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Congratulations to Dubai International Airport on 50 years of service.

Emirates and Dnata look forward to growing together over the next 50 years.
When Dubai International was officially inaugurated on September 30, 1960 it comprised an 1,800-metre airstrip of compacted sand, an apron, a fire station and a small terminal building. Some 50 years later Dubai International has evolved from a small airstrip mainly serving as a refuelling stop for a few airlines to an international gateway for 130 airlines that is ranked among the world’s leading hubs for international passenger and freight traffic. Passenger numbers will surpass 46 million in 2010 and approach 98 million by the end of the decade. In the half-century since its opening, Dubai International has welcomed over 402 million passengers and handled over 3.87 million aircraft movements.

Throughout its proud history Dubai International has exceeded expectations delivering double-digit traffic growth and world-class service. As the first point of entry for over 95% of all visitors to Dubai, Dubai International and the thousands of dedicated employees who work there have played a pivotal role in making a positive and lasting impression on the millions of visitors who have passed through its doors.

Even as we begin a year of celebrations to honour Dubai International’s golden anniversary, we are looking to the future. Aviation has been and continues to be a significant contributor to the social and economic development of Dubai. To preserve and increase those contributions, and support the impressive expansion of Emirates and flydubai, Dubai International will continue to expand including the construction of the world’s largest A380 dedicated facility – Concourse 3.

In many ways the proud history and tremendous growth of Dubai International mirrors the development of our great city and emirate. It is further proof that through vision, innovation, collaboration and hard work, we can achieve great things.

By HH Sheikh Ahmed Bin Saeed Al Maktoum, Chairman, Dubai Airports
Dubai’s aviation model has been instrumental in transforming Dubai International from a small single-terminal airport with a packed sand runway into a leading global gateway over the past 50 years. A liberalised aviation policy, supportive government and coordinated approach means that Dubai Airports is able to react quickly to the marketplace and make swift decisions on major infrastructure investment, as Paul Griffiths, CEO, Dubai Airports explained to Ross Falconer.

Griffiths described Dubai Airports as a conjoined organisation that works closely together with Emirates Airline, the Dubai Civil Aviation Authority, Engineering Projects and other aviation stakeholders, which gives it a distinct advantage in its ability to act quickly and efficiently. “Aviation is fundamental to the ongoing prosperity and economic expansion of Dubai. My job is to make sure that the airport infrastructure grows to ensure there are no constraints and this approach allows me to do exactly that,” commented Griffiths. “We’re proactively continuing to expand at Dubai International and Dubai World Central-Al Maktoum International to ensure we can accommodate the massive influx of aircraft and traffic expected to inundate both airports over the next 10 to 20 years.”

Double-digit growth has been the norm at Dubai International. Over the past 50 years, passenger traffic has increased at an average annual rate of 15.5% and the frenetic pace continues, according to Griffiths. “I’ve been here less than three years and we have seen growth in passenger numbers of 13 million in that time. We’ve been mobilising stakeholders and looking at innovation in joined-up ways. US$40 billion is being spent to fulfil what we’re doing in the next few years,” said Griffiths. “If we look back, the vision that existed in the mind of one individual, the late Sheikh Rashid Bin Saeed Al Maktoum, was remarkable – to allocate a site for ultimately the world’s largest airport, and an Open Skies policy, as well as to employ and bring in an excellent management team at the airport and make that happen. The whole phenomenon here is quite remarkable. There is very little bureaucracy – we can make big decisions quickly.”

Dubai Airports reached its golden anniversary on 30 September 2010, marking 50 years of smooth operations and double-digit growth. Dubai International’s humble beginnings began with an 1,800m air
Dramatic growth projections

Dubai International handled 47.2 million passengers in 2010 – up 15.3% on the 40.9 million recorded last year. “We are seeing expansion across the board, not only from our usual top flight destinations such as India, the UK, Iran and Germany but we are also seeing significant increases in passenger traffic to and from the US, China and Australia,” said Griffiths.

Arguably the world’s most significant airport expansion programme is taking place in Dubai, with infrastructure enhancement to increase capacity from 60 million to 75 million with the opening of Concourse 3 at the end of 2012. With additional facility enhancements and operational efficiencies that will expand

The past, present and future of Dubai aviation

Dubai International has welcomed more than 402 million passengers at an impressive average annual growth rate of 15.5%. It has also handled over 3.87 million aircraft movements at an average annual growth rate of 12.4%. The rapid expansion of air freight traffic has been equally significant with an annual average growth rate of 14.3% since 1977.

“The past 50 years have been nothing short of remarkable and the future holds even greater promise as we build our infrastructure to support the impressive expansion of Emirates and flydubai and ascend the ranks of global aviation hubs,” said Griffiths.
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to 90 million in 2018. Dubai World Central-Al Maktoum International will be the world’s largest airport by 2030, with five runways and capacity for 160 million passengers and 12 million tonnes of cargo per year. Phase 1, which features capacity for 250,000 tonnes of cargo, opened its doors for cargo operation in June 2010. Some 17 cargo airlines have already signed-up to operate at the new airport.

“A major part of the attraction is the proximity to Jebel Ali port and Jebel Ali Free Zone. Goods can arrive by sea, transit in a few minutes on the bonded road and be exported by air without duty and Customs procedures. We are delighted with the response from cargo operators who are seeing the opportunity,” explained Griffiths.

The new airport is also strategically located between Dubai and Abu Dhabi. General aviation operations were launched in February 2011. Initial capacity will be 5-7 million passengers, while the main terminal building once constructed will have an initial capacity of 80 million passengers.

Capacity expansion plans reflect the dramatic growth that is projected for the next 15 years. Griffiths said: “The big moment will be when Emirates relocates to Dubai World Central-Al Maktoum International at some point in the next 12-20 years.”

He added that the new airport will slowly be populated once the Emirates transfer is complete. “We will be careful we don’t stretch capacity – we will build the main terminal as Phase 2 of the airport. We expect cargo traffic to grow steadily and low-cost and charter traffic to populate the new airport. We project there will be steady growth – a 6.8% compound growth rate.”

Expansion is assured with Emirates growing its fleet with further A380 and 777 deliveries. Those aircraft will, of course, be competing for business around the world. While most international markets shrank in 2009, all traffic flows to the Middle East grew in double-digits. As Griffiths puts it: “The Middle East is becoming the epicentre of the world.”

The proportion of transfer traffic at Dubai International is currently around 43%. Griffiths explained that Dubai Airports had expected that figure to be even higher by now, but the rapid development of commerce and tourism in the UAE has grown the O&D market. By the time Dubai World Central-Al Maktoum International is at full capacity, he forecasts that 100 million of the anticipated 160 million passengers will be transfer passengers. Cargo growth is also dramatic with volumes expected to grow 48% from 2010-2015 to top three million tonnes.

In addition to building the world’s largest airport, Dubai Airports is also further developing Dubai International, adding new aircraft stands and opening a third concourse at the end of 2012, which will be the world’s only dedicated A380 facility. The design is a fully split double-deck concourse. Meanwhile, Emirates Terminal 3 opened in October 2008 and in September 2010 welcomed its 50 millionth passenger. “It was a flawless opening,” said Griffiths. “We completed the transfer over four weeks and populated the terminal gradually. Our consumer research shows that the terminal is very popular.”

Aviation a strategic priority
Dubai’s aviation model is clearly working. The impressive growth being enjoyed by Dubai Airports can be attributed to Open Skies, supportive government policies, Dubai’s attractiveness as a business and leisure destination, and its ideal location as a convenient global transit point. The aviation sector contributes an estimated 25% of Dubai’s GDP and is, therefore, a major strategic priority for the emirate. As the logistics hub at Dubai World Central-Al Maktoum International is developed, those contributions will grow even further.
Dar Al-Handasah Consultants (Shair & Partners) is a pioneering force in the development of projects specialising in planning, engineering and project managing facilities. With more than 120 airports around the world, ranging from major international facilities to local aerodromes, DAR Group has been instrumental in the development of international airports to meet the dynamic aviation sector growth and demanding needs of some of the busiest and most important airports.

