A partner for US airports
Cost-effective design solutions and minimum impact to ongoing operations make Siemens LAS a favorite among US airport operators

Poised to grow
The baggage handling system at Copenhagen Airport meets requirements for high flexibility » Page 4

The future is Crystal clear
Siemens opens the world’s largest exhibition dedicated to the future of cities » Page 10

news
New order from Munich Airport » Page 3
Siemens expands the baggage handling-system at Copenhagen Airport » Page 3
Total Airport Management Suite (TAMS) project concluded » Page 12
Cargo handling system for Miami » Page 12

solutions
Poised to grow » Page 4
Siamos: one year on » Page 6

vision
A recipe for better airport operations » Page 8
The future is Crystal clear » Page 10

At Los Angeles International Airport Siemens is upgrading Delta Air Lines’ baggage conveyor system.

In the late 1950s, commercial air travel started to get a foothold in North America. And since then, the industry has grown to become the world’s largest. In fact, North America is home to more than half of the world’s busiest 20 airports. Siemens Logistics and Airport Solutions (LAS) is a trusted partner for airport operations, as ongoing US projects prove.

Fit for the cruise ship season
Operators of Delta Air Lines Terminal 2 at the Fort Lauderdale-Hollywood International Airport (FLL) awarded Siemens LAS with a design-build contract for a new in-line baggage screening system. The proposal had to comply with TSA requirements as well as Delta Air Lines’ specific needs for new conveyor systems » Continued on page 2
Dear Readers,

A customer-oriented, regional footprint, well-trained and experienced people, a trendsetting product portfolio and, last but not least, operational excellence – that’s what you can expect from Siemens. That’s our commitment as well as our daily challenge. Customer proximity – being where we are needed – is our utmost concern.

For us, customer focus means listening to our customers and understanding their needs and challenges. This is the key to our business, as the many examples in this issue clearly demonstrate.

On pages 1 and 2 we introduce our newest contracts from the United States, which all rest on years of close contact with customers. We also feature a contract with a new customer, namely Copenhagen Airport; in an interview on pages 4 and 5, two top managers from Copenhagen Airport explain why they chose us over one of our primary competitors.

As good as customer focus may already be at Siemens, there is always room for improvement. That’s why everyone in our company makes an effort to become better in this important area. A few months ago I took over as the head of the Airport Logistics Business Segment. I already know many of you personally from my many years working in the airport industry, and I am looking forward to continuing work with all of you in this exciting business environment. For us, customer focus is and will remain the key to success.

Sincerely,
Michael H. Lampen
Senior Vice President Airport Logistics

» Continued from page 1

and an automated early bag storage system. Siemens went against all major competitors to win the contract. The cost-competitive Siemens design solution – as well as the company’s professional project management approach – convinced Terminal 2’s operators.

Siemens and its general contractor are providing full design management and execution of all elements, including architect/engineering design, safety systems, mechanical, electrical, plumbing and civil works. The Siemens solution focused exclusively on customer needs. “We tried to see things from our customer’s perspective. By using our proprietary next-generation engineering tools, we were able to present a simulation of operation, which demonstrated competency beyond the customer’s expectations,” said Barry Lagerstedt, director of sales.

Fort Lauderdale’s cruise ship terminal has the highest seasonal peak departure volumes in the world. The Siemens engineering team utilized actual throughput needs based on the peak cruise ship travel periods and passenger arrival at the airport terminal. Flexibility was also addressed with the Siemens design, including capacity to grow for long-term use, something that helped Siemens stand out from competitors. To ensure a comprehensive solution, the business development team worked directly with engineering design, procurement, manufacturing and execution teams. Delivery of the TSA-certified system is scheduled for November 2013, just in time for the year-end cruise season.

Further project at LAX

Siemens is taking care of a further project in close cooperation with Delta: a design-build contract for a baggage conveyor system upgrade in Delta Air Lines Terminal 5 at Los Angeles International Airport (LAX). “We developed unique and economical design solutions that enabled our proposal to be both cost-effective and incur minimal operational impact to existing airline operations,” says Barry Lagerstedt. Decision for the customer was the offer’s value proposition and Siemens’ overall industry success with past projects at LAX, including a former apron baggage screening system (ABS) and an outbound sort system replacement. Handover of the upgraded baggage conveyor system is scheduled for October 2014.

