



Next conference venue: The Bali Nusa Dua Convention Center in Denpasar

PHOTO: BNDCC

## From Hamburg to Bali

30th IAPH World Ports Conference 2017 to be held in Indonesia



With today's congress finale Hamburg hands over the baton for the 30th IAPH World Ports Conference 2017 to the Indonesia Port Corporation, who will stage the event in the Bali Nusa Dua Convention Center in Denpasar, the Bali capital, on 1 - 4 May 2017.

As future host nation Indonesia presented itself within the framework of the 29th IAPH World Congress in Hamburg with an atmospheric "Bali Night" on Wednesday evening, providing a foretaste for the next event in two years time. Further information was on hand for conference participants at the exhibition booth in the Hamburg Congress Center giving details of port development projects and planned investments.

The Consulate General of the Republic of Indonesia in Hamburg also used the opportunity to invite guests to an information event at the Chamber of Commerce, where, among others, Ridwan Djamiluddin, Deputy for Infrastructure and Coordinating Minister for Maritime Affairs of Indonesia, as well as R. J. Lino, President

Director of PT. Pelindo II, talked about the subject "Indonesian Economic Updates: Economic Potentials through Maritime Sector Development". Hamburg's Senator for Economic Affairs Frank Horch pointed out the long tradition in trade relations between Hamburg and Indonesia. Currently Hamburg imports goods valued at 600 million euro each year from Indonesia, whilst around 400 companies from Germany are active in Indonesia, 25 of these with their own subsidiaries. Indonesia is giving foreign companies big incentives at



Future host Indonesia also with an information booth in the CCH PHOTO: FRANCK

the moment to develop local manufacturing industry and expand logistics capabilities. To facilitate this a "One Stop Service for Investments" has been set up as contact and coordination point for enquiries.

Indonesia, with 17,500 islands and more than 250 million inhabitants, is the world's largest island state and fourth largest nation by population. Economically it ranks 16th worldwide. Analysts see Indonesia, as part of the rapidly growing Southeast Asia region, amongst the fastest growing markets with the potential to move up to rank 7 amongst the global players by 2030. One factor for Indonesia's climb into the top ten group of leading economies will be its growing class of affluent consumers, whose number is forecast to jump from 45 million now to 135 million by 2030. Gearing itself towards this figure, the government is stimulating the economy in an effort to raise the current annual growth rate of 5.2 per cent to seven per cent.

The 2015 to 2019 Medium-Term Development Plan is a major investment program launched to achieve this goal. Most of the investment will be made in infrastructure, →

## CONTENTS

Focus: 30th IAPH World Port Conference in Bali . . . . .	1-2
LNG for Shipping: Risks and Opportunities . . . . .	3
Clean Air in Ports . . . . .	4
Cruise Ships and Ports: Now and Future Trends . . . . .	5
Impressions . . . . .	6-7
smartPort Logistics . . . . .	8
Less Waste - Clean Propulsion Energy . . . . .	9
Today: smartPort Projects in Practice . . . . .	10-11



Indonesia intends to boost expansion of its ports with a mammoth investment program. The largest current project is expansion of the Tanjung Priok Port in North Jakarta

PHOTO: PRIOK PORT

from page 1 → particularly the expansion and modernisation of Indonesian ports. Maritime investment will account for 79 billion dollars, with the number of ports increasing from 278 to 450 and new shipping routes being created. Indonesia's President, Joko Widodo, intends to develop his country into a "global maritime axis", an ambition involving creation of a "maritime highway" linking the eastern part of the giant archipelago more strongly to the economic centre in the west of Java and around the capital Jakarta. This strategy in future could, for example, significantly reduce logistics costs for transportation of goods from Papua or the Molukkas.