1999 marked the commencement of Dar Al-Handasah’s involvement in the Phase II Expansion Plan for Dubai International which aimed primarily at increasing the passenger handling capacity from 20 to 60 million per year and the cargo handling capacity from 0.5 to 2.5 million tons per year, in addition to the development of all other support facilities to cater for the rapid growth of Dubai to its leading role as a world economic hub.

The development works at Dubai International comprised the improvement of the existing facilities and the development of new terminals, concourses and a cargo mega terminal to meet the growth in passenger and cargo traffic at Dubai International, and more particularly, the expansion plans of Emirates airline.

Dar Al-Handasah provided the planning, design, project management and supervision of construction of the entire project.

With the aggressive growth of the aviation sector in Dubai and more specifically Emirates Airline, the longer-term ambition of Dubai extends beyond Dubai International. Dar Al-Handasah was appointed to take the lead on the planning and implementation of a new airport as part of a major ‘Airport City’ development in the Jebel Ali area – Dubai World Central.

The focal component of the Dubai World Central development is the new Al Maktoum International (DWC), which will be the world’s largest passenger and cargo hub upon its completion. The airport will be capable of handling 160 million annual passengers and over 12 million tonnes of cargo per year.

Phase 1 construction of DWC is now substantially complete. Cargo operations started in June 2010. This first phase of the airport will operate as an integral part of Phase 1 of Dubai World Central, creating along with Dubai Logistics City, the nucleus of a well-founded multimodal logistics hub.
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Dubai is ideally located four hours flying time from one-third of the world’s population and 12 hours from 80% of the population, an advantage that has played a significant role in establishing it as an emerging international hub. Emirates Airline’s expansion drive to reach 100 million passengers by 2020 is also fuelling Dubai Airports’ growth, as Jamal Al Hai, Dubai Airports Senior Vice President, explained.

“The vision of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, places aviation at the very centre of the economy, alongside tourism and trade. Each of these sectors is interlinked and growth in one spurs development in another,” he said.

He has seen Dubai International grow from a small regional airport to an international hub. There are numerous milestones, but the one that stands out from the past is the opening of Sheikh Rashid Terminal in April 2000; that was the turning point for Dubai’s aviation, and the beginning of a new era in Dubai International’s history. “The terminal considerably expanded our capacity and enabled us to take our customer service quality to a totally new level,” explained Al Hai. “We had launched the Dubai Airport Cares team on the sidelines of the terminal’s launch to ensure passengers’ comfort during the transition to the new facility. It all added up in the following three years when we won the Airports Council International’s airport service quality award for best airport for three consecutive years from 2001 to 2003.”

Optimising capacity and investment

When Terminal 3 opened, Dubai International had a capacity of just over 25 million passengers per annum while the throughput had crossed 34.34 million in 2007. The successful opening of Terminal 3 increased capacity drastically to 60 million passengers per annum, and that improved customer service – both in terms of the new facilities and technologies that T3 brought into play and the smoother flow of passengers through the airport.

“Our growth has been closely linked with Emirates and it still amazes me to see how fast the airline has evolved into one of the world’s most successful carriers. That success is now being repeated by flydubai, Dubai’s own low-cost carrier. In less than two years of its launch the airline is already the second largest contributor of passenger traffic, after Emirates, at Dubai International,” said Al Hai.

“‘There is hardly any international airport in the world that complains of extra capacity. In fact, expansion projects at most airports typically materialise only when they become inevitable. Dubai Airports does not believe in playing catch-up because we recognise the impact capacity constraints can have on our operations and the passenger experience. We are in a far better position to manage our growth and capacity needs. That’s why we have embarked on a steady programme of capacity expansion and investment,’ he said.

Dubai Airports has invested heavily in the expansion and modernisation of Dubai International in recent years. The launch of Terminal 3 in October 2008 is a memorable milestone in Dubai International’s history. It was hailed in the aviation world and celebrated among travellers as the smoothest launch of a state-of-the-art facility that also happened to be the world’s single largest terminal building.

The success of the Dubai aviation model can be attributed to a pro-aviation government policy, which is based on the long held and proven belief that aviation is an important part of a nation’s economy, a mutually beneficial partnership between the government and the industry, and a vision that embraces the changing industry dynamics driven by globalisation.

“The vision of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, places aviation at the very centre of the economy, alongside tourism and trade. Each of these sectors is interlinked and growth in one spurs development in another. No wonder today Dubai International connects 220 destinations across six continents on 130 airlines,” said Al Hai.

The past, present and future of Dubai aviation

Dubai Airports

50 | Celebrating the New and Golden Age of Travel

The vision of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, places aviation at the very centre of the economy, alongside tourism and trade. Each of these sectors is interlinked and growth in one spurs development in another.
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Recently, Shell Aviation was also the winner of the Best Fuel Provider Award at the first annual Emerging Markets Aviation Awards (EMAA) in Dubai. The award marks Shell’s achievements in markets of the Middle East, India, Pakistan, Africa, Russia and the CIS countries.

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growth. Our strategy is to time our expansion projects in such a way that provides operational capacity in a timely and cost-effective fashion,” explained Al Hai. “The burst of sudden growth we experienced in the last decade, especially in the second half, required a quick response. Our timely and world-renowned response was the flawless opening of Terminal 3 in 2008.”

The upcoming projects – Concourse 3 at Dubai International and the next phases of Dubai World Central-Al Maktoum International – are being executed as part of a master plan that will help deliver capacity where and when it is needed most and in a fashion that optimises investment.

Work is in progress to build Concourse 3, which is part of the Terminal 3 complex and dedicated for use by Emirates Airline for its A380 fleet. Upon completion, Concourse 3 will feature 20 A380 contact gates, making it the largest facility of its kind in the world.

“With air travel across the globe forecast to double over the next decade and a half, constraints on traffic rights due to congestion caused by lack of airspace optimisation and the dearth of availability of landing slots will become more pressing than ever. Airports around the world are already experiencing congestion, on the tarmac as well as inside the terminals, due to the impact of growing air traffic. The industry is increasingly acknowledging, particularly for long haul flights on high density routes, that an aircraft with significantly larger capacity doing relatively fewer flights alleviates these problems,” commented Al Hai.

Considered the most advanced, spacious and efficient aircraft ever conceived, the A380’s size will help cope with growing passenger numbers without negatively impacting Dubai International’s efficiency. This is very much in line with Dubai International’s goal of becoming the world’s busiest international hub, delivering top quality customer service.

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ADPI is playing a key role in the expansion of Dubai International Airport and the development of Dubai World Central-Al Maktoum International. ADPI’s Alain Le Pajolec, Chairman & CEO, and Yann Le Page, Regional Director, outlined the developments.

When the architectural competition was launched for Terminal 3/Concourses 2 and 3 at Dubai International, of crucial importance was how to build a terminal, with a capacity of around 20 million passengers per year, in an existing tight urban context. Le Pajolec and Le Page explained: “The space suggested at the time between the motorway and the existing taxiway being very limited, lower than the available space in front of Terminal 1, we proposed to build the terminal under the taxiway and to use the space available for road access and the car park. As in the existing Terminal 1, the 300m access tunnel to Concourse 1 was considered a major process and commercial drawback – we proposed, for the new Terminal 3, to occupy this underground length with all the necessary operational activities: check-in, passport control, baggage delivery, etc, therefore providing the double benefit of comfortable road access, as well as reducing the passenger walking distance by 400m.”

From an architectural perspective, ADPI had to face the double challenge of laying out an airport terminal of 300m by 300m underground, while designing a façade befitting such an iconic building, “As the possibility of designing roof openings between the taxiways was quickly discarded for obvious technical reasons, some other ideas crossed our minds, such as bringing daylight in with fibre optics, or creating a luminous ceiling, resembling an artificial sky, varying the light intensity, hence recreating the atmosphere of the day and the night, the setting sun or the clouds,” said Le Pajolec and Le Page.