Local resources a plus

In Dallas, Siemens LAS has been awarded a contract to modify and expand an existing baggage handling system in Terminal B of the Dallas/Fort Worth Airport (DFW). Siemens will replace three existing outbound sorting systems and three standalone TSA screening systems into a single, centrally located screening and sorting system. The new system will handle all Terminal B TSA-screened baggage and existing pre-screened transfer baggage.

Siemens will provide all engineering, manufacturing, installation and project management. Construction will commence November 2012 in a facility that houses all American Eagle Airlines DFW operations, with completion scheduled for May 2014. As such, the system will be built without interfering with live airport operations. Siemens was one of six companies competing for the contract. Dan Stricklin, senior account manager: “With our engineering and manufacturing facilities located on DFW airport property, just ten minutes from the project site, we had a competitive advantage. For us it is no problem to use local labor, facilities and management for the project.” ▼
Siemens has been awarded a contract by Copenhagen Airports A/S, owner and operator of Copenhagen Airport (CPH), to expand and modernize the airport’s existing baggage handling system. The contract is worth a total of around €12 million and specifies completion in time for the 2013 summer traffic. The expansion will increase the performance of the system by around 30 percent.

The current baggage handling system at Copenhagen Airport has a total length of around nine kilometers. The expansion work will see an additional 2.5 kilometers of conveyor elements added, increasing the number of spaces from 3,700 to about 4,700. In September, work commenced on the expansion of the baggage sorting hall. The improvements are being carried out during running operations, with completion scheduled for late November 2012 and December 2013.

Since the inauguration of Terminal 2 in 2003, passenger numbers at Munich Airport have been steadily rising. To ensure that the airport continues to handle baggage as reliably and quickly as it has in the past – and to maintain its state-of-the-art short minimum connecting time – Siemens has been contracted to boost the performance of Terminal 2’s baggage handling system by about one-third. In the process, some 2,000 new conveyor elements will be installed. Currently, Siemens is expanding the storage capacity of the early bag store for Terminal 2, increasing the number of spaces from 3,700 to about 4,700. In September, work commenced on the expansion of the baggage sorting hall. The improvements are being carried out during running operations, with completion scheduled for late November 2012 and December 2013.

Siemens has been awarded a contract by Copenhagen Airports A/S, owner and operator of Copenhagen Airport (CPH), to expand and modernize the airport’s existing baggage handling system. The contract is worth a total of around €12 million and specifies completion in time to accommodate the 2013 summer traffic. The expansion will increase the performance of the system by around 30 percent. The current baggage handling system at Copenhagen Airport has a total length of around nine kilometers. The expansion work will see an additional 2.5 kilometers of baggage handling equipment. The inclusion of redundant systems will ensure the highest level of system availability and fail-safe operation. The system is designed to transport, scan and sort 5,000 items of baggage per hour. Siemens will provide the energy-efficient drives and process-optimized control systems, and the company will also be responsible for overall project management.

Copenhagen Airport is the largest air transportation hub in Northern Europe. It already has an annual throughput volume of 22.7 million passengers and is preparing to cope with up to 10 million additional air passengers per year.
Poised to grow

The baggage handling system at Copenhagen Airport meets requirements for high flexibility – today and tomorrow

In June 2012, Siemens won an order to extend and refurbish the baggage handling system at Copenhagen Airport (CPH). Airport Logistics spoke to program manager Holger Wentzel Olsen and head of baggage operations Søren Elkjær of Copenhagen A/S, which owns and runs the airport.

For years you have relied on one of our major competitors for your baggage handling solutions. Why did you choose Siemens for the current expansion?

Holger Wentzel Olsen: In the past, most of our suppliers also served as technical advisors. For this project we decided to split the job up. We hired BNP Associates, an external consultant specialized in baggage handling systems, and together we prepared the generic tender material. Afterwards Siemens and two other major baggage handling suppliers passed the prequalification to tender and we received a total of three proposals. In a process lasting six months we sharpened both the budget and indeed the solutions required. In the end our evaluation process pointed out Siemens as the winner of our EU-wide tender. We decided not to go with our previous provider but to partner with Siemens. According to our evaluation, Siemens offered the best solution in regard to price, product, quality and project organization. Another decisive factor was Siemens’ commitment to meet our tight schedule and finish the project by early summer 2013.