Indonesia's most important port is Tanjung Priok in the

north of Jakarta, which handles roughly 65 per cent of the nation's maritime cargo. It possesses three terminals for containers and non-containerised freight, a berth length of 10,220 meters and an area of 179.41 hectares. Last year total container turnover at the port amounted to 5.7 million TEU. With capacity at this port now stretched, despite measures to optimise land and equipment, and in anticipation of further growth, a concept for NewPriok has emerged, the largest port project in Indonesia, designed to serve medium to long-term growth prospects of Jakarta as gateway to Indonesian trade. Construction will be conducted in two phases utilising 392 hectares in North Jakarta. Channel dredging work and

reclamation started in 2013. Phase 1 comprises three container terminals and two product terminals, the first container terminal on a 32 hectares area built as deck-on-pile and the balance of phase 1 a 180 hectare reclamation. Initial draft is 16 meters with a design depth of 20 meters that will accommodate triple-e class ships. Phase 2 will add a further four container terminals and can be developed once capacity in phase 1 has reached 70 per cent.

#### More terminal capacity

NewPriok Container Terminal 1 (NPCT 1), scheduled for completion this year, will be operated by a consortium led by Mitsui partnering with PSA and NYK for a period of 25 years. When fully operational in 2023 the NewPriok Port (also known as Kalibaru Port) will more than triple the annual capacity of Tanjung Priok, which today is 7.5 million TEUs per year. IPC, Indonesia's largest port operator, plans to invest 2.47 billion dollars to realise this project.

On the Insel Batam, just a few kilometres from Singapore, IPC, in partnership with the Chinese Merchant Group, is also constructing new facilities for container handling, with an annual capacity of four million TEU.

For the long term it is planned to up this to 15 - 20 million TEU. If large vessels are able to dock in Batam in future, Indonesia could become more interesting for direct calls from liner traffic and thus become a competitor to Singapore.

A further major port project is a four billion dollar expansion of Jayapura in Papua. The peninsula has extensive reserves of gas, oil and coal and the German company Ferrostaal GmbH intends to build a petrochemical complex here for two billion dollars.

## IMPRINT

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**Editors** Frank Binder (resp.) Eckhard-Herbert Arndt, Claudia Behrend, Tim-Oliver Frische, Björn Helmke, Peter Kleinort, Ariane Wagner

**Translation** Michael T. Roberts

**Design** Andreas Gothsch

### Advertisements

Tilman Kummer  
+49-40-23714-0

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The NewPriok Container Terminal in Tanjung Priok is almost complete. It is part of the first phase of port expansion. In future triple-e-class vessels can be served here

PHOTO: PRIOK PORT





PHOTO: MARLIES MENDER

Fuelling Germany's first LNG ship in Bremerhaven. The 94 meter long Borkum ferry „Ostfriesland“ owned by AG Ems bunkers 40 cubic meters of LNG

## Progress with LNG projects

96 per cent expect a positive environmental impact

One of the studies presented at the IAPH Conference reveals that the maritime industry sees prospects for a reduced carbon footprint and lower operating costs in the medium term through use of LNG as a marine fuel.

Liquefied Natural Gas (LNG) as a fuel to power ships could reduce environmental pollution caused by shipping – and in the medium term also cut operating costs. In the short term, i.e. in the next 1-2 years, high initial investment is preventing the big breakthrough for LNG. That is the result of a study by the EU initiative LNG for Shipping presented yesterday at the IAPH Conference.

The consultant company PwC and the classification agency DNV/GL interviewed 53 experts on behalf of the EU Commission on the pros and cons of LNG in the maritime economy. 96 per cent of respondents consider positive environmental aspects likely or highly likely, stated PwC manager Axel von Perfall. This is due to lower particle emissions, fewer greenhouse gases and quieter ships. Moreover, 76 per cent see a possibility for financial benefits in the form of reduced fuel costs in relation to other ships' fuels and lower maintenance and repair expenditure. Energy suppliers would like to be given a business opportunity through creation of an LNG infrastructure, but the

main obstacle to this at the moment, according to the 96 per cent, is the uncertain financial situation. Both ship and infrastructure operators are currently unsure if and when investment in machinery and the appropriate facilities would be worthwhile. The second obstacle relates to the confusing situation regarding standards and regulations.

