

MAERSK

POST



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THE POKÉMON WAY

THE VIRTUAL REALITY RIG | Pokémon hunters are not the only ones who are getting hooked on immersive technologies such as virtual and augmented reality. At Maersk Drilling, they have made it possible to bring customers onboard a rig without ever leaving the boardroom. Taking a virtual reality tour of the Maersk Resolute, Will McBeath, Senior Technical Account Manager says: "We see ourselves using these technologies to lower maintenance costs, and for training and rig familiarisation programmes. They are opening up a whole new world for us."

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Theme: Strategy in action

The pineapple express

STRATEGY IN ACTION | One of Costa Rica's largest pineapple exporters, Gustavo Zamora Matamoros (picture) is constantly looking for ways to grow his business. With a new container facility in Moín, Costa Rica, and its new strategy, Maersk will be able to offer customers like Matamoros a comprehensive package of new services. The pineapple express is on its way.

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Photo: Jesper Schwartz

Maersk Drilling is using big data

THE INDUSTRIAL INTERNET | Maersk Drilling and General Electric have agreed to collaborate on a technologically advanced data driven pilot project. This comprises the first steps in Maersk Drilling's ambition to reduce customers' total well costs with the help of sensor data that can be used to improve drilling performance and create smarter maintenance schemes. "We are beginning to make the industrial internet of things a reality," says Jesper Kjær Hansen (picture), Maersk Drilling's Chief Information Officer.



Photo: Thomas Nielsen

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Photo: Thure Andersen

Engagement on the ground brings change

SHIP RECYCLING | Maersk's intention to have vessels recycled in Alang, India and its concurrent decision to sell two container vessels to one of the leading ship recyclers in the area has raised concerns and triggered controversy. The ambition is to change an industry.

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Fight against corruption

A NEW ANTI-CORRUPTION STRATEGY | Maersk Line is taking the fight against corruption into the classroom in the form of a new course at the World Maritime University in Malmö, Sweden.

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Photo: Christina Bode



Photo: Jesper Schwartz

People are back on the beaches

SECURITY | The APM Terminals Moin port project on Costa Rica's Caribbean coast has had a wide ranging impact on the safety and security of the surrounding community. According to Jaime Quesada (left), Head of Security for APM Terminals, and Nelson Barquero (right), Deputy Director of the Limón Police, the port project is attracting people back to beaches once controlled by drug dealers, motivating local kids to attend school again and even shrinking the workload of the Limón police.



Up is not the only way

DUAL CAREERS MATTER | Spouses of internationally mobile employees can have a difficult time finding work in a foreign country, as Ayesha Hartlett discovered. But thanks to her ingenuity, and a new network supported by Maersk, she found a way.

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Photo: Peter Einhorn



Søren Skou
Group CEO

Photo: Anders Koch

A strategy to deliver growth

➤ In September, we presented a whole new strategy that will allow us to address the challenges of a lack of growth and a sharp deterioration in results, cash flow and returns.

This strategy, supported by a new structure, aims to ensure we remain strong, profitable and financially viable and develop new sources of profitable growth to prosper long term. It will allow us to focus on growth and enhancing synergies within transport and logistics, while ensuring agility for the oil-related businesses to pursue individual strategic solutions for future development.

A.P. Møller-Mærsk A/S will in the future focus on global transport and logistics, building on Maersk Line, APM Terminals, Damco, Maersk Container Industry and Svitzer. The overall strategic intent is to

create a stronger, more integrated container, logistics and port business that can deliver profitable growth, improved products and a much better customer experience driven by digitization. We will be holding a Capital Markets Day on December 13, and I look forward to giving you all a further update on the details of the strategy then.

The aim for our oil-related businesses is to create strategic agility and focus on growing Maersk Oil as an energy company. The businesses will be managed with an active owner mindset to develop structural solutions to our strategic challenges.

It is the intention that the energy-related businesses – Maersk Oil, Maersk Drilling, Maersk Supply Service and Maersk Tankers – will be separated out from A.P. Møller-Mærsk A/S over the

next two years. A.P. Møller Holding, the fully owned holding and investment company of the A.P. Møller Foundation, expects to remain an influential shareholder in the energy-related businesses also after a separation from A.P. Møller Mærsk A/S – the energy related businesses will continue to be part of the Maersk family.

As we undergo these strategic and structural changes, we can take pride in the fact that our businesses are top quartile performers in their industries. A performance driven by strong teams with dedicated employees who are doing a great job in difficult markets. This requires motivation, stamina and the ability to execute – qualities that we have in our operations all around the world. 🌐

Maersk Drilling to boost efficiency

THE INDUSTRIAL INTERNET | With the help of digital industry giant General Electric, data from a large number of sophisticated sensors on a drilling rig are now being processed and analysed online. The objective: To increase drilling productivity and reduce maintenance costs significantly.



"We are now starting the journey that will eventually bring us to a point where an installation on every rig will gather, and analyse, data from hundreds of sophisticated sensors as a part of daily operations. We are beginning to make the industrial internet of things a reality," says Jesper Kjær Hansen.

Photo: Thomas Nielsen

through **big data**

BY NICOLAI OSTERGAARD

➤ Sensors, algorithms and processing power are about to boost efficiency within Maersk Drilling.

For evidence of this, just take a look at the new ambitious partnership formed by drilling contractor Maersk Drilling and global supplier of industrial equipment and software analytic tools, General Electric (GE).

The two companies have just agreed to collaborate on a technologically advanced data driven pilot project. The project comprises the first steps in Maersk Drilling's ambition to reduce customers' total well costs using sensor data to improve drilling performance and create smarter maintenance schemes.

According to Maersk Drilling's Chief Information Officer, Jesper Kjær Hansen, **big data projects will play an important part in the future of offshore drilling.**

"We are now starting the journey that will eventually bring us to a point where an installation on every rig will gather and analyse data from hundreds of sophisticated sensors as a part of the daily operations. We are beginning to make the industrial internet of things a reality," says Jesper Kjær Hansen.

A general infrastructure

He stresses that the pilot project is the first step in building a general infrastructure that can be harnessed by various vendor solutions and for many purposes based on input from various sensors.

The pilot project is due to last a year. The overarching target is to reduce maintenance costs by 20% and increase productivity by enhancing operational efficiencies.

"When building the latest addition to our fleet – the XLE jack-ups and the drillships – we installed various sensors for data acquisition.

Those sensors are the foundation of these pilot projects, and I am eager to harvest the benefits from these investments," says Chief Technological Officer at Maersk Drilling, Frederik Smidth.

The initial infrastructure tests have been conducted **on drillship Maersk Voyager**, while the pilot projects are about to be carried out on one of Maersk Drilling's XLE rigs.

The new partnership between Maersk Drilling and GE is prepared for the other business units in the Maersk Group to utilise and take advantage of.

250 sensor data as a beginning

The project seeks to take advantage of the hundreds - or potentially thousands - of sensors already in place on the different pieces of drilling equipment. The projects aim to decide precisely how the enormous amount of sensor data on any given drilling rig can be capitalised.

Operational sensor data from critical pieces of equipment like top drive, thrusters, BOP etc. will be connected to a so-called historian, a kind of specialised server that stores the data needed to form a coherent picture of the drilling operation. The sensor data will minutely register how the drilling equipment is behaving and being operated.

All in all, 250 different sensor signals are being collected from the drillfloor as a beginning.

"The sensor data will give us a more detailed view of the different sub operations carried out on the drill floor enabling the crew to identify best practices, decrease variance, optimise processes and inherently increase our productivity," says Kasper Karlsen, Head of Performance Improvement at Maersk Drilling.



The pilot project is an important step toward fulfilling Maersk Drilling's ambition to develop smarter and more efficient solutions at a much lower cost. All with the purpose of helping customers to reduce total well cost to a minimum.

"With this pilot project we are making a proof of concept that we are ready to move from so called calendar based maintenance into sensor triggered maintenance. We have been preparing this for some time," says Jens Ulrik Gullacksen, Head of Maintenance & Materials.

Predictive maintenance is a project within Maersk Drilling that strives at creating a new maintenance regime that involves moving away from a traditional calendar-based maintenance scheme. Instead, Maersk Drilling is moving towards an algorithm-triggered regime whereby one only replaces a particular part when a sensor data analysis issues a warning that it is wearing out.

Analysed by industrial experts

During the project period, the sensor signals from the top drive will be transferred to General Electric's Industrial Data Centre, where the data will be processed by specialised algorithms and analysed by General Electric's industrial experts.

After 12 months, the pilot project will be evaluated. At this point, it will be decided whether to proceed with its roll-out to the rest of the fleet. ■

Bigger ambitions than

CUBA IS CALLING | One of the world's last Communist countries is opening up to the world. With a new direct service to the island from Northern Europe, Maersk Line underlines its commitment to a developing Cuba

BY MONIKA CANTY

► The Feria Internacional de la Habana was buzzing this year. A record attendance from international companies at Cuba's annual trade show is testament to changing times in one of the world's last Communist countries. Thanks to economic reforms and growing engagement with the outside world there is more interest than ever from foreign companies looking to do business with Cuba.

"There was a huge presence especially from European, Chinese and Russian companies," says Carolina Aristizábal, Marketing Manager for the Caribbean Sea Cluster who represented Maersk Line at the event. "Many foreign companies are looking for investment opportunities in Cuba today."

It's tender season, which means shipping lines are bidding for an annual contract from the government to carry cargo from Europe and Asia – as the Cuban government still controls most of the import and export business. The business value is

significant – around 5,000 containers are imported from Europe and 25,000 from Asia every year.

Maersk Line is hoping its new direct service from Rotterdam, the first ever from Northern Europe to Cuba, will be instrumental in securing a major

deal. A 2,556 TEU vessel now makes a weekly call to the state-of-the-art Mariel Port outside Havana, which is key to the government's plan for attracting foreign investment.