Søren Elkjær: May 6, 2013, is the day we’ve marked on our calendars to finalize the project to go into operation. This date is absolutely crucial for us since our peak season starts in May when many of the big cruise ships take off. You see, Copenhagen is one of the Top 3 cruise ship airports in Europe. And with our proximity to Sweden, we also serve many passengers whose travel starts and ends in southern Sweden.

There are currently a number of ongoing projects at Copenhagen Airport. How does the baggage handling project fit in here?

Olsen: The airport has several capacity programs running at the moment, all supporting CPH’s world-class hub strategy, which among other things includes a significant capacity increase. The programs develop landside and airside capacities. The baggage program’s aim is to increase our capacity of handling baggage from today’s 22.7 million to 30 million annual passengers. A total of nine projects are currently running at CPH, whereby the baggage handling project is by far the biggest. Other parts of the baggage program include building projects, cooling and energy supply. A particular challenge is that all these projects have to be carried out during live operations.

Elkjær: In regard to the baggage handling system, a primary concern for us was that the available space be used more efficiently. When we started the design phase, our biggest constraint was to keep our solutions inside our existing envelope. In other words, to increase our capacity by more than 30 percent by just processing in a
more efficient way. The capacity increase mainly comes from load balancing the baggage before it reaches our new x-ray cluster. In simple terms this means that a suitcase goes for the first available x-ray machine placed in a cluster. The design in the tender and the final Siemens design has many redundancies built in to make the system less sensitive in case of local breakdowns in baggage handling. As a spin-off, the creation of redundancies is that the baggage handling system is easier to maintain.

How does the baggage handling system support Copenhagen’s overall strategy?

Elkjær: Our board of directors has an initial goal of reaching 30 million passengers per year. Besides our baggage handling program, a landside expansion project is also in progress. A further expansion is the extension of pier C in Terminal 3 for intercontinental flights at the airside.

Olsen: When we are looking at our long-term goal of reaching beyond 30 million passengers per year, many options are being discussed — for example construction of a completely new Terminal 4. Brand new baggage handling facilities will be part of the scope. So, for the future CPH is looking at significant investments.

And how do you want to attract these additional passengers?

Elkjær: We identified two key issues that will help us raise our passenger numbers. Firstly, we want to strengthen our position as the most important hub in Northern Europe by attracting both more intercontinental flights and more feeder routes, which are essential to the viability of the intercontinental routes. And secondly, we offer very efficient landside transport: Via Metro you can reach the Copenhagen city center quickly and at a reasonable price. That’s the perfect fit for passengers who want to travel cheaply and take our low-cost carriers. We are sure that the combination of these two factors will help us reach 30 million passengers.

Will the refurbished baggage handling system help with the baggage of the increased number of passengers?

Olsen: Indeed. I will give you one example. We are in the process of preparing self-bag-drop facilities with two airline alliances. This will mean that the baggage handling system has to deal with more than twice the bag rate at the positions for the new bag drops. The belt speed from the lines behind the bag drops and counters will be more than doubled in order to take away the increasing number of bags. The x-ray cluster with the load balancing together with 80 percent more early baggage storage will support handling the baggage all the way to the aircrafts — 24 hours a day, 365 days a year.

What are your future plans with the baggage handling system?

Olsen: The baggage handling system now being delivered by Siemens is the first part of CPH’s baggage strategy. The second part is defined as a new baggage handling facility including new products such as an inlet for off-airport check-in, mainly supporting check-in at Copenhagen cruise line terminals, major Copenhagen hotels, and new transfer inlets supporting Schengen and non-Schengen traffic. This future baggage handling system expansion will also be the beginning of using the new ICS (Individual Carrying System) technology. ICS provides a high degree of transparency for the current operation. The speed, capacity and flexibility of ICS count among its major advantages. We believe such an investment will take place in connection with the establishment of a new terminal facility. «
Siamos: one year on

Thanks to the Siamos suite, Münster Osnabrück International Airport is fit for the future

With the start of the 2011 winter flight schedule, the Siamos suite went online at Münster Osnabrück International Airport (FMO) (see Airport Logistics Issue 5, December 2010). We caught up with Francisco Rodriguez, the airport’s CIO, to learn more about the reasons for choosing the Siamos suite and the impact on the airport’s operations over the last year.