When handed over it will be the largest low-cost terminal in the world,” said Le Pajolec and Le Page. Commenting on the evolution of Dubai Airports, as the 50th anniversary is celebrated, Le Pajolec and Le Page said: “The knowledge has commonly increased in quality and awareness between all actors of the development. All along the design/building/readiness/operation process, DCA/JV/End Users have jointly progressed along the last 10 years in the knowledge of designing/building the different airport equipment, taking into consideration the huge scale leap from T1 to T3 for example, increasing the quality in a loop design process, taking into account the feedback from existing operations into the design of new buildings, and vice versa, implementing new techniques from other world class airports.”
Dream, Design... Build

ADPI, founded in 2000, is a fully-owned Architecture and Engineering subsidiary of Aéroports de Paris to undertake large planning schemes and complex construction projects (airports, stadiums, buildings, opera houses, etc.). Its Architecture and Engineering activities include consulting, planning, project management and supervision of contracted work. In 2010 ADPI celebrates 10 years of architecture and engineering in Dubai.

ADPI congratulates Dubai Airports on the occasion of their Golden Anniversary.
When Director General of Dubai Civil Aviation Authority Mohamed Ahli joined the airport in 1966, Dubai International was a far different airport than it is today. Featuring a single sand runway, a small terminal building to process passengers, and a handful of airlines, it has since developed into the world’s fifth busiest airport for international passenger traffic. And Ahli, who began his career in ticketing and reservations, now heads Dubai’s Civil Aviation Authority. “In those days there was no Dubai Civil Aviation. Dnata was looking after everything—civil aviation, ticket sales, reservations and airport services,” he recalls. “We had very few airlines operating into the airport...Iranian and Middle East, Kuwait Airways and British Overseas Aviation Company (BOAC).”

From its humble beginnings, the airport was slowly developed and began to come into its own during its second decade of operation. “In 1971 the new airport was opened and it started to boom from 1972,” says Ahli. “We had one runway and excellent facilities—all the runway facilities with landing systems and navigational aids, not like before when we used to have a compacted sand runway and we used to light torches with gasoline for aircraft to land at night.”

The facilities were advanced for the time and the belief was that the new airport would last Dubai for at least the next 50 years. Of course, the airport’s popularity, Dubai’s geo-centricity and the addition of new airlines conspired to ensure this estimate was phenomenally off-track. “It was only one and a half years later when we had to remove the garden and landscaping to build offices,” explains Ahli. “Then we built another runway and started expanding.”

Finally, a new terminal was built to accommodate the vast number of passengers arriving at and departing from Dubai International each day. As the airport developed, so did Ahli’s career as he gained experience in every department before assuming his current position of Director General. “I am proud of my role in building this airport,” he says. “I gained experience in almost every area—cargo, passenger traffic, load and flight planning until I reached this position.”

Ahli has always espoused a compassionate attitude towards airlines in difficulty. Over the years, that approach has consolidated the airport’s reputation for working in partnership with customers. For example, the airport offered discounts and the use of some facilities without charge to Middle East Airlines during the war in 1975 to help them through a challenging time. That attitude lives on to this day. Most recently, during the disruptions caused by the Icelandic volcano that all but shut down European airspace in April, Dubai Airports waived parking fees for airlines with stranded aircraft.

Ahli: “What the airport has achieved would not have been possible without the guidance and support of Sheikh Ahmed bin Saeed Al Maktoum, President of Dubai Civil Aviation Authority, and this committed staff of Dubai Airports.”
Throughout his career, Ahli says, his development and success have been the result of the considerable contributions of the multi-cultural team around him. This cooperation and an atmosphere of mutual respect and understanding have brought Dubai International to where it is today, says Ahli. The DCAA Director General is equally quick to lavish praise on Sheikh Rashid bin Saeed Al Maktoum as well as Sheikh Ahmed bin Saeed Al Maktoum for their vision, trust and leadership.

"Behind this growth was the vision of Sheikh Rashid," he says. "He used to follow everything at this airport and when we appointed committees to look after the airport, the committee had full authority. One thing he always used to say was that this airport was built to receive aircraft, so don't turn anybody down. He started the open skies policy from that day. We continue to have open skies that welcome all airlines. We reply quickly to all airline requests and applications," Ahli explains.

Alongside Sheikh Rashid’s vision, Sheikh Ahmed’s backing and encouragement has been invaluable. "What the airport has achieved would not have been possible without the guidance and support of Sheikh Ahmed bin Saeed Al Maktoum, president of Dubai Civil Aviation Authority, and the committed staff of Dubai Airports," he says.

Whether as a result of the inviting open skies policy, the can-do attitude or the outstanding team spirit, Dubai International is a phenomenal success. But the airport’s success has not been achieved without facing difficulties. Ahli says one of the most challenging aspects has been managing the ever-increasing level of passenger traffic, resulting in a constant need to think ahead. "We handle over 47 million passengers per year," he says. "But while we have the facilities, the sky is getting full and we have to re-design the airspace every five years to keep pace."

Ahli says vision and preparation continue to be key tools for success. "We prepare ourselves and think ahead," he says. "Our statistics show we cannot continue on this site forever. So we started building Dubai World Central-Al Maktoum International which when it is finished will accommodate about 160 million passengers and will be the largest airport in the world. The government could have insisted the development be put on hold to save money but they did not. This is thinking ahead."
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Dubai World Central-Al Maktoum International will support the Emirate’s aviation, tourism, commercial and logistics requirements through 2050 and beyond. Ross Falconer spoke to Dubai Aviation City Corporation’s Khalifa Al Zaffin, Executive Chairman, and Rashed Buqaraa, Chief Operation Officer.

Located at the crossroads of global trade flows, Dubai World Central-Al Maktoum International provides multi-modal transportation solutions, international connectivity and, according to Al Zaffin, “the kind of operational predictability that is vital to today’s fast-cycle business environment”. It is an ambitious project, the goal of which is to position Dubai as a leading international trade centre and a global logistics hub.

The infrastructure development project will, over time, see the new airport transformed into the world’s largest global gateway and a multi-modal logistics hub that plays an increasingly integral role in the ongoing economic and social development of Dubai. Phase 1 of
the airport, which officially opened for cargo operations on 27 June 2010, upon completion will be the largest airport in the world with five runways and capacity for 160 million passengers and 12 million tonnes of cargo.

The opening of the new airport will complement additional components of the larger Dubai World Central project, including free-zone commercial, residential and educational facilities. The cost of the entire Dubai World Central development, including all clusters, is estimated to be in excess of US$43 billion. Linking Dubai to the world through air, sea and road, the new development is an integrated solution to the 21st century challenges of global trade and transport.

Dubai Logistics Corridor marks another successful step in the ongoing development of Dubai World Central as an epicentre of regional trade and logistics. The Logistics Corridor significantly boosts Dubai’s logistics efficiency by cutting sea-air transfer times and providing unparalleled connectivity to trade and transport hubs across the globe. “This will make Dubai the only city in the region to offer this level of connectivity and among the few globally to offer a truly multi-modal logistics hub,” explained Al Zaffin. Additionally, it creates a single Customs-bonded environment between Dubai Logistics City and JAFZA, allowing for an unhindered supply chain between the two zones and free movement of goods from sea port to airport and vice-versa. “Clearly, this is a major milestone in the evolution of all that has been achieved by Dubai Airports. Together, we are contributing to the sustained growth of this great city.”

Located at the crossroads of global trade flows, Dubai World Central-Al Maktoum International provides multi-modal transportation solutions and international connectivity.

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Born into Dubai’s Open Skies policy, Emirates has thrived on competition and now flies to 109 destinations in 65 countries. Tim Clark, President and CEO, outlined how the airline has achieved 25 years of growth and its strategy for future success.