Nevertheless, successful pilot projects do exist. These are often sponsored by the EU or other institutions. Günter Eiermann from LNG supplier Bomin Linde pointed out that it has established an LNG fuelling service for ships in Stockholm and that in the Lithuanian port of Klaipeda a ship used to bunker and transport LNG will enter service in 2017. Furthermore, in Germany a second LNG powered ferry has just commenced operations between Cuxhaven and Helgoland. Hamburg too can boast its own LNG project: In summer the Becker Marine Systems 'power barge' will supply energy to AIDA cruise ships whilst in port. In winter it will help a company in the south of Hamburg generate power.

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# More benefits for clean air

Port experts appeal for cooperation

A surprise had already been anticipated: In an electronic flash survey among the participants of the World Ports Conference, nearly 88 per cent favoured more regulation and legislation to protect the environment in ports. This was preceded by statements from Christine Loh, Under Secretary for the Environment of the Hong Kong Special Administrative Region Government, Gene Seroka, Executive Director of the Port of Los Angeles, Johan Röstlin, CEO of Copenhagen Malmö Port and Alexander Porschke, President of Nature and Biodiversity Conservation Union (NABU).

In the subsequent panel discussion on "Clean Air in Ports - Corporate Responsibility

to the Business Challenge" a consensus among the four participants was quickly formed: More legislation - more communication - more cooperation of ports worldwide.

China and Hong Kong in particular are looking to ports in California and Europe for information on their experiences with environmental technologies. "These port locations are the world leaders with regard to environmental and sustainability strategies," Christine Loh said. "We are trying to get the appropriate impetus for our ports out of these examples." Loh announced that China will implement SECAs within the next five years. She appealed for international experiences to be shared in a much stronger way.



Johan Röstlin, Christine Loh, Alexander Porschke and Gene Seroka

The key issue in her point of view is how port authorities and terminal operators may be made familiar with environmental issues. For that reason the currently rather technical dialogue has to focus more on the environmental and social aspects of port-cooperation, supply chains and the needs of local residents.

Alexander Porschke agreed: "Although we are the most important environmental NGO in Hamburg, we are precisely only one voice among many others here to discuss the future of the port." Environmen-

tal organizations and NGOs also are in favour of economic success for the port, but this should align with environmental requirements.

"In order to work on environmental solutions, people first have to understand the complexity of supply chains," Gene Seroka commented. He campaigned for a "B2E strategy" - Business-to-Employees: "One in every twelve jobs in Los Angeles is settled in the port. The measures we implement there for clean water and clean air have a direct effect on the entire city."



THE RED SOFA

## Smart solutions for Hamburg

Axel Mattern, CEO of HHM, praises "splendid IAPH"

"Our port is growing," remarked Jens Meier, Chairman of the Management Board Hamburg Port Authority (HPA), yesterday on the fringe of the Red Sofa talks. "That means that the existing infrastructures in the limited port boundaries need to be intelligently and efficiently used." With this statement the host of the 29th IAPH summed up precisely the point of discussion the Sofa Talks focused on.

"There's nothing we can do about the Port of Hamburg being where it is. But what we can do is optimise the port even more," added Axel Mattern, CEO of

Hafen Hamburg Marketing, in words of support for the HPA chief. "This is being done and we've heard how splendidly progress is being made at this world conference," praised Mattern.

This point of view was confirmed also by Ulrich Wrage, CEO of data specialist company Dakosy, in the Red Sofa Talk, stressing that Hamburg's Port Community System (PCS) "is one of the most advanced in the world, particularly with respect to intelligent workflows. Otherwise, it would not be possible to turnover the 10 mil. TEU each year".

Further important smartport compo-



nents are the intelligent traffic light systems presented by Hamburg chip manufacturer NXP, the HPA and Siemens, which aims to avoid truck congestions on roads in the Port of Hamburg.

Lars Reger, Chief Technical Officer of the Automotive division at NXP, agreed when asked for his perspective by DVV sofa moderator Tim-Oliver Frische.