What made you decide to go with the Siamos suite?
When we first started thinking about a new Airport Operation Database (AODB), it was clear that such a step would require careful consideration, as the decision would affect us for the next ten years. The AODB in the Siamos suite from Siemens was still at a very early stage, both in terms of development and design. But when we looked at the ideas underlying Siamos and the people working behind the scenes, we realized that the concept went far beyond conventional solutions.

Airport Management System (AMS) is a further element in the Siamos suite in operation at FMO. What benefits have you recognized over the last year?
For us, the AMS system cuts out a host of manual steps. The automation technology used during the various procedures of the passenger handling process allows airport operators and management to concentrate on key tasks. Whether up-to-the-minute reports, messages or the automatic recording of delivery notes, everything can be configured easily and adapted according to a specific customer or task at hand. We are now in a position to forecast the development of air traffic at our location and consequently to predict economic trends and introduce appropriate countermeasures, if necessary. Ad hoc events can now be dealt with very quickly.

Were any special steps taken in the run-up to implementation?
We allowed ourselves plenty of time for this complicated and costly project. After around two years of development work, countless meetings and a range of elaborate tests in the laboratory and on the ground, we put the AMS into live operation at the start of the 2011 winter schedule. There were no unexpected surprises, but we certainly gained new insights into the difference between theory and practice. We are convinced that the decision in favor of Siamos was the right one. Thanks to the suite, we are well equipped to tackle the challenges of the future, whether regulatory, in terms of conformity, or due to the introduction of new interfaces. «

“When we looked at the ideas underlying Siamos and the people working behind the scenes, we realized that the concept went far beyond conventional solutions.”
Francisco Rodriguez, CIO of Münster Osnabrück Airport
1 With its quick connections and low-cost flights, Münster Osnabrück Airport caters to both business travelers and tourists.

2 Some 7 million people live in the vicinity of Münster Osnabrück Airport, which equates to a sizeable market.

3 Münster Osnabrück’s apron by night.
Nonetheless, the required level of collaboration among the different stakeholders at an airport is usually not met. Each stakeholder has different interests, priorities and preferences. This becomes all the more evident when on the day of operation a whole range of new aspects and constraints often emerge, for example resource outages, capacity drops, changed airline preferences or different passenger behavior.

The result is often enormous delays and wasted resources. According to the Eurocontrol Performance Review Report, air traffic delays cost around €1.5 billion a year in Europe alone. In other parts the world, the impact is similar. It soon becomes evident that what is most needed is quick and structured operations control so that stakeholders can first deal with unplanned events as effectively as possible – and then return to normal operations. The

By nature airport operations are complex. On the day of operations, the many business processes related to aircrafts, passengers, baggage and cargo are handled simultaneously by different stakeholders. In order to enable smooth and efficient operations, seasonal and daily flight plans are prepared, agreed upon and approved by the stakeholders. Obviously, the different processes and decisions that have to be made are far from being independent.

Nonetheless, the required level of collaboration among the different stakeholders at an airport is usually not met. Each stakeholder has different interests, priorities and preferences. This becomes all the more evident when on the day of operation a whole range of new aspects and constraints often emerge, for example resource outages, capacity drops, changed airline preferences or different passenger behavior.

The result is often enormous delays and wasted resources. According to the Eurocontrol Performance Review Report, air traffic delays cost around €1.5 billion a year in Europe alone. In other parts the world, the impact is similar. It soon becomes evident that what is most needed is quick and structured operations control so that stakeholders can first deal with unplanned events as effectively as possible – and then return to normal operations. The
The agents responsible for individual airport operations should each have working positions in the APOC. From these positions they are able to access more detailed information to make tactical decisions. Naturally, one big advantage of the physical APOC is the possibility for direct, human-to-human communication, which is especially useful in handling exceptional cases. The integration of meeting and discussion spaces in the APOC as well as workflow management systems support this collaboration.