"Opportunities for shipping are only limited by the imagination - and by the capacity of Cuban authorities to take advantage"

Richard Feinberg author of Open for Business: Building the New Cuban Economy.



"It's crucial that we land the long-term deal with the Cuban government," explains Aristizábal. "It's a one-year tender and its constant cargo. We have submitted a very competitive bid, and our new service from Rotterdam, the first mother vessel to call Cuba, shows our commitment to the economy."

A new production hub

While Cuba imports about USD 14 billion in goods per year, it exports just USD 5 billion so there is a huge potential for growth in that area.

"In the future, especially if US trade and investment sanctions are lifted, one could easily imagine a 5-10% annual growth rate in trade," says Richard Feinberg author of "Open for Business: Building the New Cuban Economy".

"In addition, once the transshipment port of Mariel is fully operational, ships could pass through the

Panama Canal, off-load in Cuba, while the containers continue to ports along the Atlantic Seaboard of the USA. So opportunities for shipping are only limited by the imagination - and by the capacity of Cuban authorities to take advantage."

Cigars and rum are the most famous Cuban products, but the government has much bigger ambitions to turn the area around Mariel Port into a hub for production – bringing in raw materials from China and processing them for re-export in sectors from pharmaceuticals to automobiles.

"From a technical perspective they don't have the ability to do this yet and that's why they want to bring foreign investment to Cuba," says Andres Felipe Rodriguez who worked as Maersk Line's general manager for the Caribbean.

"From a people perspective they do. Cuba has one of the most

cigars and rum



Analysts are predicting a 5-10% annual growth rate in trade to and from Cuba in the future, especially if US trade and investment sanctions are lifted.

Photo: Scampix

skilled and educated populations in the Americas. The level of spoken English is fairly high despite most people having never left Cuba. If they are able to realise this vision of being a hub for production, it might create an export market, but a lot of things would need to be in place first."

Lifting trade barriers

A major stumbling block is the US trade embargo, imposed 56-years ago when the US banned exports to Fidel Castro's communist regime.

Fines for breaking the embargo can be enormous, so for many companies, doing business in Cuba is just not worth the risk.

"If we by accident send cargo bound for Cuba to the US the fines are huge," says Anne Sophie Zerlang Karlsen, Maersk Line trade manager for Europe. "So major precision is required."

Added to that, ships calling Cuba are banned from entering US waters for 180 days, so it's been a major juggling act to get the route in place.

President Barack Obama made - a historic visit to Havana earlier this year but the embargo still stands, and there is no timeline for when it will be repealed.

For SeaLand - Maersk's US based intra-Americas shipping line - Cuba is a case of 'wait and see'.

"The future potential is significant," says **Craig Mygatt, CEO, SeaLand.** **"Cuba is the largest of the Caribbean islands. It represents a market of 11 million people just 90 miles from Florida in dire need of all types of products and services with good infrastructure at the Port of Mariel.**

But we cannot get ahead of the ball on this. We have to abide by current embargo rules." ■

News in brief

Employee engagement stays strong

Employee Engagement at Maersk remains at 76 % this year following a record response rate of 93% of employees completing the survey.

Despite turbulent times across all Maersk businesses, this year's Employee Engagement score has remained strong and equal to last year at 76%. The score falls just 1% outside of the top quartile- rated companies surveyed by IBM where the benchmark has risen to 77%.

Participation was at its highest ever level at 93% - up 2% on 2015, which means 74,000 out of 79,000 employees provided feedback this year.

Group CEO Søren Skou comments: "Despite operating in extremely challenging markets the positive sentiment of our employees has not been impacted. This is a significant achievement as it shows Maersk employees remain engaged in tough times."

"I would like to thank all the employees who took the time to complete the survey," says Skou. "The record response rate clearly indicates that employees expect action to be taken as a result of this survey. I encourage all managers to follow up with their teams in order to ensure that we continue to drive a high level of engagement and motivation in the organisation."

Maersk Values

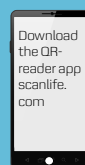
Maersk Values, commitment to innovation, clarity of company strategy, the diversity agenda and career development opportunities remain top drivers of employee engagement at Maersk.

Employees' perception of the Maersk Values has increased favourably by 1% this year to 83% - a positive development, particularly considering the volatile business climate.

While most engagement drivers have stayed strong, the survey is also helping us to uncover areas that require more attention.

For example, the results show that "commitment to diversity and inclusion" is down 2 percentage points compared to last year, and down 8 percentage points on the external benchmark. The number of employees who "have a clear understanding of my company's strategy," fell by 2% this year, but remains strong at 78%.

How to scan a QR code



THEME

STRATEGY IN ACTION

Around the world, Transport & Logistics sees a gap in service it plans to fill; **Costa Rica** and Kenya provide examples. Meanwhile, early work on Culzean in the North Sea is a showcase in the skill set of Maersk's Energy division, where Maersk Drilling now offers virtual rig tours.

THE PINEAPPLE EXPRESS

STRATEGY IN ACTION | One of Costa Rica's largest pineapple exporters, Agricola Agromonte ships 130 containers of pineapples each week with the help of Maersk Line and is keen to break into new markets. The biggest obstacle to its ambition is poor infrastructure and a lack of professional logistics services. But with a new container facility in Moin, Costa Rica and its new strategy, Maersk will be able to offer customers like Agromonte a comprehensive package of new services. The pineapple express is on its way.



BY JOHN CHURCHILL

➤ Since his first days in the fields, Gustavo Zamora Matamoros has learned all that he could about the science and business of pineapples. Now, ten years after transforming Agricola Agromonte into one of Costa Rica's largest pineapple exporters, he continues to look for ways to improve and grow his business.

The main obstacle? Infrastructure and logistics.

"I feel incredibly proud when I attend conferences in Europe and hear buyers ask 'Is the pineapple Costa Rican?' Our pineapples have earned a reputation for quality. But to reach new markets and compete with other Latin American and Asian growers, Costa Rica needs better infrastructure and access to the big ships and the first tier trade routes," says Matamoros.

According to the 2015 Global Competitiveness Report, Costa Rica ranks 103rd out of 140 nations in terms of overall infrastructure. Similarly, its roads rank 115th and its ports 109th.

When it opens, APM Terminals Moin will improve one of those numbers dramatically. The new port will open in 2018, but exporters like Matamoros say it cannot come quickly enough.

Meanwhile, Maersk's newly created Transport & Logistics division will provide customers like Agromonte with a comprehensive alternative to the fragmented, transactional services that are so common in many countries.

A gap in the market

While Agromonte ships about 130 containers of pineapples each week via Maersk Line – approximately 65 million pineapples a year – it mostly does so to markets in Europe and the United States and is keen to break into the Asian and African markets. The Costa Rican economy depends on exporters like Agromonte, as they make up 40% of its GDP. Besides pineapple exports (world #1), Costa Rica is among the top-10 exporters of many fresh commodities.

Once completed, the new Moin port will transform Costa Rica into an important trading stop for big shipping lines, providing exporters like Agromonte with direct access to the world's busiest trade lanes in the process. Furthermore, by doubling the container storage capacity and installing modern equipment, vessel operations will also be far more efficient than they are today.



Photo: Jasper Salwans

→ According to a study carried out by Qbis Consulting, the combination of all these factors will result in the reduction of trading costs by an estimated 15% on the part of exporters and importers.

Combined with the new strategy supporting a Transport and Logistics division, Kenneth Waugh, Managing Director of APM Terminals Moin sees a clear opportunity to deliver a compelling package of benefits to customers once the port opens for business.

"There is no integrated transport and logistics service provider in Costa Rica at present," says Waugh. "The farmers don't have the time, or often the expertise, to analyse and optimise their supply chains. Also, the products and services that are available to them provide them with little flexibility in terms of pricing for their product, little or no brand recognition and an otherwise very limited set of advantages. In contrast, we will be able to provide our customers with a one-stop transport and logistics shop."

Building on a strong position

In **Kenya**, Steve Felder, Managing Director of Maersk Line in the 11 Eastern African countries sees a similar need and opportunity for the new Transport & Logistics division. Over the last five years, Maersk Line has grown its share of the avocado export market in Kenya to 75% by pioneering avocado shipments by sea in controlled atmosphere containers. Maersk Line has taken market share from air carriers based on the benefits of an unbroken 'cold chain' – a better quality product and less waste – not to mention, much cheaper transport with a better environmental profile. Today, Maersk Line ships up to 1,200 containers of avocados out of Kenya each year.

"This is a niche market that is defined not by price but by service. More specifically, customers want reliability and risk management, and the fewer the number of service providers they have to deal with, the better," says Felder. He

Photo: Jesper Schwartz



"I feel incredibly proud when I attend conferences in Europe and hear buyers ask 'Is the pineapple Costa Rican?' Our pineapples have earned a reputation for quality. But to reach new markets and compete with other Latin American and Asian growers, Costa Rica needs better infrastructure and access to the big ships and first tier trade routes"

Gustavo Zamora Matamoros, one of Costa Rica's largest pineapple exporters.

emphasises the fact that, while there is a high demand for professional, comprehensive logistics services, none of Maersk Line's competitors are currently offering integrated end-to-end services.

"A lot of the logistics services are very transactional. Damco and Maersk Line have the ability to offer a complete package, a farm-to-door transport and logistics solution with a single invoice for the customer,"



While Agricola Agromonte is one of Costa Rica's largest pineapple exporters, the company continues to look for ways to improve and grow its business.

says Felder. "There is nothing else like it in this market."

Stephan Grabowski, Damco's CEO in the East Africa Area, says he expects customers will be interested – and not surprised.

"Our customers have told us on numerous occasions that they trust Maersk Line and Damco to deliver a consistent solution, given that we are sister companies with sound values and a customer focus."