**EMIRATES – 25 YEARS OF GROWTH**

Emirates was born when a cheque from His Highness Sheikh Mohammed bin Rashid Al Maktoum for US$10 million enabled the lease of two aircraft, and on 25 October 1985 the first flight to Karachi took off from Dubai Airport. “Some 25 years later, through sheer determination, Emirates has established itself as one of the leading airlines in the world,” said Clark. “In the last 25 years Emirates, alongside Dubai, has achieved what many claimed was impossible. Under the chairmanship of His Highness Sheikh Ahmed bin Saeed Al-Maktoum, it is a story of collective wisdom, forensic planning and the boldness to create an airline that would help create an inspiring modern city, snatched from the desert.”

Emirates’ standing is so much more than an airline. The company has evolved into a travel and tourism operation on a colossal scale, straddling numerous divisions and propelled forward under the umbrella of the Emirates Group.

The airline has an all wide-body fleet of 151 aircraft, including 15 A380s, and an additional 200 aircraft are currently on order. In the 2009/10 financial year, some 27.5 million passengers flew with Emirates and the passenger load factor was an impressive 78.1%.

Clark explained that Emirates has a well thought-out strategic plan for the future. Each of the Airbus and Boeing jets it has ordered has been carefully planned for present and future network requirements.

“Emirates is committed to maintaining a young and modern fleet, which enhances our passengers’ comfort and safety and also makes our fleet one of the most eco-efficient in the skies,” said Clark. “Our strategy is to continue to progressively grow as a high quality and profitable global carrier connecting six continents through our efficient hub in Dubai. We believe air travel will grow strongly in the next decade, and with many major airports worldwide operating at maximum capacity due to constraints on expansion, the A380 is key to our plans to meet increasing passenger demand. The 777s also form the backbone of our fleet, and we have configured these aircraft to give us maximum flexibility in terms of route deployment.”

The fleet comprises a number of aircraft types, each with different...
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Al-Maktoum is also the Chairman of Dubai Airports,” commented Clark. Emirates Terminal 3 has been an incredible success since it opened in 2008 thanks to the collaborative effort from all stakeholders. It is an invaluable asset for the airline as it continues to leverage the airport to its full potential to fulfil its strategic plans. “Our customers continue to benefit from the ease, convenience and luxury the terminal represents. Having our own dedicated facility has allowed us to imprint our own personal style on it, replicating the comfort and convenience of flying Emirates on the ground,” said Clark. “Emirates Terminal 3 is a testament to our corporate values that see our passengers enjoy ease of travel, home comforts and refined luxuries both in the air and on the ground – helping us to deliver on our promise and fulfill customer expectations from the Emirates brand.”

Meanwhile, Dubai World Central-Al Maktoum International is being developed to cater to the future aviation and logistics needs of Dubai. While Dubai International is sufficient for Emirates’ immediate needs, and with a certain amount of investment will be able to accommodate the airline’s fleet growth for the next 12 years, there is no doubt that the new airport will play an increasingly important role in the long-term. “Emirates aims to move to the new airport between 2022 and 2030. Any relocation of Emirates’ operations to Dubai World Central-Al Maktoum International, and the concrete timing of such a shift, is a decision for the Government of Dubai, which is also the owner of the airline,” explained Clark.

Strategic plan
Emirates has a very specific long-term strategic plan to grow and expand its business. With a total of 90 A380 aircraft ordered, it is set to become the world’s largest operator. The A380 is an integral part of the airline’s growth strategy and the aircraft is pegged to become the backbone of its long haul operation. Clark commented: “The A380 is our flagship in terms of passenger comfort, innovation, operating and environmental efficiency, and revenue generation.”

The airline is constantly assessing and reviewing new route opportunities. While it never commits to markets in which it does not see long-term potential, Emirates is known for entering markets not previously served by large international carriers. For instance, it sees incredible opportunity throughout Africa and currently serves 19 African destinations – Dakar, Senegal being the most recent addition on 1 September 2010.

Dubai has become a significant tourism and business destination in its own right. The hub model is key; Dubai is located at a strategic crossroads between Europe, Asia and Africa. “Nearly two billion people live within four hours’ flying time of the Gulf and more than twice as many within eight hours. Our business model relies on bringing people from one corner of the world to another, via our efficient Dubai hub,” said Clark. “We are committed to promoting Dubai alongside Emirates and each year implement a number of initiatives that are designed to bring further traffic to the emirate. Such initiatives include stopover incentives and large scale trade and media familiarisation trips to increase word-of-mouth exposure in the market.”
Dubai Duty Free, as a single operator, now accounts for 3.3% of global duty free and travel retail sales (which includes airports, airlines, ferries and other shops) and 5.5% of the airport duty free business. McLoughlin said: “We are thrilled to have posted such a positive year in 2010. Our sales have been consistently buoyant throughout the year and we are pleased to see that our penetration level continues to be high and that we sell to around 45% of all passengers, while the average spend per departing customer is around US$46.”

20.5 million sales transactions were recorded at Dubai Duty Free in 2010 – an 11% increase year-on-year. Perfumes remain the number one category with a 16% increase to sales of US$180.3 million in 2010. Liquor and gold retained the No. 2 and No. 3 positions with increases of 13% and 11% respectively. Significant growth was also seen in watches, which rose by 26%; cosmetics, which were up by 23%; and cameras, which rose by 19%.

Increases were seen across all Dubai Duty Free retail areas, with Terminal 3 sales increasing by 20% overall, including an 11% increase in arrivals sales. Terminal 2 sales also rose by an impressive 24%; a revamp of the retail operation in Terminal 2 is planned for 2011.

Dubai Duty Free’s strategy is to try to increase spend per departing and arriving passenger. The penetration level for departing passengers is extremely good, currently standing at around 45%.

“We want to push that higher and we will do this in a variety of ways: ensuring that our products are visible, accessible and in demand, ensuring that our staff continue to offer a high level of service which in turn results in sales, to ensure that we continue to work with our suppliers to offer the latest products or exclusives wherever possible and to make sure that we offer value for money. Now more than ever, the traveller is looking for added value and we will continue to work towards providing that,” explained McLoughlin. “We are also looking at our arrivals offer more and more, and have tried to create greater visibility and understanding of the arrivals offer for passengers, particularly in Terminal 3.”

The operation saw an increase in consumer spending across all categories in 2010. Indeed, December saw a new monthly sales record with turnover reaching US$136 million – 13% higher than the monthly record set in December 2009. Meanwhile, on 20 December, when Dubai Duty Free celebrated its 27th anniversary, sales reached an impressive US$18.5 million.

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of merchandise presented in an extremely attractive and convenient shopping environment. The focal point of the retail offer in the departures area is a 1,150sqm central retail outlet that incorporates perfumes and cosmetics, luxury goods, fashion, confectionery and electronics. On either side of this central area are two 300sqm retail areas, featuring liquor and tobacco in one outlet and food and confectionery in the second. “The positioning of the retail offer is excellent and will be visible to passengers immediately after they enter the departures hall, once they complete immigration and security procedures,” said McLoughlin.

In the arrivals hall, Dubai Duty Free will offer a conveniently located 350sqm outlet located directly in front of the baggage reclaim belts. In total, Dubai Duty Free’s retail area will cover 2,250sqm and be supported by a further 1,150sqm of back-of-house area. At present, Dubai Duty Free operates 15,000sqm at Dubai International Airport across the three terminals and with the opening in 2012 of Concourse 3, it will have a further 8,000sqm.

“So we are continuing to consolidate our existing operation while keeping an eye firmly on the growth plans ahead. I think that with the size of operation in the future, the prospect of us remaining the single largest airport retailer is pretty good,” concluded McLoughlin.

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The management and staff of Dubai Duty Free congratulate Dubai Airports on their 50th anniversary.

