013 will, once again, be held in collaboration between ACI EUROPE and ACI Asia-Pacific. The event returns to the Asia-Pacific region, and will be hosted by Doha International Airport at the Qatar National Convention Centre on 18-20 November 2013.

The ACI Airport Exchange exhibition was officially opened by: Patti Chau, Regional Director, ACI Asia-Pacific; Declan Collier, CEO, London City Airport and President, ACI EUROPE; Jos Nijhuis, CEO, Schiphol Group; and Olivier Jankovec, Director General, ACI EUROPE.

Marjeta Jager, Director for Policy Coordination and Security, DG MOVE, European Commission, delivered a keynote address in the Security Summit. She focused on the long-term aviation security models being studied by the EU to address existing and emerging terrorist threats.
Schiphol Group’s international focus is designed to strengthen its competitive position, and the expansive global network of Air France-KLM and its SkyTeam partners plays a key role in this. The SkyTeam alliance is the largest transatlantic joint venture in the aviation sector, with Amsterdam Airport Schiphol, Aéroports de Paris and JFK International Airport serving as important hubs.

The Port Authority of New York and New Jersey selected JFK IAT to develop and manage the new Terminal 4 in 1997, making it the first private, non-airline entity to manage an air terminal in the US. Terminal 4 was also the first in the US to be co-developed by a foreign airport operator. The $1.4 billion (€1bn) redevelopment of the terminal was completed in May 2001, when it officially opened.

“It’s a great story and a unique business model of public-private partnership in the US,” said Alain Maca, President, JFK IAT, to Ross Falconer.

As The Terminal of Choice at JFK, and it is the only 24/7 terminal at the airport,” said Maca. “Terminal 4 is a success story in terms of management, finance, and meeting customer expectations – we pride ourselves on doing a really effective job with the airlines.” The business model means that passengers benefit from Terminal 4’s commitment to passenger comfort, convenience and service, while the airlines benefit from a dedicated management company overseeing the terminal’s landside and airside operations in addition to the terminal.

Passenger numbers at Terminal 4 have grown from three million to 10 million – a significant proportion of the 49 million handled overall at JFK International Airport. The terminal’s traffic mix is 80% international, 20% domestic. Importantly, today Terminal 4 handles over 33% of all international traffic at the airport. That percentage will reach 50% when Delta Air Lines’ international traffic at Terminal 3 moves to Terminal 4 next year. More than 30 airlines operate at Terminal 4 - Delta being the biggest.

A newcomer in 2012 was Delta’s SkyTeam alliance partner China Airlines, which added routes to Taipei and Osaka. Maca explained that passenger numbers are expected to increase to 14-15 million within the next five years, with that growth largely coming from Delta and other SkyTeam carriers. He commented: “Delta is really looking to expand in New York and will be opening its largest ever Delta Sky Club at Terminal 4.”

A major $800 million (€607m) expansion of Terminal 4 is currently underway, which will increase its size by more than one-third. The expansion project, which includes nine new international gates on the B Concourse for Delta, is scheduled for completion in May 2013, and will result in improvements and enhancements that will benefit all of Terminal 4’s airline partners and their passengers, including a new and expanded domestic baggage claim, an inline baggage system, a centralised security checkpoint, and a host of new retail and exciting food & beverage offerings.

“We’re going to create an unbelievable post-security retail programme. We currently have 100,000sq ft of retail space and are adding 40,000sq ft in a $60 million (€45m) investment, including special brands and innovative F&B concepts. Commercial revenues are very important and we are focused on how to drive those revenues,” explained Maca.

He concluded: “This is Phase 1 of the expansion. We are also talking about Phases 2 and 3. In the long-term, we are looking at handling 20 million passengers per year and providing an efficient product to our customers.”
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As a valued contributor to the major 70MB extension of Schiphol’s baggage handling system Scarabee is very proud to be a part of this celebration with Schiphol airport.
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