The next phase of growth

On a clear day, one can almost get a sense of the size of Agromonte just by looking out from its offices, located just inside the entrance to

the farm. But right now, it is the rainy season in Costa Rica and the rain is pouring down so heavily that Agromonte's 1,800 hectares approximately 2,700 football fields are almost invisible. Four-wheel drive trucks come and go, carrying some of the more than 1,000 people that work on the farm, indicating that the work must go on.

"It takes a pineapple 14 months to reach maturity," says Matamoros, looking out at the rain while passing one of his farm's prized golden pineapples back and forth in his hands. "It's an interesting business, tending to each phase of that development." He talks about the

last ten years, how the farm has grown from just few dozen hectares in size to one of the country's largest.

"I always knew that this is what I wanted to do. I'm very proud of what we've built here and I'm excited about the next ten years, and to seeing Agromonte continue to grow and improve." ■

New Moin Port a boon for Costa Rican trade

APM Terminals is building a new container shipping port in Moin, Costa Rica that will significantly improve Costa Rica's infrastructure and trade.

The existing Moin-Limón port has no fixed cranes on the quay and a draft of only 9 metres. It is currently only capable of handling tiny, 2,500 TEU ships. In short, this means less space on board each vessel for cargo and slower container operations.

The new port will have six new ship-to-shore cranes, a 16-metre draft and 600 metres of quay so that it can handle 13,000 TEU ships, roughly the maximum size able to pass through the newly expanded Panama Canal, when the need arises. The port is being designed with Costa Rica's fresh exports in mind: more than 60% of the terminal's capacity will be devoted to refrigerated container handling. When it opens in 2018, APM Terminals Moin will be ready for vessels up to three times the size of those currently calling at the port.

"The reefer volumes in Costa Rica and Latin America in general are going to grow as ports like Moin enable the bigger ships to call them. We expect volumes to double within the next 15 years. With better equipment and operations we can

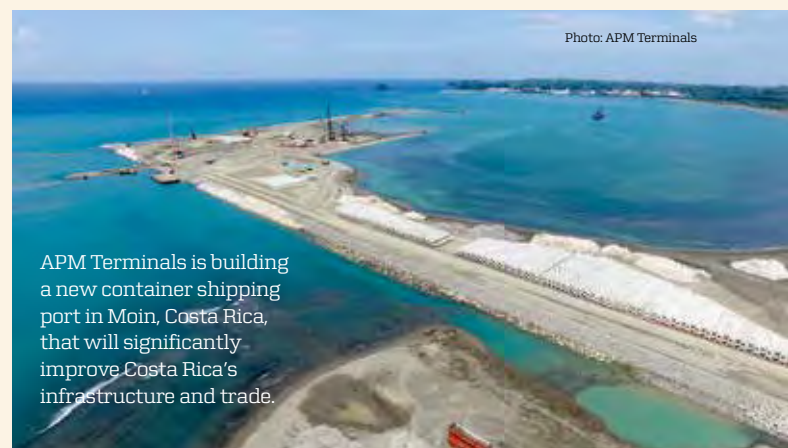


Photo: APM Terminals

APM Terminals is building a new container shipping port in Moin, Costa Rica, that will significantly improve Costa Rica's infrastructure and trade.

get much larger volumes in and out of Moin much faster – in hours, not days as is the case today," says **Roberto Madrigal, Sales Manager for Maersk Line in Costa Rica**. "For exporters of fresh fruit, time is critical and the increase in port efficiency will be of huge benefit to them." ■

New ships to beat the competition

VESSEL EFFICIENCY | Maersk Tankers is in the midst of renewing parts of its fleet to support its position as market leader in the transportation of oil products. The new vessels are designed to accommodate customer requirements, such as higher efficiency, which will help to add value to both their business and that of Maersk Tankers.

BY SAM CAGE

➤ "It's quite a privilege," says Captain Piotr Wieczorek. "It is always very nice to be first captain on a new vessel, so it's a great opportunity."

Although the crew is not yet manning the bridge and its systems are not yet up and running, Captain Wieczorek – who has been working at sea for 18 years, the last two of them with Maersk Tankers – already radiates pride in his new vessel. He is ready to steer out on the oceans with a vessel that is more efficient than similar sized product tankers built 10 - 15 years ago.

The Maersk Timaru, a 182-metre-long product tanker that is one of the most efficient in Maersk Tankers' fleet, was completed in late October. She had just been out of the



Photo: Jesper Schwartz

"It's quite a privilege. It is always very nice to be first captain on a new vessel, so it's a great opportunity"

Captain Piotr Wieczorek, Maersk Timaru.

The next generation of vessels and rigs

- ✓ One of Maersk Tankers' new vessels is featured in a new Discovery Channel television series, which shows Maersk's energy supply chain by following company experts and subcontractors as they design and build the next generation of vessels and drilling rigs
- ✓ Filming took place mainly in Denmark, Norway and South Korea and the series is currently being broadcast. **For more information <http://www.maersk.com/en/hardware/2016/08/the-worlds-biggest-shipbuilders-on-your-tv>**

Sungdong shipyard in South Korea

for sea and cargo trials, and her captain was happy with the result.

All about efficiency

Maersk Tankers has the crude product tanker industry's largest fleet and the Maersk Timaru is one of more than 80 vessels carrying products such as gasoline, naphtha and palm oil.

Rates have fallen in the third quarter of 2016, but the planned investment in 19 new vessels to renew parts of the fleet is helping Maersk Tankers to stay competitive in the market. They are designed to accommodate customer

requirements, such as higher efficiency, which in turn will help to add value to their business and to that of Maersk Tankers.

Its Taking Lead strategy includes cost leadership, delivered in part through more efficient vessels like the Maersk Timaru. A critical component in this is the development and use of a highly advanced market model and data analysis, making it possible to more accurately forecast which markets and cargo yield the highest rates and position the vessels accordingly.

"We have gained our market leader position by delivering on



Photo: Jasper Schwartz

Rates have fallen in the third quarter of 2016, but the planned investment in 19 new vessels to renew parts of the fleet is helping Maersk Tankers remain competitive in the market.

the strategy. Today, we are a top quartile performer in the industry, and we will continue to push the boundaries to retain our position – particularly through using more advanced data and models when we make commercial decisions,” says **Christian M. Ingerslev, the newly appointed CEO of Maersk Tankers.**

A connected vessel

From the bridge, Captain Wieczorek surveys the forested hills surrounding the yard and looks forward to when the vessel is fully connected, feeding in data to build up banks of information which will be used for business decisions.

He points out the smooth hull and propellers designed to ease passage through the water, and other features that will make taking charge of the Maersk Timaru a truly exciting experience.

“The vessel has been designed specifically to save fuel. She has a more efficient engine, different hull dynamics, the propeller is designed to be better at moving the water,” Captain Wieczorek says. “We even have LED lights on board to use less energy. This and the other new vessels are the most efficient and advanced vessels in the Maersk Tankers fleet.” □

The Pokémon experien

Will McBeath, Senior Technical Account Manager, Global Sales at Maersk Drilling and Ana Zambelli, Chief Commercial Officer at Maersk Drilling.



Photo: Christina Bode

ce to win new business



THE VIRTUAL REALITY RIG | In a first for the drilling industry, Maersk Drilling has teamed up with Danish tech start-up Kanda to create a virtual reality rig, allowing customers to take a tour without ever leaving the boardroom.

BY MONIKA CANTY

✉ Anyone who has come across the rather surreal sight of a Pokémon hunter glued to their smartphone chasing a virtual reality creature down the street, will attest to the fact that technologies such as augmented and virtual reality are changing our view of the world today.

Applications for these immersive technologies - which blur the line between the real world and the virtual one - are now spreading far beyond the gaming industry. In an unusual partnership, Maersk Drilling has teamed up with Kanda, a young Danish tech start-up, to explore how they could be used to enhance the sales experience.

"Virtual reality has been around since the '90s, but it died out as it was too expensive and computers weren't powerful enough to support it back then," says Kristian Andreassen, Director at Kanda.

Andreassen - who describes himself as a "gadget freak" - bought a virtual reality headset when they first re-emerged around three years ago and became hooked on what the technology could do. "We started looking at how we could commercialise its use. The interest has been huge, as many companies today want to understand how they can apply the digital world to their workplace."

Kanda aims to tackle one of Maersk Drilling's biggest challenges - how to help customers truly understand the vast capabilities of their rigs in a way that a powerpoint presentation never could.

Take the Virtual Rig Tour

"It's long been a dream of mine, to step into a client's office and instead of opening up a powerpoint



"It's long been a dream of mine, to step into a client's office and instead of opening up a power point to try and explain what we do, to be able to take them on a tour and really show them what it is we do. Today, virtual reality has made that possible"

Ana Zambelli, Chief Commercial Officer, Maersk Drilling.

→ presentation to try and explain what we do, to be able to take them on a tour and really show them what it is we do. Today, virtual reality has made that possible,” explains **Ana Zambelli, Chief Commercial Officer at Maersk Drilling.**

Logistics, cost and safety issues often make it impossible for Maersk Drilling to provide customers with a first-hand experience of the rig.

Through virtual reality, the rig is brought to them instead. **Using a special camera, Kanda filmed a 360-degree shoot of the drill floor on the Maersk Resolute rig in Esbjerg.** Viewing this through a virtual reality headset transports the user onto the rig, allowing them to move around it as if they were actually there without ever leaving the comfort of the boardroom.

Another product uses an augmented reality app to transform a flat image of a rig into a 3D model that users can explore by zooming in and out of certain features.

Standing out in a tough market

It is hoped that such experiences will help bring Maersk Drilling a lot closer to their customers, not just on the sales front, but long before.

