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Amsterdam Airport Schiphol opens the world's most modern baggage hall

Airport increases capacity and improves baggage flow with smarter baggage system

ARMONK, N.Y. and Veghel, the Netherlands – March 17, 2011: Vanderlande Industries and IBM helped Amsterdam Airport Schiphol to create a smarter baggage system at baggage hall South that gives more precise ability to manage the growing amount of baggage that is expected to pass through the airport in the future. The new modern baggage hall was opened officially yesterday.

The new baggage handling hall, which is located to the south of Departure Hall 1, is part of the airport's 70 Million Bag (MB) programme to increase the capacity of the airport by 40 percent to 70 million bags in the future. It will help handle the expected further growth in passenger and baggage flow at Schiphol Airport. The new hall, with its 15,000 m² surface, is able to facilitate the baggage handling for several airlines for both check-in and transfer baggage.

"The South hall baggage system is an important part of the airport's strategic 70 Million Bag programme to create an efficient, reliable and fast baggage handling process," said Mark Lakerveld, Senior Manager Baggage at Amsterdam Airport. "It will support Schiphol to remain Europe's preferred airport and to maintain its mainport function."

70 million bags

Fitting out the new baggage handling hall for South was the first major step of Amsterdam Airport Schiphol 70 MB programme which has been set up to increase the baggage handling capacity to 70 million bags in the future. Amsterdam Airport Schiphol is carrying out this project in collaboration with KLM, Vanderlande Industries and IBM. Vanderlande Industries, IBM and Grenzebach Automation designed, built and tested this system that is considered to be the most advanced baggage handling facility, featuring space efficient applications with robotized loading of baggage.

Through an interconnected, synchronized system every single bag can be located at any point in its journey. This 21-kilometer transport conveyor contains innovative technology like AS/RS (Automated Storage and Retrieval System) bag storage with 36 cranes operating a fully redundant storage of over 4,200 bag positions and DCV-technology (Destination Coded Vehicles), as well as six robot cells for the automated loading of bags into containers and carts. It is expected that up to 60 percent of all baggage in the South hall will be handled by robots, which will increase productivity as well as improve the ergonomic working conditions for operators.

After check-in bags go directly into the bag storage, waiting to be loaded. Robots enable this process, by 'pulling' bags from the bag storage 'on-demand', releasing baggage on the conveyor belt only when needed to prevent overload of the system. This way, the airline can handle more bags in less time, with lower cost, energy efficient and in a limited space. This enables the airport to maximize its efficiency, cost effectiveness and service levels, as well as to meet increasing sustainability demands.

By integrating the baggage control system with passenger check-in information, Amsterdam Airport Schiphol has streamlined the process for the airlines of baggage tracking and reconciling passengers with their bags. Linking into real-time flight information allows for quick off-loading of baggage when a passenger misses his flights and for redirection of bags on alternative flights when connections are missed. The integrated system also provides accurate, up-to-date information and metrics to monitor

baggage handling performance, helping managers resolve issues quickly and identify areas for improvement. Heavy baggage is now handled automatically by robots that work around the clock.

About Vanderlande Industries

Vanderlande Industries provides automated material handling systems and accompanying services. It focuses on improving its customers' business processes and strengthening their competitive position. The Company is active in the markets for Baggage Handling at airports, Distribution Centres and Parcel and Postal sortation facilities. The Company implements and maintains material handling systems of all sizes, ranging from local sorting depots, airports and distribution centres to the world's largest facilities. The company ranks is world market leader in baggage handling.

In every case the emphasis is on close partnership with the customer, extending from initial analysis of the underlying business processes through to total life-cycle support. To achieve this, the Company possesses core competences, ranging from design and build to operate and maintain. Relevant disciplines are project management, system design, engineering, supply chain, manufacturing, ICT, system integration, operation and maintenance. The company has net sales of more than EUR 600 million and employs almost 2000 people.

Vanderlande Industries is a global player with a presence in all key regions of the world. The company has subsidiaries in the Netherlands, Belgium, Germany, France, Great Britain, Spain, Canada, PR China, India, South Africa and the USA. These Customer Centres handle all key business functions and maintain direct contacts with customers.

About IBM

With more than 50 years experience in aviation, IBM works with top airlines and airports across the globe deliver more highly differentiated customer experiences and improve their operational efficiency. IBM brings software, hardware and services expertise, along with deep industry knowledge, to help clients in areas such as strategic consulting, reservation system modernization, asset optimization, multi-channel sales and service, operations control systems, and more. IBM helped build the [first online reservation system](#), Sabre, which is one of 100 "[Icons of Progress](#)," significant company milestones over the past century that are being celebrated during IBM's Centennial this year.

To see how Amsterdam Schiphol Airport is able to increase capacity and improve baggage flow through smarter software, watch: <http://www.youtube.com/watch?v=LCYOyUqgSU>

For more information about Smarter Transportation at IBM, please visit: www.ibm.com/luggage

Join us on Facebook: <http://www.facebook.com/peopleforasmarterplanet>

About Grenzebach Automation

Grenzebach Automation is a leading supplier of automation solutions in the airport context, providing innovative, yet reliable and efficient equipment to close the remaining automation gap between the baggage conveyor and the apron. The Company, located in Karlsruhe, Germany, is part of the successful and globally active Grenzebach Group and focuses on developing technology for the automation of logistic processes. Grenzebach is a well-established manufacturer of production and handling technology for flat glass, building panel, veneer and other industries. With production capabilities in three continents and a professional 24/7 service organization with locations in all relevant time zones Grenzebach is always close to you. The family-owned company with its global footprint achieves revenues of more than EUR 300 million and employs about 1,500 persons around the globe.

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