Dubai Duty Free is the single largest duty free operation in the world.
Dubai offers a compelling business proposition for airlines from around the world. It is a growing tourist destination and regional business centre offering world-class amenities and a tax-free business environment. When combined with an open skies policy and affordable, top-notch infrastructure it’s no surprise that Dubai International has 130 airlines flying to some 220 destinations on six continents.

Still Dubai Airports strives to do more to grow its airline and route offering. Most recently the organisation has launched a marketing assistance programme for all airlines flying to Dubai, to help them gain access to advertising space, influential local media and other suppliers and stakeholders that can serve to boost their exposure in the market particularly during the launch of new or start-up routes.

“It's a comprehensive scheme that enables airlines to enjoy special rates while dealing with Dubai Airports’ media and marketing partners,” said Rich Talian, VP Strategy, Dubai Airports. “Our Business Development team offers tailor-made incentive schemes considering the route and airline requirements.”

Inaugural flight ceremonies can also be arranged, with key stakeholders invited. Dubai Airports’ Corporate Communications team can advise airlines on suitable venues for hosting launch events. It can also provide complimentary consultation to develop the most efficient approach in dealing with local and regional media, particularly Arabic media to maximise coverage and exposure.

Talian explained that Dubai Airports’ Business Development team works closely with the airlines from the route planning stage until the airline begins operations.

“In promoting a route, the Business Development team supplies all necessary information, facts and figures to the airline to assist their marketing initiative,” he said. “The Conditions of Use document assists the airline in conducting operational studies on Dubai routes and the Business Development team participates in press conferences and media events that the airline hosts to promote the route. It also supports airlines in increasing frequency and adding new destinations.”

Different incentives will be offered for Dubai World Central-Al Maktoum International Airport once that airport opens for passenger operations. The Dubai Airports master plan for Dubai International and the new airport is based on the requirement to achieve throughput to accommodate the 150 million annual passengers that are anticipated to fly into, out of or through Dubai by 2030. Upon completion, Dubai World Central-Al Maktoum International will have capacity for 160 million passengers and 12 million tonnes of cargo per year.

James Robinson, Head of Strategic Planning, said: “Developing appropriate facilities that will cope with the magnitude of an airport this size is a significant challenge. As such, Dubai Airports has initiated the Airport Innovation and Technology Working Group, which involves all key stakeholders, to develop solutions for Dubai World Central-Al Maktoum International that will achieve the required throughput while maintaining a high level of customer service. This will be an ongoing integrated approach looking at ways to improve processes, deploy new technologies and develop world-class facilities.”
Arup’s Operational Readiness Activation & Transition (ORAT) team managed every step of Emirates’ and Dubai Airports’ move into this massive new facility – taking it from a $4bn USD construction project to a fully operational airport terminal.

Having worked on a number of large scale activation projects, Arup recommended using its ORAT approach at T3/C2. ORAT provides a detailed process of operational assessment, independent of contractual obligations. It creates the opportunity to make corrections to facilities and processes prior to opening and ensures that by the time of opening, staff are trained and equipped to respond to any situation.

One of the critical modules of Arup’s ORAT service is the Trials Programme. Trials are the mechanism by which the team can accurately assess the state of readiness of staff and facilities. Arup designed an extensive trials programme comprising of the execution of over 60 trials over a six month duration, in addition to nearly 100 different ‘fit-checks’ at gates, check-in counters and baggage belts.

Arup also introduced its web based electronic Facilities Activation Support Tools (eFAST). The dynamic, scalable and single platform nature of eFAST allows all members of a project team real-time access to information and facilitates resource management and real-time communication.

Arup’s understanding of major capital projects and their transition into operational environments, specialist technical knowledge around IT, logistics and terminal operations, and understanding of Dubai Airports’ operational requirements were absolutely key to the success of the project.

Arup has been involved in aviation development for over 50 years. In that time our teams have worked on more than 100 airports across the world. Few firms can match our 2008 record for completing six major airport projects in a year, spanning the globe from Beijing to London, New York to North Carolina, and Hyderabad to Dubai.
Evolution of the retail offer means there is an ongoing process of improvement in line with enhancing the overall passenger experience. New brands are introduced when suitable space becomes available, or when vacant space is categorised as suitable for commercial as opposed to operational needs. Relationships with existing valued concessionaires also evolve as their concepts expand, or are upgraded to reflect changing business needs. As the landmark 50th anniversary is reached, Barry commented on how Dubai International and its retail offer have evolved. “I first came to work in the Gulf region in January 1996 with Aer Rianta International, and passed through Dubai International shortly afterwards. At that time, Dubai International was undergoing an expansion programme – a process which never seems to have ended! Dubai Duty Free already had an excellent global reputation for shopping, and its shops were located in the original area at that time. During the subsequent five years I passed through the airport regularly as
a passenger and witnessed the phased development of new facilities. I joined Dubai Duty Free in 2000, the year in which the Sheikh Rashid Terminal opened, which was a big step forward in airport commercial design for this region. The challenges which 9/11 and other global events brought to the region also remain in my memory, but Dubai proved to be a resilient and attractive destination for many reasons. There is no doubt that the airport undergoes a constant evolution. That in itself has brought many opportunities to introduce retail concepts which reflect the diverse and changing profile of our customers.”

Maximising commercial opportunities

Dubai Airports aims to continue developing from the strong foundation that retail currently enjoys at Dubai International. Both passenger profiles and volumes have evolved considerably in recent times, due to the expansion of routes and services provided by Emirates Airline, flydubai and other international carriers as well as changing passenger behaviour and tastes. A priority is to continue to predict and meet customer expectations within this very dynamic landscape, and build sustainable, flexible business models with concessionaires and stakeholders. “I see more integration of retail and food concepts in the future, thereby maximising commercial opportunities for Dubai Airports, but also ensuring a more efficient use of customers’ time at the airport,” said Barry. “By being involved much earlier in the design and delivery of new infrastructure, there is an opportunity for us to create an environment which is customer-focused and quality driven, and reflects Dubai’s status as a significant global destination and transfer point.”

From day one of passenger operations at Dubai World Central-Al Maktoum International, essential services will be in place across all categories, including financial services, car rental, hotel reservations, advertising, and a choice of leading food concepts, while Dubai Duty Free will provide departures and arrivals duty free shopping. Dubai Airports, of course, interacts very closely with Dubai Duty Free. “We share real estate and we share customers, so there are many occasions where we connect with each other, particularly in planning. The objective is to ensure that overall category management appears seamless from a customer’s point of view,” explained Barry. Retail services at both airports are made available in accordance with customer expectations and volumes, and the range of services is expected to increase in line with growth in passenger numbers over time. The key is to ensure that those services and concepts put in place most closely match customer demands and fulfil commercial expectations.

“As the world is becoming more global in its outlook, there is a prevalent and growing expectation that leading brands are available at international airports. Dubai is an important business gateway and tourism hub and our services should match this,” said Barry. “Nevertheless, international or originating passengers expect to see a flavour of the country which they are entering or leaving, whether that is destination merchandise or food. It is important to reflect the pulse of a host country in terms of architecture or other means, and commercial activities usually try to find the right balance wherever that is possible. It is certainly an area for further development.”

Non-aeronautical revenues are increasingly important to Dubai Airports and are expected to see the biggest growth over the coming decade.
JCDecaux currently reaches 34% of the world’s 4.5 billion travellers per year. Its Transport Division, which includes airports and railways, has performed strongly in 2010, with double-digit growth. It is the fastest-growing segment for the JCDecaux Group and robust growth is forecast to continue in 2011. “We remain confident because of the organic growth of the business, growth in passenger numbers and because of our innovations. It is a very promising environment and a very dynamic industry,” said Decaux. “From a JCDecaux perspective, airports are a key focus for the growth of the company – we want to continue to be the preferred advertising company for airports. We view airports as a business with a lot of growth to come. The industry is accelerating in growth in most markets around the world, with major airport developments across all regions.” JCDecaux already operates at 7 of the world’s top 10 hub airports and has the clear capability to innovate with new products and services in the airports industry: “We can serve clients across the world with airport advertising proposals. Airports are truly a global business and we offer a global media coverage,” continued Decaux.