Meanwhile, Chief Harbour Master Jörg Pollmann, demanded during his stint on the Red Sofa: "What we absolutely need is for the Elbe to be deepened even more."



# AIDA boss demands 4th terminal

Hamburg should expand existing infrastructure for luxury liners

If Hamburg's port is to profit from rapid global growth in the cruise shipping segment it must act quickly to create further handling capacities for luxury liners.

"Hamburg is in desperate need of a fourth cruise terminal," said Michael Ungerer, President of AIDA Cruises and Chairman of the cruise association CLIA, on Thursday at the World Ports Conference. The statement was made during a morning of talks and discussions devoted to the global development in cruise shipping.

Between 2014 and 2017 the capacity of German cruise shipping lines will increase by 42.9 per cent. By 2016 we are looking at reaching the two million mark and a further million guests can be added to that in the following three to four years," explained the manager.



The "AIDAdiva" passing St. Pauli-Landungsbrücken in the Port of Hamburg

PHOTO: AIDA CRUISES

But this will only be achieved if all the responsible parties begin to think about providing the necessary framework for it to become a reality. And they need to start thinking about it today because what we now have in 2015 will not be enough," Ungerer stressed. On 9th June the new Hamburg Cruise Center (CC3) in Steinwerder will officially be brought into service

handling AIDA and MSC ships.

## Venice also growing rapidly

A further example of rapid growth was provided by Dr. Roberto Perocchio, Managing Director of Venezia Terminal Passeggeri from the world heritage city of Venice. In recent years the port has invested massively in its infrastructure. The handling facilities are based on

the former historic facilities for handling goods, but have been subject to significant modernisation to make them suitable for their new task. Perocchio announced that between 1997 and 2014 around 25 million passengers passed through Venice, 18 million of which were cruise ship guests. For the cruise business today Venice is the „Gateway to the eastern Mediterranean.“

## New TUI-ship to be christened today

Former German olympic swimmer Franziska van Almsick is expected in Kiel today to christen the new luxury liner "Mein Schiff 4". The 37 year-old will officially name the newcomer to the TUI Cruises fleet at an evening ceremony at the Ostseekai. The 295 meter long and 36 meter wide cruise liner was built at the Meyer Turku Oy shipyard in Finland.

On 15 decks 1000 crew member will be at hand to wait and serve up to 2500 passengers. TUI Cruises will be bringing two further sister ships into service in the years 2016 and 2017. The new additions are the company's response to the sustained boom in cruise shipping.

## The importance of law for trade and ports

International standards for passenger ships need to be harmonized

Approximately 90 per cent of world trade is handled by maritime shipping. In order to regulate the manifold interests of states regarding the use of the high seas and coastal territorial waters the Law of the Seas came into being. In spite of numerous international agreements there are still specific aspects that remain unresolved.

How diverse and complex these are became apparent in the panel discussion on the subject "Ports and Global Trade - Legal Trends and Challenges" that took place on Thursday morning in the CCH.

After an overview of the role and history of the United Nations and statements on the work of the IAPH Legal Committee, moderator Frans von Zoelen, CLO Port of Rotterdam Authority, requested conference guests to pose their questions.

Dr Geraldine Knatz, Professor of the Practice of Engineering and Policy at the University of Southern California, opened by addressing the issue of several tragic accidents involving passenger ships and asked what the International Maritime Organization (IMO) is seeking to implement. Michael Shewchuk, Legal Officer at the Unit-

ed Nations replied that there is still a lot of work to be done, but the legal framework was basically in place. "Passenger Safety is discussed on an annual basis at the UN." Dr Christoph Hasche, Honorary Secretary General and Vice Chairman of the German Maritime Arbitration Association, adding that the IMO has already implemented the International Convention for Safety of Life at Sea (SOLAS) and the Athens Convention relating to Carriage of Passengers and their Luggage by Sea (PAL), and emphasized the importance of the classification societies in harmonizing standards.