“We are in a very difficult market situation. Today, there are about 500 vessels out there and jobs for 200, so drilling rigs to a certain extent have become a commodity. There is a perception that they are all the same and that choosing between them comes down to price - but that just isn’t the case,” says Zambelli. “Our rigs have the



Photo: Christina Bode

“Virtual reality has been around since the 90’s but it died out as it was too expensive and computers weren’t powerful enough to support it back then,” says Kristian Andreassen, Director at Kanda.

technology to drill down into thousands of metres of water and earth while withstanding incredible pressures and adverse weather conditions. We needed to find a better way to demonstrate these incredible capabilities.”

Huge potential

So far, the technologies have proved so impressive that Maersk Drilling is already imagining other applications. “Moving forward, we see ourselves using these technologies to lower maintenance costs and for training and rig familiarisation programmes. They are opening up a whole

new world, in terms of how we qualify people for the job which at present involves moving them around the globe,” says Will McBeath, Senior Technical Account Manager, Global Sales at Maersk Drilling.

For Zambelli, the litmus test was a thumbs-up from her 10-year old son.

“It’s a fact that the oil industry is perceived as being a traditional and old fashioned one and we haven’t always been able to convey how exciting and technically advanced we are. When I showed this to my son, even he agreed it was cool, and I knew immediately that we were onto something.” ■

More pioneering projects in Maersk Drilling

Augmented and virtual reality are not the only technical solutions being explored by Maersk Drilling. Here are a few others that could change the future of drilling.

1. Remote drilling

This involves a demonstration project in which a driller’s cabin will be built inside a container that can be placed anywhere on the rig, or even on an onshore location several hundred kilometres away from the rig. The project takes advantage of live pictures from cameras and broadband data technology. As more and more operations on the drill floor have become automated, this removes the need for the driller’s cabin to be situated next to the drill floor. It is the first step towards a fully automated rig, which in the long-term could significantly reduce costs and improve safety.

2. Cruise control for drilling

Real-time drilling is a ground-breaking technology, in which data streams from a wide variety of sensors placed in and around the drill bit are analysed in real time. This in turn allows the equipment control system to carry out adjustments automatically. This could lead to lower well construction cost, and improved well quality.

3. Predictive maintenance

In an attempt to move away from the traditional, calendar-based, maintenance scheme, Maersk Drilling is exploring a sensor-triggered regime, whereby one only replaces a particular part when a sensor provides a warning that it is wearing out. This would reduce the financial burden associated with annual maintenance significantly.



Ready, set – **DRILL**

Photo: Maersk Drilling

ENERGY EXPERTISE | Drilling started successfully on the Culzean project in September. It was a major milestone for one of Maersk Oil's key projects and marked a strong collaboration with Maersk Drilling.

BY SAM CAGE

▣ The drilling team gathered to watch a combination of footage from a remote submersible and data scrolling across the screens – torque, weight, pump pressure.

All attention in the doghouse – the all-purpose room next to the driller's cabin on the Maersk Highlander rig, which is used as an office for the driller and storehouse for small objects – was on the start up of drilling on Culzean, the USD 4.5 billion Maersk Oil-operated North Sea project that is expected to deliver 5% of the UK's gas needs.

It was vital to ensure the drill string was vertical, in order to start the well correctly and hence make the

ensuing sections simpler, and the indicators showed that all the planning and preparation was paying off. Maersk Drilling acquired the newbuild Maersk Highlander in May and the teams from the two businesses have worked closely together to ensure the smooth start up.

"We've done a lot of work over the last three or four months to get the rig ready for operation, so it's really exciting to start using it the way it was designed to be. They are challenging wells to drill and you've got to be very vigilant," says Rohan Corlett, Maersk Oil's Drilling Supervisor.





Rohan Corlett, Maersk Oil's Drilling Supervisor: "You just have to be vigilant on Culzean's challenging wells."

Photo: Andy Ford

- It was an important milestone for both Maersk Oil and Maersk Drilling, which are both part of the new Energy division.
- "It's such a major project, not only for Maersk but also for the UK. It's really fascinating to be working on

The Culzean project

Maersk Oil operates the Culzean development with a 49.99% interest. Its co-venturers are BP (Britoil) 32% and JX Nippon, 18.01%

The field has resources estimated at 250-300 million barrels of oil equivalent

Production is expected to start in 2019 and continue for at least 13 years, with a plateau production of 60,000-90,000 barrels of oil equivalent per day

Culzean was approved by the UK Oil & Gas Authority in August 2015

The Maersk Highlander

The newbuild harsh environment rig was acquired by Maersk Drilling from a subsidiary of Hercules Offshore and has a five-year contract for work on Culzean

With legs of 167 metres, it can operate in 120 metres of water and has a drilling depth of more than 9,000 metres

It is capable of handling the high pressure and high temperature (HPHT) conditions present on Culzean and has an accommodation capacity of up to 150 personnel

such a big plan and being involved from the beginning," says Corlett, who was among the first batch of MITAS (Maersk International Technology and Science Programme) programme participants in 2006, which gave him the opportunity to build a broad base of experience across the oil and drilling industry.

Shared values

It has been the most accelerated project that **Lars Kasueske, Rig Manager for the Maersk Highlander**, has been involved with in his 22 years with the company.

"We basically didn't really know the rig when it was purchased in late May this year, and yet we turned it into a Maersk Drilling rig with a trained Maersk crew and all the Maersk Drilling systems implemented, and on top of that got the safety case approved allowing us to operate in the UK," Kasueske says. "All this was achieved over a 3 month period, due to the dedication of the people involved and having good systems, and the Maersk Drilling team behind us."

Both Kasueske and Corlett, the Maersk Oil drilling supervisor, point to the quality of the staff and teamwork between Maersk Oil and Maersk Drilling as key factors behind the successful start up of drilling – and some interesting ways of building up trust and cooperation.

"We got to know each other through a team building course before we came out here. We were out on a loch in Scotland, where we made a raft from barrels and wood, and sailed out to an island and camped in the woods. It's an unusual way of working together and learning how the team works," Corlett explains. "It's been really good to work with Maersk Drilling. We share the same values and mindset, and it's been a great experience to cooperate so well on such a big project." ■

Photo: Thomas Nielsen

Value opportunities in Energy

ENERGY STRATEGY | The overall strategic intent for the oil-related businesses is to create strategic agility and to focus on growing Maersk Oil as an energy company.

BY SAM CAGE

✉ **With global demand for oil products expected to peak within the next 10 years and the underlying market for oil production forecasted to experience a rebound, there continue to be opportunities for harvesting value for the oil-related businesses, as well as significant profits from oil production.**

Maersk has a long tradition in energy and through strong skills developed over decades – as demonstrated on Culzean, a complicated high-pressure, high-temperature (HPHT) field that requires particular expertise – it is well positioned to compete in a sector that continues to offer ample long-term growth opportunities.

“The businesses in the Energy division have the capabilities, strengths and talented and dedicated people required to be strong players in the industry transition that will take place over the next couple of decades,” says Claus V. Hemmingsen, Group Vice CEO, responsible for the Energy division.

The overall strategic intent for the oil-related businesses is to create strategic agility and focusing on growing Maersk Oil as an energy company. The businesses – Maersk Oil, Maersk Drilling, Maersk Supply Service and Maersk Tankers – will be managed with an active owner mindset to develop structural solutions to the strategic challenges.

More agility

Maersk Oil will build on its strengths in the North Sea, where it has a strong track record and can utilise the capabilities and cost-efficient operational set-up that has allowed it to make money, even with oil prices below USD 50 per barrel.

Continuous improvements have been made in operational performance and sustainable cost reductions in 2016, underpinned by a commitment to being incident free. Maersk Oil is maturing key development projects like Culzean and Johan

Sverdrup, and aims to strengthen its portfolio through acquisitions or mergers and to keep exploration activities and expenses at a low level.


For Maersk Drilling, the focus will be on continuing to deliver high-quality performance with existing assets such as the Maersk Highlander, enabling the best possible utilisation of the fleet with its workforce of skilled and dedicated employees. It will continue to take out cost, and investments will be limited to maintenance and selective investments in technology and innovation that provide immediate returns.

“The new strategy gives the businesses in the Energy business the freedom and agility to pursue individual solutions for future development”

Claus V. Hemmingsen, Group Vice CEO, responsible for the Energy division.

Despite the very difficult markets it is currently operating in, Maersk Supply Service is well positioned to broaden its scope of operations, into both the solution space as well as adjacent offshore segments. After a near term market decline and an expected longer term rebalancing, Maersk Tankers is a vehicle for growth as market leader in the product tanker segment.

“The new strategy gives the businesses in the Energy business the freedom and agility to pursue individual solutions for future development,” Claus V. Hemmingsen says. “There is an exciting time ahead of us as we explore the potential in the Energy division.” ■



Claus V. Hemmingsen: “The new strategy gives the businesses in the Energy business the freedom and agility to pursue individual.”



A NEW TEAM AT THE HELM

In September it was announced that A.P. Møller - Mærsk A/S will be reorganised into two separate divisions; Transport & Logistics and Energy. The change in strategy has brought with it a change in leadership at the top of the company. Here we introduce the senior management charged with steering the Maersk Group into a bright future.

The Maersk Group

The Maersk Group is an integrated transport & logistics company with multiple brands and is a global leader in container shipping and ports. Including a stand-alone Energy division, the Maersk Group employs roughly 88,000 employees across operations in 130 countries.

Maersk's headquarters in Copenhagen, Denmark.

MANAGEMENT, A.P. MØLLER - MÆRSK A/S



SØREN SKOU, GROUP CEO

A.P. Møller - Mærsk A/S, CEO, Transport & Logistics division and CEO of Maersk Line

Søren Skou joined Maersk in 1983. Over the next decade and a half, he held various positions in Maersk Line in Copenhagen, New York and Beijing. In 1998, Søren Skou joined Maersk Tankers, where he was CEO from 2001 to 2011. In 2012, he was appointed CEO of Maersk Line, a role he continues to hold today.