**Entertainment and experiential services**
A key area of focus in the airport environment is what Decaux describes as a “less is more” approach – fewer units while ensuring the biggest impact. “This is the way to go forward for high standards and quality across the portfolio,” he said. JCDecaux is known for its innovation through the development of new products; among the most iconic media developments in recent years are innovations such as the FIFA World Cup live updates that created maximum impact. Around 90 screens in Terminals 1 and 3 at Dubai International provided live match result updates and daily game highlights.

JCDecaux is the largest airport advertising company in the world. It has a truly global platform, being present in 184 airports worldwide, across all continents, including Dubai International. Jean-Charles Decaux, Group Chairman, JCDecaux, outlined the company’s strategic vision to Ross Falconer.
DECAUX:

“Our focus in the airport team is second to none. We are deploying our knowhow across the world. The Middle East is a strong growth platform and a place we can deploy new products – we are engaging with travellers.”

Jean-Charles Decaux, Group Chairman, JCDecaux: “From a JCDecaux perspective, airports are a key focus for the growth of the company – we want to continue to be the preferred advertising company for airports. We view airports as a business with a lot of growth to come.”

has been the HSBC jet bridges at airports around the world – these are seen as a major brand driver for HSBC. Another major lever is digital technologies. “We’ve been pushing boundaries, with plasma screens and LED screens. Big is beautiful – enlarging the message for consumers and passengers,” commented Decaux.

JCDecaux adopts an analytical approach when it begins working with an airport. Dubai International, for example, is a key transit hub bridging east and west. As 50% of Dubai’s passengers are in transit, JCDecaux’s strategy at the airport is to have impactful areas, with an offer focused on entertainment and experiential services. “We’re the most experienced company to serve the fast-growing passenger-based airports,” said Decaux.

Total – a partner of the Renault F1 team – rolled out a wide-ranging advertising campaign at Dubai International to reach the large influx of visitors attending the Formula 1 Abu Dhabi Grand Prix. Throughout November, Total’s branding could be seen on over 160 faces of columns, light boxes and wall wraps in Terminals 1 and 3. The centrepiece of the campaign was a 35sqm experiential space in Terminal 3, featuring a real Formula 1 race car, two interactive video game stations and a scalextric track for radio-controlled car races. The experiential space was the biggest stand that Dubai International has ever had.

JCDecaux has been working with Dubai Airports since 2008 and has developed a tailor-made offer. A unique product development is the world’s largest LED screen – 32sqm – in Terminal 3 at Dubai International. There is also a ‘welcome corridor’ in Terminal 1, which has digital screens for maximum impact. “It is an amazing airport and a great organisation, dealing with tremendous growth. Our team and myself are working very closely with the management team at the airport. We have to be able to create new innovations for maximum impact, such as the FIFA World Cup live updates. All of these initiatives have been more than welcomed by the Dubai Airports team, which comes from the strong support of the Chairman,” explained Decaux.

The JCDecaux brand is expanding rapidly in the Middle East region. It first began working in Terminal 3 at Dubai International before expanding into the airport’s other terminals. It subsequently won the contract at Sharjah and was recently awarded the contract to operate at 26 airports in Saudi Arabia. “Our focus in the airport team is second to none. We are deploying our knowhow across the world. The Middle East is a strong growth platform and a place we can deploy new products – we are engaging with travellers,” concluded Decaux.
Dubai Airports provides the infrastructure and the backbone of the IT systems across Dubai International. While various stakeholders may have their own IT infrastructure, the backbone infrastructure is in place to cater for the airport's growth.

Among the innovative IT solutions being explored are self-service kiosks, with a number of functionalities being tested for common use kiosks. "The main thing that these kiosks are used for now is to issue the boarding pass, but we’re exploring offering seat selection, re-booking and so on. What we’re aiming to do is offer a convenient, one-stop-shop for the passenger," explained Kazim. "We’re also looking at their location, specifically at having common use kiosks located across the city to reduce the bottlenecks at the airport itself. Self-service is something that we will definitely continue to explore. Smartphones are also becoming far more popular and we’re looking at providing a platform for users to be able to download up-to-the-minute information on flights, delays, retail offers, processing times and so on."

Dubai International has experienced an unprecedented growth rate, so Dubai Airports is increasing the capacity of the airport and, at the same time, is striving to ensure a smooth transition when new technologies are implemented. "We’re continuing to review all of the data on the airport operating systems so that all of the flight information can be based on real time aircraft movements – this ensures a smoother transition for the transfer passenger," said Kazim.

Multi-Airport Operating System
At Dubai World Central-Al Maktoum International, Dubai Airports will implement a Multi-Airport Operating System, which will allow it to manage the operations of both airports from one central system by generating accurate forecasts based on real-time data. "This will help to reduce the passenger transition time through the airport and the passenger will have more time to explore the retail opportunities on offer, rather than spending a lot of their time stuck in queues," explained Kazim.

Dubai Airports is exploring the introduction of open platforms so that a number of airlines will be able to use common systems. These open platforms will help to make the experience of the airlines as well as the passengers much more efficient. All of these enhancements will be scalable and Kazim emphasised that these improvements will not just be for the 5-10 years ahead, but far beyond that. He explained: "The technology that we have access to makes the integration of the systems possible. When we are integrating the two airports, we have a ‘live’ airport and an airport that’s starting from scratch, so it gives us the opportunity to grow the IT system gradually. The systems need to be compatible because of the Multi-Airport Operating System that we will use."

Commenting on the 50th anniversary of Dubai International, Kazim added: “I’ve been involved in my current capacity since July 2009, but prior to that I was with Emirates for eight-and-a-half-years so I have seen Dubai International grow enormously. At a point in time, Dubai could have been measured against regional airports in terms of what it offered. The introduction of Dubai Duty Free was a big moment for the airport because it was a new concept in this region and since then, the airport has progressed in leaps and bounds and we can now compare ourselves to international airports. We have seen the airport grow in front of our eyes and the airport can now help to connect the whole world.”
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Answers.
Capacity enhancements delivered on the ground must be matched by development of additional capacity in the sky, and for this reason the Dubai Air Traffic Management Strategic Plan (Air Traffic Control’s planning and development roadmap) is closely aligned with Dubai Airports’ Master Plan. “Our collaboration with Air Traffic Control is a continuous demand/capacity balancing exercise. Landside, airside and airspace capacity are aligned wherever possible to ensure that additional capacity is released in time to facilitate increasing demand,” said Woodrow. “Of course at every airport there comes a point where the top of the capacity staircase is reached and yet demand continues to grow, and this is where our second airport, Dubai World Central-Al Maktoum International (DWC), will in future be critical to our continued success.”

The continued growth of aviation in Dubai brings with it the challenge of ensuring that best practice Communication, Navigation, Surveillance and Air Traffic Management (CNS/ATM) technologies are incorporated into the ATM strategy. “We are continuously assessing new technologies to determine where these might fit into the long-term strategy and quantify what benefit in terms of safety, capacity or efficiency they might offer,” explained Reavy. “Several major projects are already underway, such as the introduction of Electronic Flight Progress Strips (EFPS), the implementation of a new approach radar system and transition to a new air traffic control centre at DWC and further enhancements to our already robust surface movement guidance and control system.”
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Dubai Airports is also looking into ‘next generation’ technologies that harness the advanced navigational capabilities of modern fleets such as those of Emirates and flydubai. Reavy added: “Aircraft technology has outpaced air traffic management technology over time and we are now looking to harness aircraft-centric communication, navigation and surveillance capabilities to address airspace capacity issues and pull air traffic management from the analog to the digital age.”