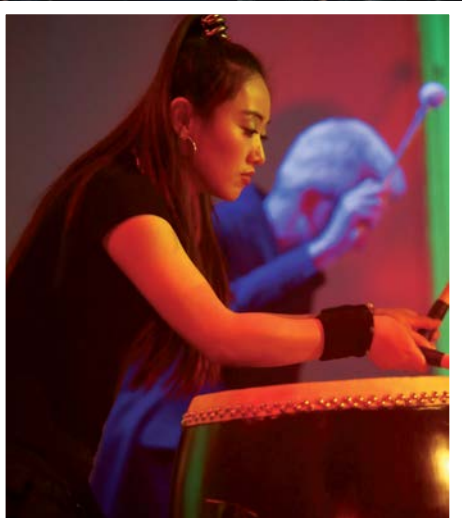
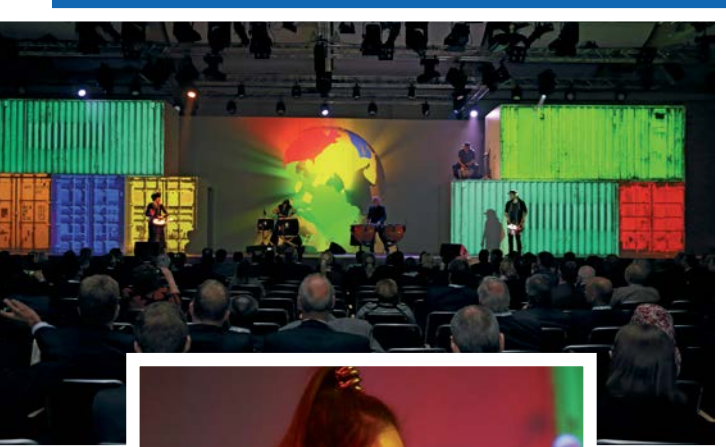


# Impressions

## Enthusiastic finale

## IAPH praises HPA

## Grand Gala Dinner



With a colourful and high-spirited closing ceremony, yesterday the 29th World Conference in Hamburg came to an end in the CCH. Prior to the final musical act of the evening by drummer group Yogi Yokus, chief organiser Sabine Stüben from the Hamburg Port Authority (HPA) and moderator Max Boodie said goodbye to the 950 guests. Stüben and her team were applauded by departing IAPH president Grant Gifillan. „It was one of the best conferences I've ever attended”.







# Silver and Bronze for JadeWeserPort

Deepwater port commended for environment initiative and transport optimisation



Arrival of the "Merete Maersk" at JadeWeserPort (JWP) in Wilhelmshaven

PHOTO: SCHEER

All praise for Germany's only deepwater port in Wilhelmshaven: Yesterday, the facility was on the receiving end of two major prizes. IAPH President & Chief Executive Officer/Director Port Authority of New South Wales (Australia), Grant Gilfillan, handed the awards to Holger Banik, CEO of Lower Saxony Ports and JadeWeserPort Realisierungs GmbH & Co. KG.

The 2015 Silver IAPH Environment Award honours the Langwarder Groden conversion scheme of a 140 hectare area, 79 belonging to JadeWeserPort Realisierungs GmbH & Co. KG. The scheme set about developing a salt marsh by opening the summer dyke to expose the area to normal tidal influences and create conditions for a sustainable and regularly flooded salt marsh. Work started on removing around 40,000 cubic meters of unsuitable earth from the main dyke in July 2012 and replenishing this with 185,000 cubic meters of clay for dyke reinforcement and ground cover. Construction of a concrete riprap provides clear demarcation from the salt marsh. On completion of this a further 503,000 cubic meters of clay was applied to reinforce the main dyke in line with latest scientific knowledge on coastal protection. The project was finished in autumn 2014 and is complemented by a five kilometer long circular trail for nature lovers in Langwarder Groden.