As a decentralized solution, an APOC virtually connects all relevant stakeholders and decision makers with shared information, communication infrastructure and concertation processes. A stakeholder’s individual role determines which concrete IT systems are integrated. For example, an airline agent would very likely be given access to the transfer passenger display.

Whether a centralized or decentralized setup is chosen, Siemens draws on its extensive experience with control centers. For example, control centers from Siemens help keep operations running smoothly at the New York Metro Control Center and at Hannover’s Traffic Management Center. In the world of airports, references include the Terminal 4 operation center in Madrid Barajas, operation centers in Bangkok, Hyderabad and Bangalore, as well as the baggage operation centers in Munich, Milan Malpensa, Beijing Capital Airport and Incheon, South Korea.

Everything under control
Siemens takes over the entire planning of a control center starting with the operational concept and up to the design for the room and working positions as well as the video wall. For implementation of a control center, Siemens aids with the smooth transition from the as-is situation to the new concept. Assistance with proactive change management helps ensure buy-in from the different stakeholders. For the “nervous system” of the control center, Siemens offers a range of IT solutions.

First and foremost, IT solutions increase situational awareness with direct and aggregated process information either on desktops, video walls or handhelds. IT also covers communication systems for interaction within the control room and with remote operations control locations – via phone, message systems, video conferencing and more.

Guidance through difficult operational conditions is accomplished with assistance and optimization systems – similar to car navigation systems. Workflow management systems streamline coordination, breaking down plans into tasks and actions. Finally, IT for document management ensures that all stakeholders can rapidly access the data they need.

All of these IT solutions make a substantial contribution to the success of control centers from Siemens, yet for APOCs the most interesting IT innovation may very well be the Total Airport Management Suite (TAMS) (see page 12). TAMS is an open modular software suite that Siemens developed in the framework of a consortium project supported by the German Federal Ministry of Economics and Technology (BMWi).

A new form of infrastructure
That an APOC carries definite advantages is clear. But at whose initiative can an APOC be introduced? The most suitable stakeholder here is the airport authority. The airport authority is usually expected to provide the basic infrastructure of an airport like runways, taxiways, terminals, power and fuel supply, and security – as well the basic operations infrastructure like flight planning and resource allocation. As such, the airport authority is seen as the perfect stakeholder to introduce and operate an APOC, which can be viewed as a new, modern form of operations infrastructure.

The business case for an APOC is convincing: improved airport productivity – which saves money, protects the environment and leads to increased passenger comfort.

APOC, AOCC or AOC?
APOC stands for Airport Operations Control Center. Sometimes the concept is also referred to as AOCC (Airport Operations Control Center) or AOC (Airport Operations Center). In Europe, the industry has agreed to use the acronym APOC for this type of control center.

ideal operations control should also make it easy for agents to interact with one another. Enter the concept of the Airport Operations Control Center (APOC), which Siemens presented in Munich at the Airport IT&T conference in mid-October.

Video wall for the big picture
The main task of an APOC is to ensure common situation awareness. The APOC can be set up either as a central physical location or as a decentralized solution. As a physical location, in either a dedicated building or a room, the APOC is equipped with a video wall that reflects the overall situation for the coming three to six hours. Information portrayed on the video wall includes among others key performance indicators, operating strategies, airside and landside congestion levels, current traffic situation in the air and on the ground, weather and CCTV.

The main task of an APOC is to ensure comprehensive situation awareness. The APOC can be set up either as a central physical location, in either a dedicated building or a room, or as a decentralized solution. As a physical location, in either a dedicated building or a room, the APOC is equipped with a video wall that reflects the overall situation for the coming three to six hours. Information portrayed on the video wall includes among others key performance indicators, operating strategies, airside and landside congestion levels, current traffic situation in the air and on the ground, weather and CCTV.

The APOC can be set up either as a central physical location, in either a dedicated building or a room, or as a decentralized solution. As a physical location, in either a dedicated building or a room, the APOC is equipped with a video wall that reflects the overall situation for the coming three to six hours. Information portrayed on the video wall includes among others key performance indicators, operating strategies, airside and landside congestion levels, current traffic situation in the air and on the ground, weather and CCTV.