Unlocking airspace capacity
Dubai Airports and Dubai Air Navigation Services (DANS) use key air traffic management performance areas such as safety, efficiency, capacity and environment as the focal points of future airspace management strategy. Movement forecasts produced by Dubai Airports are used as the start point for demand and capacity balancing activities. “Our operations research and aeronautical strategy teams work very closely with DANS to arrive at capacity declarations for the short-term (1 to 2 seasons ahead) and agree a roadmap for targeted development and deployment of capacity enablers to deliver additional runway and airspace capacity, and facilitate our airline stakeholders’ growth plans in the medium to long-term,” said Woodrow. “Locally our focus is on optimising runway capacity, increasing consistency and predictability and implementing efficient systems and processes in order to accommodate and manage growth. We are also looking to deliver tangible environmental benefits in terms of reduced noise, fuel burn and emissions.”

Dubai Airports is currently involved in several Middle East initiatives taking a whole system approach to collaboratively de-conflict air routes, reduce bottlenecks and unlock latent airspace capacity.

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Tower simulator
Prior to June 2010, Dubai World Central-Al Maktoum International was classified as a ‘greenfield’ airport in a new location without any legacy of prior operations. One of the many challenges, therefore, was that live “on-the-job” training in the operational environment, which is normally provided to new airport staff by their experienced peers, was not possible. However all staff had to be fully trained and certified as competent prior to the airport’s first flight movement. “In the case of the air traffic controllers, who perform a highly regulated, safety critical role, this was accomplished by use of a 360° virtual reality tower simulator,” explained Reavy. At Dubai World Central-Al Maktoum International, where the live elements of the normal training process were not possible prior to aircraft operations commencing, the General Civil Aviation Authority (GCAA) approved a comprehensive greenfield training plan which had been compiled by the DANS ATC training unit. Reavy said: “The purpose built tower simulator onsite brought virtual reality to ATC training in that it achieved a level of realism so close to the live operational environment that controllers were fully competent to handle any scenario that might occur from the minute the first aircraft movement touched down at DWC. The simulator replicated the view, equipment and layout of the new control tower and was designed to enable controllers to practice in a realistic environment as they prepared for a safe and seamless commencement of operations.”

The simulator remains onsite today and continues to be utilised for ongoing ATC training tasks. It projects a panoramic 3-dimensional 360° visual representation of the airport’s airside layout and surrounding areas of Dubai with the runway, taxiways, terminals and parking stands depicted exactly as they are in real life. “Over 100 different aircraft can be depicted during simulation, from an A380 to a single engine light aircraft, as well as a variety of airport operations vehicles,” explained Reavy. “As well as day and night scenarios, wind, fog, rain, thunderstorms, emergencies and unusual occurrences, equipment and system failures are all able to be simulated.”
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The inauguration of Dubai International in 1960 marked the entry of Dubai onto the world’s aviation stage and has since proved to be the catalyst for the emirate’s unprecedented aviation growth, which now spans half a century. Ryan Ghee explores 50 years of Dubai aviation.

By 1964, the airport’s annual capacity was 8.5 million passengers and 200,000 tonnes of cargo. By 2018, the airport will be able to handle 90 million passengers, while 2030 will see the completion of the 160 million capacity Dubai World Central-Al Maktoum International.

The history of aviation in Dubai dates back to 1937 when the first Imperial Airways flying boat landed on the Dubai Creek, but it was not until more than 20 years later that the ambitious vision of Sheikh Rashid bin Saeed Al Maktoum, then Ruler of Dubai, shaped the future of the emirate’s role as a global player in the industry.

As described by Graeme Wilson, author of ‘Flight into the Future’: “In June 1959, Sheikh Rashid received in his small office, in Customs House, a delegation from IAL (International Aeradio Limited). The team were there to present a plan for Dubai Airport, around two miles from the town. Soil surveys had been successful. IAL projected a 1,500-metre to 2,000-metre runway, a small terminal, and planned a comprehensive technical specification. The runway was estimated to cost £16,000 (the equivalent of £260,000 today), the terminal £2,500 (£40,000) and equipment £17,000 (£275,000). IAL estimated annual running costs of £20,000. Sheikh Rashid had also requested IAL to plan a fully air-conditioned 30-room hotel, adjacent to the airport, which would add a further £100,000 (£1.6 million) to the Dubai government’s bill.”

From conception to completion, the construction of the airport was fast-moving and following a groundbreaking ceremony in September 1959, on 30 September the following year the airport was officially inaugurated, heralding in a new era for aviation in Dubai.

Throughout the 1960s, the growth pattern that was to set
the trend for the remainder of the millennium quickly emerged and 1965 in particular proved to be a milestone year. A one-third increase in traffic was complemented by an expansion to the runway and apron, while the airport was included in the Regional Air Navigation Plan of the International Civil Aviation Organization (ICAO) for the first time. In each of the next three years, passenger numbers increased by two-thirds. As the growth continued, by 1969, the airport handled more than 6,500 annual scheduled traffic movements.

With Dubai International by now firmly established as an aviation force in the Middle East, the $150,000 Dubai Cargo Village was unveiled in 1991. By the middle of the decade, the airport was handling 6.5 million annual passengers and 300,000 tonnes of cargo and by 1999, throughput in excess of 10 million was achieved for the first time. As the turn of the century approached, the airport’s growth, in terms of both passenger numbers and facilities on offer, continued to gather pace.

21st Century global hub
On 15 April 2000, the Sheikh Rashid Terminal was unveiled, aptly named after the visionary Dubai Ruler who had passed away a decade earlier. Wilson explained: “[T]he late Dubai Ruler’s legacy has never been forgotten. Aviation had been one of Sheikh Rashid’s tools for progress... (his) contribution was recognised at the airport site he had himself inaugurated 41 years earlier: ‘It all started with Sheikh Mohammed, whose own years in charge of Dubai International almost stretched to a quarter of a century, to oversee completion of one of the Middle East’s most ambitious design and construction projects. At the root of the $540 million expansion at Dubai International was its new terminal.”

The 118,000sqm terminal increased the airport’s capacity from 10 million to 25 million and in just its third full year of operations, it handled some 18 million passengers.

Having grown at an annual rate of 15% in the eight years from 2000 onwards, 2008 marked Dubai Airports’ true statement of intent to establish Dubai International as a leading global hub. The opening of Terminal 3, for the exclusive use of Emirates, increased the airport’s capacity to 60 million passengers.

Just two years later – the year that marked the 50th anniversary – Dubai International handled 47.2 million passengers, a 15.3% increase on the previous 12 months, and with the growth of aviation in the emirate expected to continue at such pace, the addition of Concourse 3 will extend the capacity to 75 million by 2012. By 2018, this will increase by a further 15 million, before the completion of Dubai World Central-Al Maktoum International in 2030 will see it become the world’s largest airport, capable of handling 160 million passengers and 12 million tonnes of cargo per year, thus cementing Dubai Airports’ position at the very heart of global aviation.
From modest beginnings, Dubai International has become a global player among airports. With a passenger throughput of over 47 million in 2010, the airport ranks in the world’s top 15 as a result of remarkably consistent growth.

In the early 1990s, the airport broke through the 5-million passenger barrier and numbers have grown every year since, even at times of global economic and political turmoil that have made other global airports see passenger numbers decline. For the most part, Dubai International’s growth has been in double-digits and in 2010 alone, it grew by over 15%.

A key contributor is of course the fast-expanding locally based airline Emirates, which has turned the strategically located airport into a major transfer hub. According to schedule data provided by OAG, more than 58% of available seats in and out of the airport were on Emirates in February 2011. Ten years ago, the airline’s share was only 41% of Dubai’s total.

In 2010, Emirates launched six...
Once upon a time, an ex-EasyJet network planner who was teaching at Cranfield University’s Department of Air Transport decided to take all his great wealth of route planning skills and create a huge source of intelligence for all the world to share – online. Airline Network News and Analysis (anna.aero) was born and has been published every week since July 2007.
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Brian Council Manager, International Route Planning, US Airways

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new routes out of Dubai: Tokyo, Narita, Amsterdam, Prague, Medina, Madrid and Dakar. The addition of the Japanese capital was notable for being a much-anticipated route that was finally enabled by the extension of the Japanese capital airport’s second runway. To half of these new destinations – Amsterdam, Prague and Dakar – Emirates is the only Gulf carrier to operate, showing how the airline maintains its dominant status in the region.