"The fast-paced changes of this world demand that we can adapt quickly, easily and at minimal cost while retaining the focus on each Business Unit. Our future set-up must effectively respond to these challenges."



CLAUS V. HEMMINGSEN, GROUP VICE CEO

A.P. Møller - Mærsk A/S and CEO, Energy division

Claus V. Hemmingsen joined Maersk in 1981 as a shipping trainee and moved into leadership roles in Hong Kong and Singapore for Maersk Line. In 2003, he became responsible for APM Terminals, before taking over the responsibility for Maersk Drilling and Maersk Supply Service in 2005, Svitser in 2006, and Maersk Tankers in 2012. From January 2014 to October 2016, Claus V. Hemmingsen's role focused on being CEO for Maersk Drilling and a member of the Group Executive Board.

"The new strategy and supporting structure puts in place the foundations on which we can build growing businesses. While making these changes, we must stay focused on what makes us successful – for Maersk Tankers, Maersk Drilling and Maersk Supply Service that means a strong operational performance and delivering for our clients. For Maersk Oil it means cost efficient and safe production and top class project management."



JAKOB STAUSHOLM, GROUP CFO

A.P. Møller - Mærsk A/S (effective 1 Dec. 2016) and Chief Financial, Strategy & Transformation Officer, Transport & Logistics division

Building on his position as Chief Strategy & Transformation Officer at Maersk Line, Jakob Stausholm will be taking up his broader responsibilities as of 1 December. Jakob Stausholm joined Maersk from ISS, where he was Group CFO. Before that, he spent more than 19 years with Shell in numerous finance-related positions, in Europe, Latin America and Asia, and as Chief Internal Auditor.

"Right now, we are faced with a massive digital revolution and new industry boundaries will arise in the future. Our starting point is that we have strong capabilities and have, in parts, an industry leading position. We will thus be able to meet the increasing need for new, innovative products offerings and offer digitalised services that are second to none. This expansion of our product capabilities is good news for our customers."



TRANSPORT & LOGISTICS

SØREN SKOU, CEO, Transport & Logistics



*The Maersk Line brand includes Safmarine, Seago Line, SeaLand, Mercosul Line and MCC Transport

Significant investment in digitisation

Maersk Container Industry and Maersk Line are to join forces in optimising container production planning, and developing new technology

Maersk Line is to grow its market share organically on a consistent basis

Svitzer is to pursue opportunities in collaboration with APM Terminals and Maersk Line

APM Terminals is to focus on the implementation of the new terminals currently under construction and win new profitable third party business

Damco is to collaborate more closely with Maersk Line in driving sales leads and volume to one another

Illustration: Erickson Enriquez



SØREN SKOU,
Maersk Line CEO

Søren Skou joined Maersk in 1983. Over the next decade and a half, he held various positions in Maersk Line in Copenhagen, New York and Beijing. In 1998, Søren Skou joined Maersk Tankers, where he was CEO from 2001 to 2011. In 2012, he was appointed CEO of Maersk Line, a role he continues to hold today.

"Maersk Line will grow market share organically on a consistent basis and will accelerate growth and, if attractive opportunities develop, drive industry consolidation through acquisitions."



MORTEN ENGELSTOFT,
APM Terminals CEO

Formerly CEO of APM Shipping Services and CEO of Maersk Tankers, Morten Engelstoft has a strong track record of delivering results, deep operational experience and is an excellent people leader. He took up his new position on 1 November.

"I look forward to working with the team as we enter the next chapter which will see us focus on getting more efficiency and utilisation from our terminal network while continuing to build business with our global customers."



KLAUS RUD SEJLING,
Damco CEO

Formerly Head of East West Trades in Maersk Line, Klaus Sejling took up his new position on 1 October. Klaus Sejling joined the Group in 1997. During his 20-year-career with the Maersk Group, he has held a number of leadership positions in Maersk Tankers, Maersk Line and the Group; as well as a four-year-period in Maersk Logistics.

"I am thrilled to join Damco at such an exciting time, to continue to drive growth and leverage synergies across the Transport and Logistics division."



HENRIETTE H. THYGESEN,
SVITZER CEO

Having joined the Maersk Group in 1994, Henriette H. Thygesen has previously worked for Maersk Tankers and Maersk Oil. Prior to her current role, she was Vice President and CEO for Damco in North Asia, based in Hong Kong.

"I am looking forward to working with the entire Svitzer team, and learning more about the business details and the levers that can differentiate our performance from the rest of the market – as well as creating sustainable growth."



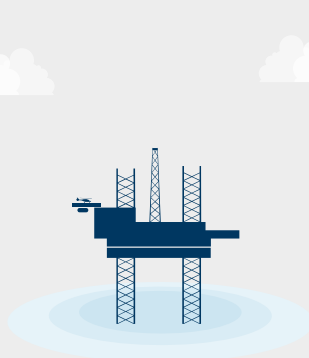
STIG HOFFMEYER,
Maersk Container Industry CEO

Stig Hoffmeyer joined Maersk Container Industry (MCI) as CEO in 2014. His career in the Maersk Group spans over 20 years, during which he has held a number of CEO positions in very different industries, e.g. Group's Operated Investment Portfolio, Maersk LNG, Maersk FPSO's, Rosti Group and DISA.

"As part of the new Transport & Logistics Division, we see great opportunities for MCI to continue developing new technologies which add value to the global supply chain."

ENERGY

Claus V. Hemmingsen, CEO, Energy division



Significant value in oil production expected over the next 15 years

- Maersk Oil is to become larger and more focused
- Focus the portfolio on fewer geographies to gain scale, with main focus on the North Sea
- Invest in long-term gas opportunities with market access and – over time – other more environmentally friendly energy forms
- Deliver value from already planned and committed investments

Oil services more challenged with limited long-term upside

- Maersk Drilling, Maersk Supply Services, and Maersk Tankers will continue to optimize their market position and operations with existing fleet and order book
- These businesses are to focus on uptime, utilisation and cost
- Further investments will be limited to maintenance



GRETCHEN WATKINS,
Maersk Oil CEO

Formerly Chief Operating Officer (COO) in Maersk Oil, Gretchen Watkins took up her new position of CEO on 1 October. Gretchen joined Maersk Oil in 2014, following more than two decades with BP and Marathon in a variety of senior leadership roles around the globe.

“We can face the future with optimism, because we have talented people and the skills to deliver value from this business.”



JØRN MADSEN,
Maersk Drilling CEO

Jørn Madsen comes from the position of CEO at Maersk Supply Service, a role he has held since 2015. Prior to that, he had a 25-year career in Maersk Drilling, most recently as COO, where he was instrumental in executing Maersk Drilling's growth strategy and laying the foundation for the company's operational excellence success.

“We should aspire to be the company of choice for our customers, because we deliver the service that helps solve their problems and creates value.”



STEEN S. KARSTENSEN,
Maersk Supply Service CEO

Steen Karstensen joined the Group in 1986 and has had a 30-year-career with the company in procurement, logistics, supply chain, in-house consultancy and other cross-functional areas. He has been responsible for Maersk Oil Trading and Maersk Maritime Technology, and helped to create Maersk Management Consulting. He comes from a position as Chief Procurement Officer and took up his new position on 24 October.

“I'm excited to take on this new role. Maersk Supply Service is currently operating in very tough markets, but nevertheless is well positioned to broaden its scope of operations.”



CHRISTIAN M. INGERSLEV,
Maersk Tankers CEO

Christian Ingerslev has had a 15-year career with Maersk Tankers where he held a number of leadership roles, including that of Chief Commercial Officer (CCO) since 2014. He has a profound knowledge of Maersk Tankers' business and has been instrumental in the development and execution of its strategy. He took up his new position on 1 November.

“The new setup for Maersk Tankers is very exciting. As market leader in product tanker markets with a well-established operational platform, we are positioned to take advantage of market volatility to generate value. With our “Taking Lead” strategy, the new structure and a great team we are definitely set out on the right path.”

People are back on the beaches

SECURITY IS GOOD FOR THE COUNTRY AND THE BUSINESS | **The APM Terminals Moin port project on Costa Rica's Caribbean coast** has had a wide ranging impact on the safety and security of the surrounding community, attracting people back to beaches once controlled by drug dealers, motivating local kids to attend school again and even shrinking the workload of the Limón police.

BY JOHN CHURCHILL

➤ Andres Cortéz lives just two-hundred metres down the road from the Moin School in Costa Rica. He wants to become an engineer; but for now, he is looking forward to finishing his 6th year at school. However, only six months ago, 11-year old Cortéz was reluctant to go to school and his mother worried about his safety and his future.

"They took everything they could – the chairs, the desks, the books, even the bars on the windows. They took the tin roof one time"

Silvia Raudes,
Principal of the Moin School.

"They took everything they could – the chairs, the desks, the books, even the bars on the windows. They took the tin roof one time," she says, pointing up to the new one.

High rates of crime and unemployment are facts of life in Moin and the surrounding communities. Security wasn't just a problem for the school but for the community in general. So while APM Terminals Moin is investing in local education, social development and environmental initiatives, the success of these initiatives as well as the positive impact the terminal has had on the community is largely due to the attention being given to security. According to the

"We had five robberies in a month and a half," says Silvia Raudes, Principal of the Moin School, of criminals that used to come at night and strip the tiny school bare.

contract, APM Terminals has agreed with the Costa Rican government to reserve 7,5% of the port's gross income for sustainable initiatives within the Limón community.

Free to learn again

There are no more robberies at the Moin School and the reason why is parked just outside the front gate: a K9 security patrol. Hired by APM Terminals, the guard sees the kids off in the afternoon and then begins patrols of the area until morning. Also, a new fence now surrounds the perimeter of the school grounds.