The agents responsible for individual airport operations should each have working positions in the APOC. From these positions they are able to access more detailed information to make tactical decisions. Naturally, one big advantage of the physical APOC is the possibility for direct, human-to-human communication, which is especially useful in handling exceptional cases. The integration of meeting and discussion spaces in the APOC as well as workflow management systems support this collaboration.

As a decentralized solution, an APOC virtually connects all relevant stakeholders and decision makers with shared information, communication infrastructure and concertation processes. A stakeholder’s individual role determines which concrete IT systems are integrated. For example, an airline agent would very likely be given access to the transfer passenger display.

Whether a centralized or decentralized setup is chosen, Siemens draws on its extensive experience with control centers. For example, control centers from Siemens help keep operations running smoothly at the New York Metro Control Center and at Hannover’s Traffic Management Center. In the world of airports, references include the Terminal 4 operation center in Madrid Barajas, operation centers in Bangkok, Hyderabad and Bangalore, as well as the baggage operation centers in Munich, Milan Malpensa, Beijing Capital Airport and Incheon, South Korea.

Everything under control
Siemens takes over the entire planning of a control center starting with the operational concept and up to the design for the room and working positions as well as the video wall. For implementation of a control center, Siemens aids with the smooth transition from the as-is situation to the new concept. Assistance with proactive change management helps ensure buy-in from the different stakeholders. For the “nervous system” of the control center, Siemens offers a range of IT solutions.

First and foremost, IT solutions increase situational awareness with direct and aggregated process information either on desktops, video walls or handhelds. IT also covers communication systems for interaction within the control room and with remote operations control locations – via phone, message systems, video conferencing and more.

Guidance through difficult operational conditions is accomplished with assistance and optimization systems – similar to car navigation systems. Workflow management systems streamline coordination, breaking down plans into tasks and actions. Finally, IT for document management ensures that all stakeholders can rapidly access the data they need.

All of these IT solutions make a substantial contribution to the success of control centers from Siemens, yet for APOCs the most interesting IT innovation may very well be the Total Airport Management Suite (TAMS) (see page 12). TAMS is an open modular software suite that Siemens developed in the framework of a consortium project supported by the German Federal Ministry of Economics and Technology (BMWi).

A new form of infrastructure
That an APOC carries definite advantages is clear. But at whose initiative can an APOC be introduced? The most suitable stakeholder here is the airport authority. The airport authority is usually expected to provide the basic infrastructure of an airport like runways, taxiways, terminals, power and fuel supply, and security – as well the basic operations infrastructure like flight planning and resource allocation. As such, the airport authority is seen as the perfect stakeholder to introduce and operate an APOC, which can be viewed as a new, modern form of operations infrastructure.

The business case for an APOC is convincing: improved airport productivity – which saves money, protects the environment and leads to increased passenger comfort.

APOC, AOCC or AOC?
APOC stands for Airport Operations Control Center. Sometimes the concept is also referred to as AOCC (Airport Operations Control Center) or AOC (Airport Operations Center). In Europe, the industry has agreed to use the acronym APOC for this type of control center.
The future is Crystal

Siemens opens the world’s largest exhibition dedicated to the future of cities

In London, at the end of September, Siemens opened the Crystal, its first center for sustainable urban development. Sustainable mobility is one of the Crystal’s major topics.

The crystal-shaped building serves as a conference center, urban dialogue platform and technology and innovation center all in one, bringing together political decision-makers, infrastructure experts and the general public in order to develop concepts for the future of cities and their infrastructures. “Cities are the engines of the world economy and also have the greatest impact on the environment. The development of our planet will stand or fall with the development of cities. Looking ahead to the urban future, the Crystal showcases a wide variety of opportunities and concrete solutions,” said Siemens CEO Peter Löscher at the opening ceremony.

After a construction phase of about a year and a half, the Crystal brings an architectural highlight and one of the world’s greenest buildings to the British capital. Siemens invested some €35 million in the project. Designed by Wilkinson Eyre Architects, the building features a 270-seat auditorium as well as the world’s largest exhibition on urban sustainability. Over an area of 2,000 square meters, the exhibition presents existing infrastructure solutions that make living in cities more sustainable and environmentally friendly while enhancing the quality of life.