Other airlines double presence
Emirates’ large share of Dubai’s traffic does not, however, mean that it has consumed other airlines’ markets. On the contrary, growth at the airport as a whole has been even greater and airlines other than Emirates have more than doubled their capacity in Dubai during the same ten-year period.

In 2010, 108 scheduled airlines served Dubai non-stop from 186 global destinations. Of these, 93 – exactly half – were served by Emirates. The other locally based scheduled passenger airline, the low-cost carrier flydubai, has grown to a 7% share of Dubai’s available seats since it launched operations in June 2009 and by the end of February 2011 was already serving 33 destinations. In the last year, the low-cost airline has even added more seat capacity to Dubai than its full-service counterpart Emirates. 13 of the airline’s routes are additions to Dubai International Airport’s network, whereas the other 20 of its routes are operated in competition with other airlines. The destinations added by the airline are three Saudi Arabian, three Egyptian, two Iraqi and two Syrian airports, all regional destinations, as well as Kathmandu in Nepal and Ashgabat in Turkmenistan.

Growth does, however, also come from foreign carriers. India’s Kingfisher Airlines has more than trebled its Dubai capacity in the last year, as it added daily Delhi and Mumbai services to its previous Bangalore route. This puts the airline among the airport’s top 30. Notable new entrants in the last year include airberlin, which connected Dubai with the German capital Berlin in November; and Rwandair, which the same month began operating a route to Dubai from Kigali via Mombasa on the Kenyan coast – the airline’s first service outside the African continent.

Asian traffic dominates airport
An analysis of Dubai International Airport’s route network shows how the Asian market dominates with almost a third of the airport’s total seat capacity, followed by flights within the Middle East and Europe both of which grow at higher rates. The fastest growth in the last year – over 33% – does, however, come from the Americas, although these markets are growing from much lower levels.

Further growth at the rates experienced in Dubai should see more and more carriers discover the destination, increasing the airport’s status as a world hub.
As the first step in the long-term development of the world-class Dubai World Central-Al Maktoum International, Phase 1 has set an impressive benchmark for the remainder of Dubai Airports’ major investment. Featuring a 4,500m Code F compliant runway, 64 aircraft stands – 10 of which are capable of serving new generation aircraft – and a cargo facility with an initial annual capacity of 250,000 tonnes of freight (rising to 600,000 tonnes by 2012), the first phase of the project epitomises the operator’s vision to deliver an airport complex capable of competing on the world stage.

“The airport is very much designed to be a global competitor,” Walsh said. “We’re always very mindful of our local competition, but Dubai World Central-Al Maktoum International is being developed to be a global hub and it’s fundamentally important as part of the economy for Dubai.”

Geographical advantage
Much of the airport’s potential is derived from its geographical position – located within close proximity to the Jebel Ali Sea Port and benefiting from top class road connections. Walsh explained: “A major part of the airport’s success will be its location and the meeting of multi-modal strategic needs to provide a hub for cargo and logistics. For passenger operations, the location will also allow for a larger catchment, extending to Abu Dhabi as well as Dubai.

“With Dubai International, the city has been built up around the airport and while capacity will be boosted to ensure it operates as Dubai’s hub over the next decade, DWC’s location enables us to develop the airport and the city together.”

He continued: “Developing a greenfield airport also allows you to implement best practice and world-class facilities from day one, and we wanted to make sure that it’s future proof. You have to make sure that everything you provide is seamless and state-of-the-art. We don’t want this to be the last of the old generation of airports, we want it to be the first of the new generation.”

Operational readiness
With 19 cargo airlines already signed-up to operate from the new airport, Walsh explained that the early stages of air freight operations have gone “smoothly”. In order to achieve this, however, the facilities were stringently tested over an extensive period to ensure that each of the systems was sufficiently prepared.

“Of course, before we could put the systems into service, we did the operational readiness testing which starts from small trials right up to simulating regular day-to-day operation of the airport,” Walsh explained.

“We went through a series of tests and slowly built up the complexity of each one and then, on 20 June 2010, we simulated a full operation with a live aircraft landing at the airport. Once all of that was successfully completed, we could then say that we were operationally ready.”

In addition, all of the supporting infrastructure – including the airfield, air traffic control, fire and...
rescue facilities and the fuel farm – underwent thorough testing, while Dubai Airports also ran an emergency exercise in which an aircraft incident was simulated to test the response of the emergency services and the ability of the airport and its staff to handle, and recover from, such a situation.

As part of his responsibilities, Walsh will also oversee the operational readiness testing of the passenger terminal, ahead of the commencement of passenger services. The first of these terminal facilities will enable the airport to handle as many as 7 million passengers per year, a figure that will grow incrementally throughout the continued development of the airport. Walsh explained: “The focus on this front will initially be on point-to-point business. As you would expect, we’re unlikely to attract a passenger hub operator in the early stages, therefore we need to have operators with a high O&D business.

“The early operations will probably be based around regional charters, general aviation, private jets and low-cost carriers if we can attract them to the airport.”

Further down the line, though, we will look to get the network carriers operating at the airport.”

Rapid growth

While Walsh has been directly involved in the Phase 1 project since August 2008, his experience of Dubai’s aviation infrastructure extends back to the early 1990s and he has first-hand experience of the drastic change in the emirate’s aeronautical landscape. He said: “1992 was the first time I came to Dubai and that was about the time it was just starting to grow as a hub. I was also here as a customer about ten years ago, so I remember the old airport way before Concourse 1 was even complete.

“When I came to the Dubai World Central-Al Maktoum International site a couple of years ago, it had already been under construction for about two years and the ATC facilities were in the early stages and the cargo terminal building had only just had the roof put on. It’s developed so much since then and it will continue to do so in the next few years. It has been amazing to watch Dubai World Central-Al Maktoum International grow.”
In December 2009, Cavotec’s Airport Market Unit was awarded with a landmark order in Bahrain where its airport systems were selected to supply and integrate a range of environmentally friendly ground service equipment for remote aircraft aprons at Bahrain International Airport.

The product and technological scope of this particular order is especially broad. With 18 of Cavotec’s pre-conditioned air (PCAir) systems forming the centrepiece of the project, Cavotec will also deliver and install pop-up units, transformer sub-stations, 400Hz power supply systems, a vacuum evacuation system, a blue water supply system and a potable water supply system.

More recently, Cavotec received a large order to install 53 advanced fuel hydrant systems and related material at Mumbai’s Chhatrapati Shivaji International Airport (CSIA) as part of the airport’s modernisation programme.

Cavotec ME has launched a new gate concept designed to present significant improvements in energy efficiency, fuel cost savings, decreased usage of auxiliary power units (APU) and reductions in carbon footprint within airport operations across the region. This concept promises operational efficiency by allowing the provision of up to six aircraft ground services (400Hz - PCAir - Blue Water - Potable Water - Sewage - Air Start) through the firm’s proprietary underground pop-up pits. The innovative process eliminates the need for ground support equipment (GSE) mobile vehicles, translating to a lower risk of accidents and lower maintenance and repair costs of support vehicles. The solution is intended to address cost reduction via a multipronged approach, which will give airlines and airport authorities the opportunity to save millions of dollars every year.

Since 1993, Cavotec Middle East (CME), the UAE-based subsidiary of Cavotec MSL, has developed a great number of important references within the region. CME has supplied Dubai International Airport with 400Hz cable coils, power caddies, pop-up and hatch pits, refuelling systems (fuel hydrant pits & valves, loading arms) and Wibe cable management system.

Cavotec equipment is also installed in the airports of Sharjah, Abu Dhabi, Ras al Khaimah, Jordan, Qatar, KSA, Oman, Kuwait and Iran.
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