This year's Bronze IAPH IT Award goes to the SMART SC joint project for sustained improvement of communication structures and port logistics. The project aims to raise efficiency of logistics in the container-related value-added chain for import/export by implementing universal eBusiness stand-

ards. In order to improve efficiency of freight transport, handling and storage, all means of information, communication and transaction accompanying the flow of goods will be harmonised and data, information and documents efficiently exchanged between all parties involved. Special consideration is paid in this respect to small and midsize companies as well as public authorities.

„For the JadeWeserPort in Wilhelmshaven this means optimisation of traffic to the container terminal and GVZ“, Banik stresses. Specific benefits are:

- removal of bottlenecks in the cargo handling terminals through selective control of traffic to planned schedules
- avoidance of congestion on the access roads to the JWP terminals through advance parking space planning, intelligent traffic guidance and enhanced scheduling of cargo handling activities
- more handling efficiency through early provisioning of planning fundamentals and controlling truck arrivals and departures.



Grant Gilfillan (left) and Holger Banik with the bronze award

PHOTO: HINRICH FRANCK

SMART SC was developed within the framework of the "eBusiness Standardisation in the Maritime Supply Chain" project sponsored by the Federal Ministry for Economy and Energy (BMWi), together with the Bremen Institute for Sea Transport and Logistics (ISL), dbh Logistics IT AG, aio IT for Logistics GmbH and the data processing company i2dm GmbH.

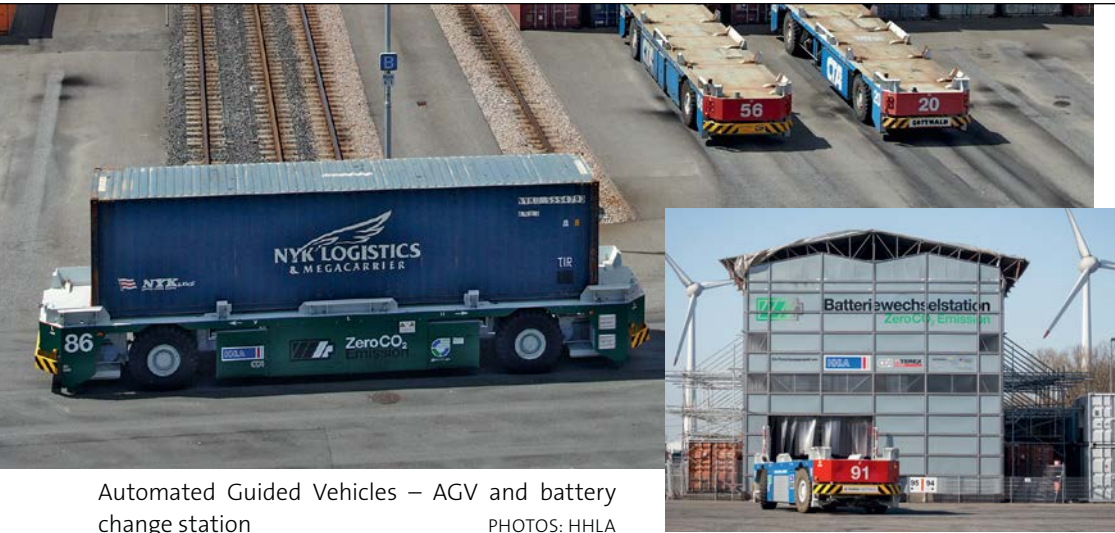
## Environment award for bremenports

An award also for the port management company bremenports GmbH at the IAPH Conference. Managing Director Robert Howe yesterday was pleased to receive the bronze medal for the "Port Environmental Award 2015".

The prize was awarded for the ecological pilot project "LNG Hopper Barge", a 4.9 million euro work boat to be built by a Dutch shipyard in the second half of the year. Construction of the vessel represents a step in a new direction for bremenports' planners in their efforts to reduce carbon dioxide emissions in the port.

The hopper barge has a length of 70.5 meters and is the first of its kind worldwide to be powered by environment-friendly liquefied natural gas (LNG) and one of only approx. 65 vessels currently equipped to use this fuel. Construction of the LNG hopper barge is being supported by the European Commission, which is contributing 1.65 million euro.