As a result, the Moin School's 108 children are back in regular attendance, according to Principal Raudes. The new desks, chairs and roof, along with pens and pencils are all still there, while the new paint on the outside of the building makes it shine in the sunlight.

APM Terminals has brought these and other major improvements as well, including internet access and durable, Wi-Fi-enabled XO laptop computers for all 108 students. It has also sponsored the school's involvement in science and innovation fairs and other learning journeys about robotics, space and other programs that were once outside the school's financial reach.

"There are 78 families in this community. We don't have the resources of urban schools," says Raudes. "Now, the children have a safe school and an environment where they can

be children and focus on learning, rather than worrying about their safety. And, they also have technology now. No one in this community has internet access or laptops, but now the students do. They are very proud. They look forward to coming to school now and don't have to worry when they go home."

Public places flourish again

Jaime Quesada is the Head of Security for APM Terminals Moin. As he manoeuvres his four-wheel drive pickup truck through the mud of the terminal site, he talks about the history and impact of drugs on the local community. Smugglers still bring drugs from Colombia, he says, and it still provides an income for some poor locals that help move it along. "But the difference now is like night and day," he says.

Quesada points to a family with small children playing on the beach just on the other side of APM Terminals Moin's perimeter fence.

"Before the project began, the drug dealers ran these beaches, so you would never see this. The people simply stayed away"

Jaime Quesada,
Head of Security for APM Terminals Moin.



"This is a huge infrastructure project with a lot of activity taking place in and around it. Besides the tight security the terminal keeps, there are also a lot of workers and officials coming in and going out. So the criminals don't feel comfortable operating here anymore," says Nelson Barquero, Deputy Director of the Limón Police (right). Jaime Quesada (left).

Photo: Jasper Schwartz





The children have a safe school and an environment where they can be children and focus on learning, rather than worrying about their safety. And, they also have technology now.

Photo: Jasper Schwartz

→ Another group of young adults are swimming and throwing a ball in the water. People now come with picnics and to watch the construction, he says. The sky is overcast, but the people are here enjoying themselves.

"Before the project began, the drug dealers ran these beaches, so you would never see this. The people simply stayed away," he says. "But not anymore. The project site security, school patrols and our partnership with the police has brought safety back to the area. People are back on the beaches."

Teamwork with local authorities

The Limón police are one of APM Terminals' closest and most important collaborators and partners. The security patrols that APM Terminals conducts around its project perimeter act as an extra set of eyes and ears for the police. They share information with each other about illegal or suspicious activity in the area as well as routine things like accidents on the roads into and out of the project site.



Community leadership

APM Terminals has agreed with the Costa Rican government to reserve 7.5% of the port's gross income for sustainable initiatives within the Limón community that focus on education and the environment. Chosen for its proximity to the terminal and importance to the local community, Moin School is one example of the initiatives being supported. Another example focuses on sea-turtle conservation. Costa Rica is an important hatching ground for several varieties of turtles. The company has sponsored a hatchery for turtle eggs and patrols the beaches together with the police and environmental authorities during the hatching season, in order to collect eggs before they end up on the black market.

"This is a huge infrastructural project with a lot of activity taking place in and around it. Besides the tight security the terminal keeps, there are also a lot of workers and officials coming in and going out. So the criminals don't feel comfortable operating here anymore. We have definitely noted a decrease in crime in Moín after the project began," says Nelson Barquero, Deputy Director of the Limón Police.

"APM Terminals wants to improve security and to promote the development of this community, and it wants to join forces with us to achieve this," he says. "Having a partnership like that is very effective and it also makes an impression on the public. It puts them at ease and makes our job easier and the city safer." ■

“The tension is so thick you could cut it with a knife”

FIGHT AGAINST CORRUPTION | Maersk Line is taking the fight against corruption into the classroom in the form of a new course at the World Maritime University in Malmö, Sweden.

BY MONIKA CANTY

► “The officials come aboard and they make it very clear they want something. They open their bags and lay them out on the windowsill. That’s the signal. Then there’s an intense battle of wills, a negotiation where seafarers are asked for something they won’t give. It’s very stressful, and the relief when the

officials disembark is overly felt. The tension is so thick you could cut it with a knife.”

Dr. Lisa L. Froholdt recounts her recent experience aboard a Maersk Line vessel. Assistant professor at the **World Maritime University** (WMU), in Malmö, Sweden; Froholdt was invited to sail with Maersk Line

to witness first-hand how Captains deal with demands for facilitation payments in preparation for a new anti-corruption course held at the WMU this year.

Corruption on the curriculum
Corruption has long been a challenge in the shipping industry, particularly →



Kristin Berglund, Head of Anti-Corruption in Maersk Line and Dr. Lisa Froholdt collaborated on the course at the World Maritime University in Malmö.

Photo: Christina Bode

→ in the form of facilitation payments – small payments such as cash, cigarettes or soft drinks sought by low-level public officials to perform routine duties.

Maersk Line helped develop the course – known as CORA – together with WMU as a way to bridge the gap between the private and public sectors on the corruption agenda; providing funding together with the A.P. Møller Foundation, and by offering to mentor any student who starts an anti-corruption initiative after they return home.

“The course establishes a common platform and exploration of corruption, its root causes and what can be done to create change,” explains Kristin Berglund, Head of Anti-Corruption in Maersk Line who collaborated with WMU on the project.

“The risks to us in the maritime industry from corruption are so great that an internal compliance programme is not enough to protect our own company and employees. We hope to collaborate further with the students when they return home. Corruption is a vast and complex problem, but it is not an impossible challenge if we work together.”

A very real problem

For the students – most of whom work in maritime authorities, many in high-risk countries – the course got to the heart of a very real problem that pervades the maritime industry across the world. Despite the sensitive nature



Photo: Christina Bode

“Corruption is a big battle but I see that education plays a very important role. In 10 years’ time, one of these students might be in an important place to make a change”

Captain Hossam Eldin Bakr, Lecturer, College of Maritime Transport, Egypt.

The new anti-corruption strategy

In the first seven months of 2016, a new Maersk Line anti-corruption strategy resulted in an 84% drop in the number of facilitation payments paid globally. The new strategy involves 24-hour support for vessels, and increased communication and knowledge sharing between Captains. The aim is to reduce facilitation payments in Maersk Line to zero.

A top maritime education

The World Maritime University (WMU) in Malmö, Sweden was founded in 1983 by the International Maritime Organization (IMO). Students come from all over the world to enrol in the masters’ programme. Alumni include Max Meija, previously of the Philippine Maritime Authority and Turkish Prime Minister Binali Yildirim.

The weeklong anti-corruption course (CORA) consists of five modules: corruption awareness, corruption and maritime security and safety; leadership, change management and communication, the psychology of corruption and negotiation techniques.

of the topic, there was a strong willingness to share experiences.

One student relayed how in his country there are thousands of ghost employees on public payrolls. "What do the rest of the employees do? Nothing. They are just names on a list. They got there via corruption because somebody knows somebody."

Another student revealed that he had suffered sleepless nights after receiving threats to his family's safety, and eventually resigned from a position at a port after having been pressured into using company funds to pay for a manager's holiday.

But what also became clear during the week is that corruption is not just something that exists on the part of public authorities, but also something that is present



Photo: Christina Bode

"An important message for me was that public service can be done without corruption. It's a duty to serve people"

Nino Gorgoshadze from the Maritime Transport Agency in Georgia.

within the private sector, and both sides have to take ownership of the issue.

As Captain Hossam Eldin Bakr, Lecturer at the College of Maritime Transport, Egypt, pointed out: "Some companies engage in corruption in developing countries to get their business done. So they are complicit. How can you apply one rule in your country and ask for something different in other countries? We need to fight corruption as a whole. You cannot catch the tail and leave the head."

Making a change

The hope is that the training will provide future leaders of the maritime sector with the knowledge and tools to help in fight against corruption.

"Corruption is a big battle, but I see that education plays a very important role," said Captain Bakr.

"It might take a long time to get into the system and inspire people, but if we incept these ideas to today's students, in 10 years' time, one of them might be in a place to make a change."

Nino Gorgoshadze from the Maritime Transport Agency in Georgia said she now felt inspired to stand up against the issue immediately. "There are 47 countries represented here and it gives the message as to what is moral and what is not. We have learnt how widely corruption can spread, and become aware of the consequences it can have."

"An important message for me was that public service can be done without corruption. It's a duty to serve people. If your education is not in tune with these core values, you cannot serve your country."

"If you see corruption and there are high-level people involved it's not always easy to do something. But if you don't take steps to prevent it, you are part of the system. So somehow you have to find a way. To be silent is not a way out," says Gorgoshadze. ■

"They tried to undermine and intimidate us"

FIGHT AGAINST CORRUPTION | Captain Morten Busch's personal, first-hand account of his own experiences on board Maersk Norfolk.

BY MONIKA CANTY

"As Masters we are on the frontline of the fight against corruption," said Captain Morten Busch. During the course held at the World Maritime University, Busch gave students a personal, first-hand account of his own experiences on board the Maersk Norfolk, which charts a route through the Mediterranean.

"At one particular port it was common practice for officials to demand cartons of cigarettes as a facilitation payment to enter. As pressure grew for us to cut these payments to zero, it became a battle. Officials resorted to different tactics. At first, we just had one official come aboard, but then we had two or three or even six. They tried to undermine and intimidate us. They insinuated what could go wrong and what retaliation could entail if we did not pay. It was highly stressful because I need the pilot's assistance to bring the ship in safely, and it's hard to concentrate on a dangerous job while having heated debates.

"It helped us to have the support of the anti-corruption department at Maersk. We copy them in to any correspondence with officials. I inform officials that if they break the law we will report them to the authorities and start legal proceedings. I ask them not to communicate with us on closed radio channels. It makes a big difference to have an organisation behind us in standing up to corruption. We stood firm and eventually the message got through that we don't make facilitation payments. The results speak for themselves. Facilitation payments in Maersk Line have been reduced by over 80% and I'm confident we will reach our target of zero."