At the Crystal, experts from the Siemens Center of Competence Cities engage in research and development geared to technologies and innovations for tomorrow’s urban infrastructures. In addition, the Infrastructure & Cities Sector coordinates its City Account Managers from the Crystal. “Cities worldwide are making investments to improve their water supplies, power grids, transportation systems and building infrastructures. Our addressable market...”

1  Blue skys are reflected in the newly built Crystal in London.

2  Peter Löscher, CEO of Siemens AG, and London’s mayor Boris Johnson (from right to left) opened the Crystal in London.
The future is crystal clear. Siemens opens the world’s largest exhibition dedicated to the future of cities.

4 The Crystal features the world’s largest exhibition on urban sustainability.

5 Over an area of 2,000 square meters, the exhibition presents existing infrastructure solutions that make living in cities more sustainable and environmentally friendly.

The crystal-shaped building serves as a conference center, urban dialogue platform, and technology and innovation center.

alone has a volume of €300 billion. In this growth market, the Crystal will help us intensify dialogue with our customers. The Crystal is our Sector’s showcase, contact point and mastermind,” noted Roland Busch, member of the Managing Board of Siemens AG and CEO of the Infrastructure & Cities Sector. With roughly 87,000 employees, the Sector provides sustainable technologies for urban areas and their infrastructures.

Encompassing an area of more than 6,300 square meters, the Crystal is a paragon of energy efficiency. The facility consumes 50 percent less power and emits 65 percent less carbon dioxide than comparable office buildings. Renewable energy sources meet the Crystal’s heating and cooling needs, a photovoltaic system generates green electricity, and rainwater is harvested for use. The Crystal received top scores in the BREEAM and LEED international assessments for energy-efficient buildings – Outstanding and Platinum, respectively – making it one of the greenest facilities in the world.

- Covering 2,000 square meters, the interactive exhibition guides visitors through the urban infrastructure of the future, focusing on possibilities for sustainable mobility, building technologies, power and water supplies, and healthcare.
- The conference center is an independent forum for engineers, architects, city planners and municipal decision-makers.
- The Crystal is home to the first and largest of three Centers of Competence Cities. The Center in London offers Siemens experts and external professionals a platform for conducting research and exchanging ideas. The two smaller centers are slated to be built in Shanghai and Washington in the coming years. «
The TAMS research project, led by Siemens, came to an official close in May 2012 at a final conference in Stuttgart. On behalf of the TAMS project partners, the host Professor Georg Fundel, CEO of Flughafenh Stuttgart GmbH, welcomed 120 guests to a program of expert talks. Representing Siemens were among others Dr. Sami Atiya, CEO of the Mobility and Logistics Division, and overall project manager Dr. Christoph Meier, who both gave presentations at the one-day event.

Sponsored by the Federal Ministry of Economics and Technology (BMWi), the TAMS project involved not only Siemens but also Barco Orthogon, Inform, ATRICS, the German Aerospace Center (DLR) and Stuttgart Airport. The project was launched in December 2008 with the aim of finding ways to make airport processes more effective and environmentally sustainable without the need for costly infrastructure measures. The open, modular software suite TAMS unites all airside and landside airport processes in one control centre, thus ensuring cross-company, integrated management. Siemens Mobility and Logistics developed the world’s first TAMS-capable integration platform that can support all classic airport processes.

In this regard, an overall package has been put together for the first time – Siamos, short for Siemens Airport Management and Operations Suite – which can comfortably enhance third-party solutions and be easily linked up to existing systems.

Siemens has received an order from LAN Cargo S.A. in Miami, Florida, to upgrade and extend the existing cargo handling system. The extension involves a roller conveyor system for inbound and outbound ULDs in a cooler room. The project, which will be handed over in December 2012, aims for a faster throughput and less damage to goods. Miami International Airport (MIA) is a leading US airport for international freight, and flowers are the largest import into MIA.

Cargo handling system for Miami

A cargo aircraft ready for loading in Miami, Florida.