Automated Guided Vehicles – AGV and battery change station

PHOTOS: HHLA

# Less waste – Clean propulsion energy

HHLA looks to a sustainable future – Electromobility reduces emissions and improves the carbon footprint

The Port of Hamburg is the largest interconnected industrial area in Germany. Due to its proximity to the city centre, it bears special responsibility in matters of climate protection.

The port's biggest container terminal operator, the Hamburger Hafen und Logistik AG (HHLA), is well aware of this responsibility. As early as 2008 it formulated the ambitious goal to reduce specific CO<sub>2</sub> emissions per container by 30 per cent by the year 2020. Already, far before this self-imposed deadline is reached, it is close to achieving this target. By the end of 2014 the HHLA had reduced emissions by 25.5 per cent.

The HHLA's business model, for that matter, is thoroughly ecological. With the intermodal subsidiaries Metrans and Polzug, as well as its own fleet of trucks, the HHLA offers customers a highly efficient transport chain between seaport and European hinterland. This is not only financially attractive, but also makes ecological sense, since large ships

and freight trains are by far the most environment-friendly means of transport for goods from places such as East Asia. The HHLA is improving its carbon footprint through numerous measures, one in particular being the switch from diesel to electricity and the use of electricity from renewable sources. An example is provided by the block storage cranes at the Burchardkai Container Terminal (CTB): Where several years ago transport was performed exclusively by diesel powered van carriers, now 24 electric cranes handle container placement and removal on a part area of the terminal. This electrification reduces levels of CO<sub>2</sub> and other pollutants like sulphur, nitrogen and fine dust particles, since the cranes at CTB and the Altenwerder Container Terminal (CTA) are powered exclusively by green electricity. The same goes for the large container bridges at CTA, each of which moves 1.8 million tons of cargo a year. A switch in energy focus is also taking place in the port. Development of the Automated Guided Vehicle (AGV) from diesel hydraulic to electro-powered container transporter represents a milestone here. Today, ten of the total 86 AGVs already run on green electricity from wind or solar energy, a clean achievement to be sure, these needing only 15 kilowatts of energy per operating hour. In comparison, their predecessors burned five times this amount. To date the vehicles have clocked up more than 700 000 emission-free kilometres and even drive autonomously for a battery change, the clever thing being that they do so when green electricity hits peak supply in the grid. This is the core of the so-called 'BESIC' program ('battery driven heavy duty vehicles in intelligent container terminal operations') promoted by the Federal Ministry for Economy and Energy. Van carriers (VC) too are becoming greener. The greenest HHLA-VCs emit 94 per cent less nitrogen oxide and 95 per cent fewer fine dust particles than their predecessors. How-

ever, not only goods transporters to the port terminals are electrically driven. More and more vehicles moving HHLA employees around the terminals are powered by electricity. At the Tollerort Container Terminal (CTT) more than 60 per cent of passenger journeys are accomplished by electro-powered Renault Kangoos. HHLA's car pool consists of 64 electric cars – the biggest fleet of electric cars operated by any European port. Waste disposal is a further component of environmental protection. At CTB a new waste water treatment plant halves hazardous waste output by separating oil and other liquids from water used for cleaning van carriers. This measure not only reduces pollutants but saves up to 90 per cent fresh water in the cleaning process. Light emissions can also be a disturbance when the port is located near to the inner city, particularly when it operates round the clock. In the past, when the sites at Burchardkai and Altenwerder were completely floodlit as a means to guarantee workers' safety, today large areas remain dark. "Our block storage cranes work fully automatically and need no light", says, HHLA sustainability commissioner Jan Hendrik Pietsch. The lights can remain switched off when no people are at work. This is enabled by LED spotlights that can be switched on and off faster than normal lights. The conversion not only pleases the local population, but is part of the HHLA's sustainability strategy, a policy that pays substantial dividends. At the CTA alone 'on' time has been reduced by 88 per cent. "Earlier a lamp would be switched on for an average of twelve hours a day, now it is only 42 minutes", states Pietsch. That creates enormous savings of over 90 per cent in electricity consumption for lighting CTA block storage. For the two terminals this amounts to electricity savings sufficient to power 500 homes in a year.