Photo: Christina Bode

Captain Morten Busch:
"Facilitation payments in Maersk Line have been reduced by over 80% and I'm confident that we will reach our target of zero payments."

"It's engagem ground that b



ent on the rings change"



In May, two Maersk vessels landed in the ship recycling yard in Alang, India for recycling under Maersk's new recycling initiative.

Photo: Thure Andersen

SHIP RECYCLING | Maersk's intention to have vessels recycled in **Alang, India**, and its concurrent decision to sell two container vessels to one of the leading ship recyclers in the area has raised public concerns and triggered controversy. Its ambition is to change an industry.

BY ANDERS ROSENDAHL

► The work to recycle the Maersk Wyoming and Maersk Georgia at the ShreeRam ship recycling facility, more specifically plot number 78, is well underway. In May, **the two Maersk vessels landed in the ship recycling yard in Alang, India, for recycling under the new Maersk recycling initiative.** The bows of both vessels have been dismantled. Large blocks of the vessels have been cut and lifted onto the impermeable floors, oily blocks are thoroughly cleaned in a designated impermeable area, before they are

"All past experience of changing any industry, points to the fact that real engagement on the ground leads to effective change"

Capt. Prashant S. Widge,
Head of Ship Recycling at
Group Sustainability.

are taken to the backyard where they are cut into smaller pieces. The work is unhurried and deliberate.

"All past experience of changing any industry, points to the fact that real engagement on the ground leads to effective change," says Capt. Prashant S. Widge, Head of Ship Recycling at Group Sustainability, adding:

"Our presence in Alang is a huge encouragement to the ship recyclers because they feel that someone is supporting their will to improve their operations and the investments they have made. Our objective is to improve the industry standards."

Widge is responsible for the activities related to responsible ship recycling from the time the vessels arrive in Alang. Supported by an onsite Maersk team at plot number 78, he is responsible for ensuring that Maersk's responsible ship recycling standards are complied with. He also enters into dialogues with other ship recyclers with the





Photo: Anders Rosenhøj

With the Maersk Wyoming and Maersk Georgia in the background in Alang, Capt. Prashant S. Widge, Head of Ship Recycling at Group Sustainability, briefs the onsite team of Maersk employees and external consultants consisting of (left to right) Bhagwanbhai Tandel, Bosun; Ashok Kumar, Naval Architect and Capt. Abhay Kumar, QHSE Superintendent.

→ aim of encouraging them to invest in and upgrade their facilities.

"These dialogues have proven to be successful, as close to a dozen ship recyclers are now working towards an up-gradation of their facilities," Widge says.

Back in Alang

In Alang, in India's north western state of Gujarat, 167 ship recycling facilities are lined up next to each other, forming a 10-km stretch on the beach. These days, the two Maersk vessels in plot number 78 are at the centre of public attention.

Historically, Alang's beaches have been an epicentre of controversy. For a large majority of workers and yards, both working conditions, and workers' living conditions are poor, sometimes appalling, and the impact on the environment is a source of concern. In some yards, however, improvements in recent years have seen Maersk come to Alang.

"A new generation of ship recyclers in Alang has done a lot to change the business' outlook. If we were to stay on the side line,

demanding that they improve their standards further before we start engaging, we may close the window of opportunity that we have right now. Things are already improving," Widge says.

One joint initiative from Gujarat Maritime Board and the ship

"There is a willingness to improve as long as these recycling facilities are given the right direction from responsible ship-owners"

Capt. Prashant S. Widge,
Head of Ship Recycling at
Group Sustainability.

recyclers is a management facility for handling hazardous waste from vessels, which is a key element of responsible ship recycling. A five metric tonne per day organic waste incineration plant, bilge water treatment plant and four big land-fills for dumping

inorganic waste were opened in 2005.

"There is a willingness to improve as long as these recycling facilities are given the right direction from responsible ship-owners. Putting ships on the ground is our admission ticket to giving this direction. We are seeing a ripple effect as other facilities have begun investing to upgrade," Widge says.

Onsite, hands-on

The Shree Ram Group owns four plots in Alang. Three years ago, Chetan Patel, the owner, decided to upgrade one of the facilities, plot number 78, aiming to be certified under the Hong Kong Convention for the Safe and Environmentally Sound Recycling of Ships, which was adopted by the International Marine Organization (IMO), a United Nations' specialized agency, in 2009.

After meeting the criteria outlined in the Hong Kong Convention, plot number 78 was audited again, this time according to the stricter Maersk responsible ship recycling standards. Then negotiations, eventually seeing Maersk vessels arrive

to the plot. Shree Ram was given a discount, as compliance with Maersk responsible ship recycling standards results in lower productivity, for improving further and having an onsite Maersk team to oversee and direct the work. This team has the authority to stop-work, which has been exercised 13 times.

Continuous progress

"We have even seen improvements during the short time we've been here, but things still aren't perfect. Many of the necessary hardware and capital investments have been made, but what really takes time to change is the safety mindset. I think we are a few years away from changing this, but I am confident we can make it," says Widge.

Plot number 78 is, however, on the verge of making one more capital investment that promises to be a game-changer: A 300-tonne capacity crane that can lift 50-60 tonne blocks directly from the ship's bow and put them onto the impermeable floor.

Looking back after nine months on the job, Widge has no regrets. He was captain of a merchant vessel at 28, working for Maersk Line's Marine Standards Team for close to four years before taking the job with responsible ship recycling. Widge welcomes the new challenge, including the concerns and criticism that NGOs have voiced:

"We are just embarking on this journey, and criticism is welcome. We will collaborate and continue our dialogues with all involved stakeholders. From this point on, we will only be increasing our standards. The way that the Maersk Wyoming and Maersk Georgia are cut will form a baseline and we will set the bar higher when the next vessels come in," Widge says.

His plan is to engage all involved stakeholders in a constructive dialogue with the key objective of improving the overall ship recycling industry.

"With a sensitive project of this magnitude, no one person or company can make a difference on their own. We are engaging in the development of sustainable ship recycling for the long term." ■

Maersk tightens its ship recycling procedures

SHIP RECYCLING | Maersk is introducing contractual steps to ensure that its sales contracts include a strong financial incentive for ship recycling to be carried out responsibly.



Claus V. Hemmingsen: "We have actively participated in, and worked directly with, the yards in Alang, India, to improve conditions there and to influence the industry as a whole."

BY CHRISTINE DRUD VON HAFNER

► In the wave of discussions on Maersk entering the ship recycling sector in Alang, Maersk has faced criticism for its handling of two independent cases related to ship recycling. One related to the FPSO North Sea Producer that was sent by its new owner to a ship recycling yard in Bangladesh, despite Maersk stipulating in the contract that the production unit, at the end of its lifetime, was to be recycled **according to the Hong Kong Convention.**

The other case relates to 14 chartered-in Starflotte ships whose contracts Maersk wanted to end ahead of time in 2014. In the final agreement with the owner, Maersk incentivised recycling at the best price, which effectively means recycling at sub-standard yards, which is what the owner chose to do

when the vessels were returned. In the latter case, Maersk has publicly acknowledged, and regrets that it indirectly incentivised the owner to recycle at sub-standard yards.

Group response

As outlined by the Head of the Sustainability Council, Claus V. Hemmingsen, the Group has responded to these cases by tightening its procedures:

"We have actively participated in, and worked directly with the yards in Alang, India, to improve conditions there and to influence the industry as a whole. Therefore, it is regrettable that in spite of these initiatives there are examples of how we have pushed in the opposite direction of our own policy. In the future, we will ensure that our

In 2009 the Group introduced a responsible recycling policy and expressed its support for the Hong Kong Convention. Since then, the Group has been waiting unsuccessfully for seven years for a global agreement on ship recycling. Despite having invested great efforts in the attempts to achieve a universal ratification of the UN's Hong Kong Convention, which sets global minimum standards within safety and environment, the Group is still waiting.

→ sales contracts contain a very strong incentive for ship recycling to be carried out responsibly," says Claus V. Hemmingsen.

Minimising the financial incentive

In 2009, the Group introduced a responsible recycling policy and expressed its support for the Hong Kong Convention. Procedures were further tightened in September 2016, in order to minimise the financial incentive for buyers to recycle irresponsibly.

The new contract terms are based on the value of the vessel at the time of sale. If the value is low (less than 25% of the highest recycling price), Maersk will not divest but will recycle the vessel according to its standards.

If the value is higher (25-40% above the highest recycling price), the new owner will be required to operate the vessel for a further two years or to recycle in accordance with Maersk's standards. When the vessel has been operating on behalf of others beyond a period of 24 months, Maersk

can no longer take on this extended responsibility.

If the value is high (more than 40% above the highest recycling price), the vessel can be resold without restrictions, as there is no financial incentive for the buyer to recycle, at this point in time.

"With these adjustments, Maersk expands the responsibilities that the Group takes to ensure responsible ship recycling. The tightened policy further clarifies the fact that Maersk will not enter into contractual agreements that encourage the new owner to find the highest price for steel in the future," says Claus V. Hemmingsen and underlines: "We stand by our commitment and intention to continue working with and developing the facilities at the Alang yards just as we continue to support global initiatives to ensure equal international requirements and conditions. Only global regulation will ensure a definitive stop to the critical conditions that we see today." ■

Maersk su

SHIP RECYCLING | As a minimum, yards that Maersk collaborates with must be certified according to the Hong Kong Convention.

BY FLEMMING J MIKKELSEN

➤ Maersk supports a global agreement on responsible ship recycling. Since 2009, when Maersk introduced a responsible recycling policy and expressed its support for the UN's Hong Kong Convention, Maersk has put great effort into pushing for its universal ratification. The convention was negotiated in the International Maritime Organization (IMO) and defines a set of global minimum standards on safety and environmental issues related to ship recycling.