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# On a Voyage of Discovery in the Port of Hamburg

Hamburg Port Authority presents smartPORT projects in practice



The last conference day again offers a full and interesting agenda. After a week of top talks, intensive discussions and exclusive evening events the sightseeing tours around the Port of Hamburg guarantee an impressive finale. Conference guests have a choice of three different theme tours on which they can learn about the development of Germany's largest universal port on its way to becoming a smartPORT. The tours will visit projects and terminals both on land and water, all finishing by calling in at "Duckdalben", Hamburg's international seamen's club.

## From collecting information to displaying it



The bus tour will head for selected pilot projects in the port, explaining how these fit in with the smartPORT strategy. Participants will experience at first hand how traffic and infrastructure data are collected and evaluated. One of the projects is an innovative intelligent parking solution that guarantees optimal utilisation of existing and new parking lots for trucks in the port. A further project showcased by the Hamburg Port Authority is the "smartROAD", which is currently being tested on a stretch to assess what can be achieved through rigorous implementa-

tion of information technology. The objective is to automatically record and manage traffic flows on all strategic cross sections in the port's road network, with detectors precisely recording the current traffic situation in each direction, the volume of vehicle emissions and wind direction. In a further step an intelligent light control system will be introduced. Currently DIVA signboards (electronic variable message signs) display traffic information to drivers of heavy goods vehicles in real time, allowing them to take alternative routes in response to traffic conditions.





## smartPORT Energy and Vessel Traffic Service (VTS) Centre

Guests on the second sightseeing tour get to know Hamburg from the water. From the vantage point of a typical River Elbe barge ferry the journey traverses the port to the Vessel Traffic Service Centre. On the way passengers are told about the smartPORT energy initiative and how this is realised in Hamburg. The outstanding project to meet city climate goals will provide shore power for cruise ships, the new Altona power plant being unique in

Europe in its dimension. The boat will then turn to pass a terminal that deploys a large fleet of electric cars, the power for which is generated by a solar plant installed on the roof of the adjacent building. Behind the Köhlbrand Bridge lies Altenwerder Container Terminal, one of the most modern in the world and operator of a fleet of automated guided vehicles (AGVs), which after successful field trials are now also battery driven. Wind power is a further source of

low-cost green energy in the port. Terminal operator Eurogate was the first company in the port to commission its own wind powered generator in 2013. Continuing its journey, the boat's next stop is the VTS Centre, the Port of Hamburg's new, ultra-modern heart of navigation. The building itself is a prime example of energy efficiency. The facility was reconstructed from January 2012 to June 2014 and the very latest state-of-the-art technology installed.



## Shore Power for Cruise Ships

The third tour takes a good look at the way the port accommodates cruise ships and alternative concepts for supplying energy. This year Hamburg expects 160 visits from cruise ships. Two innovative projects for providing shore power to cruise ships will be presented, commencing with the Altona Cruise Ship Terminal, Europe's first onshore power supply for cruise ships at berth. Completion of the facility, which has an output of 12 megawatt

ampere, is scheduled for summer 2015. The Free and Hanseatic City of Hamburg has invested 11 million euro in the project, 3.55 million of which were contributed by the European Union under the TEN-T programme. A frequency convertor is necessary to convert electricity from the 50 Hz from the grid to the 60 Hz on board ships. The combination of size and output makes the shore power facility in Altona unique in the world. Power is supplied to ships via a

flexible, automatic cable management system specifically developed for this station.

The second external power project for cruise ships in the Port of Hamburg is located at the HafenCity cruise terminal. Here, the HPA has installed the landside infrastructure to have power supplied to vessels via an LNG hybrid barge, which generates electricity at up to 8 megawatt ampere by motors powered by LNG. It is the first power barge of its kind in the world.





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