Maersk supports recycling yards in Alang, India, that demonstrate a willingness to change, and their efforts have already led to significant progress. As a minimum, yards that Maersk collaborates with must be certified according to the Hong Kong Convention. Since sending two vessels to the Shree Ram yard at Alang for the first time in May this year, Maersk has witnessed significant progress in several areas.

In the yard, 70% of the workers have received intensive safety training and instructions from the independent British assessment services provider, Lloyds Register Quality Assurance, and other organisations. The remaining 30%, who perform less dangerous tasks, have also received safety training specially targeted towards their tasks.

Other examples of the progress achieved are:

- As opposed to practices used elsewhere in the local area, the environmental recycling plan outlined by said convention

Facts on cases

North Sea Producer

- The FPSO North Sea Producer operated in the UK North Sea from 1997-2015 and was owned by the North Sea Production Company Limited (NSPC), an independent British company owned 50/50 by Maersk and Odebrecht, a Brazilian company.
- Following contract termination, the North Sea Producer was sold and transferred to a buyer in April 2016 on an "as is, where is" basis, whereby the buyer took over operational and legal responsibility for the unit.
- In August 2016, Maersk was made aware of the fact that the North Sea Producer had been sent to a recycling yard in Bangladesh, where conditions do not meet the requirements of the Hong Kong Convention. Maersk had contractually bound the buyer to the Hong Kong Convention but the buyer chose to violate the contract.
- An internal legal study has concluded that neither Maersk nor NSPC can prevent the recycling from taking place or impose a financial legal claim against the buyer.
- The Maersk Group has subsequently broken all commercial relations with the buyer.

Starflotte

- In 2005, Maersk Line acquired P&O Nedlloyd and with this company, a chartering agreement relating to 14 container ships, called Starflotte.
- Maersk Line later estimated that the ships did not meet its requirements for the remaining contract period and negotiated an agreement with the owners regarding the termination of the rental agreement and recycling of the ships, in return for compensation.
- The steel price the owner could obtain for recycling the vessels was included in the calculation of the commercial transactions between Maersk Line and the ships' owner at the termination of the agreement.
- The vessels were subsequently recycled at sub-standard yards when their contracts ended in 2013.

ports responsible ship recycling



Photo: Thue Andersen

means that the majority of a vessel is dismantled on a surface whereby there is no contact between ship parts and the surrounding sand or water.

- Use of appropriate personal protective equipment is available and required.
- All workers are paid the minimum wage plus 200 % in over-time payment and they have a contract—neither of which are otherwise practiced by the industry in the local area.
- For the vast majority of the shipyard's employees, housing conditions have been significantly upgraded and the yard is in the process of improving the housing conditions of the remaining employees.

Annette Stube, Head of Group Sustainability says that when

Maersk decided to collaborate with ship recycling yards in India everyone was fully aware of the risk of being criticised as the yards were not yet observing the regulations fully.

"We can document the main improvements that have already been achieved and we now see that the recycling yards' engagement in the plan has led to others following suit. **When we begin negotiations on the recycling of the next vessels, we will invite a number of other yards in Alang that, like Shree Ram, already follow the Hong Kong Convention and will commit to meeting our standards," Stube says, adding that four shipyards have announced that they are ready and have already initiated new investments in improvements impacting hundreds of workers.**

"When we begin negotiations on the recycling of the next vessels, we will invite a number of other yards in Alang that, like Shree Ram, already follow the Hong Kong Convention and will commit to meeting our standards"

Annette Stube, Head of Group Sustainability

Annette Stube underlines that the Group complied with standards of openly communicating to media and NGOs prior to initiating the recycling activities:

"Instead of waiting on the sideline we have taken action and the results we have achieved in six months are far more comprehensive and far-reaching than those achieved during the seven years of waiting for a global agreement." ■

No one has been **thinking**

MOTIVATING TRUCK DRIVERS | Traffic in India has boomed parallel to its economic growth. This has put already congested roads under further pressure and led to a deterioration in road safety. Targeting truck drivers through an unorthodox partnership, Maersk has put down a small bet, aiming to make a big impact.

BY ANDERS ROSENDAHL

➤ Statistically, Prasad Malhotra's accident was just waiting to happen. After 26 years in a truck on India's roads, his number was up and he was very close to becoming one of the 231,000 traffic related deaths that, according to the World Health Organization (WHO), haunt India every year.

The drama arose when an oncoming car began swerving. Seconds later, it collided head-on with Malhotra's truck.

"I was knocked senseless, but thanks to a miracle, I survived," Malhotra, aged 46, recalls of the accident that, four years down the road, still sits at the back of his mind whenever he gets into his truck.

Uninsured, like the vast majority of India's 2.5 million truck drivers, Malhotra was unlikely to have received any medical treatment for the injuries that he inexplicably dodged. Many of his colleagues have not been as lucky, he admits.

Better road safety

Parallel to its growing economy, India's traffic has increased and road safety has deteriorated. More

India's infrastructure challenge

'Unlocking growth in India' is the title of a study the Maersk Group has carried out, identifying how reducing the hidden costs of trade can drive further growth in India. According to the study, the Indian business community often cites inland infrastructure as the single most important hindrance to doing business. The study furthermore states that reducing the costs of trade by 10% has the potential to generate additional exports of up to 5-8%. The Maersk Group has entered talks with industry and government stakeholders in order to identify prioritised focus areas, in which it can channel its initiatives and efforts.

and more people are being killed in road accidents and according to the WHO, the associated economic losses – estimated at 1-3% of GDP – are likely to increase unless investments to improve road safety are made.

According to a Maersk study, the Indian business community often cites inland infrastructure as the single biggest hindrance for doing business and this is why better road safety is one of Maersk's main priorities.

At the heart of the problem, and of the solution, are the truck drivers. Learning-by-doing is the

entry ticket to this unorganised and vulnerable group, whose workdays easily exceed 18 hours. Now they are the target of an ambitious three-year programme for change funded by Maersk.

"Our own business is linked to the hinterlands and the safe movement of containers, so it makes sense for us to support the drivers and address this industry-related issue. We are in this for the long haul," says **Julian Bevis, a senior director with the Maersk Group in India.**

Maersk in India has been involved in Corporate Social Responsibility (CSR) activities for years, with business units taking local initiatives. When legislation was passed requiring companies based in India to spend 2% of profits on CSR activities, Maersk decided to take a strategic approach, targeting projects in areas related to its own business.

The first phase of the project, involving 3,000 drivers, was carried out from May to September. The second phase targets 25,000 drivers as well as truck owners, police and authorities, pushing for fair wages and a fair working environment for the drivers. Documenting activities

Many truck drivers start young and lead unhealthy lifestyles. 'The Truck Driver's Motivational Project' aims to motivate the drivers to improve their lives.



Photo: Manoj Roy

of us until now

Photo: Monoj Roy



and social impact over the course of three years, the aim is to create a model project that can be replicated across India.

"With the right approach, we are confident that we will be able to make an impact," says Julian Bevis.

The truck driver's own decision
A Kolkata based non-governmental organisation (NGO), Seva Kendra, is running the initiative called 'The Truck Driver's Motivational Project'.

"Our first goal is to motivate truck drivers to take better care of themselves," says Mahua Chatterjee, a project coordinator with Seva Kendra.

Chatterjee is also working on a Ph.D. in social psychology and is keenly aware of the fact that change comes from within.

"We cannot change people, but they can modify their own behaviour. In that sense, we are not doing any favours, we are only

helping. We can motivate them, but any change is ultimately their own decision."

During a half hour session near the port in Kolkata, Chatterjee and her colleagues walk roughly 30 drivers crammed into a small room through various aspects of the project, all revolving around improvements that they can make to their own lives and road safety. The meetings have been going on for months and the drivers listen with keen interest.

An industry approach

Devandra Singh has been a truck owner for 27 years and is a firm supporter of the initiative:

"Drivers make this business, so what is good for the drivers is good for the owners. It is also good to have an outside party involved. They can engage with drivers and owners in a way that an insider cannot. Now we just hope that this

is a sustainable project. Too many NGOs have come and gone," he says.

Stakeholders across the board point to industry effort as the only feasible route to change. Individual players can only make small improvements in an environment that is racing towards the bottom. For the industry as a whole and the country, however, the business case is crystal clear.

Many truck drivers start young and find it hard to leave, unable to find other employment. Thus, apart from escaping his accident unharmed, Prasad Malhotra's story is a common one, getting behind the wheel when he was only 16, he was drawn by a macho lifestyle he had seen on TV. Reality turned out to be less glamorous and lonelier. This is why he appreciates The Truck Driver's Motivational Project:

"No one has been thinking about us until now." ■

Mahua Chatterjee of 'The Truck Driver's Motivational Project' speaks to truck driver Prasad Malhotra. "Many new drivers are illiterate and don't know the traffic laws," he says.

Shipping solar energy into



In 2015, solar power covered more than 1% of the global electricity demand for the first time in history, according to Solar Power Europe.

MARKETS | Solar energy is on course to meet 20% of global energy needs by 2027 and Chinese producers dominate the industry. Trina Solar is the world's no. 1 in deployed capacity and in a recent tender, Maersk Line was awarded 50% of the Chinese company's volumes. Agility is key to catering for the ever-growing volumes of the company.

BY ANDERS ROSENDAHL

Working around the clock to keep up with demand, Trina Solar's production perfectly illustrates the state of the global solar industry. It is booming and en-route to yet another record-breaking year.

In 2015, solar power covered more than 1% of global electricity demand for the first time, according to Solar Power Europe. In addition, Oxford University predicts, that solar energy is on course to meet 20% of global energy needs by 2027.

Chinese dominate the industry

The solar industry is picking up the pace and Chinese producers dominate the industry. One of these companies, **Trina Solar in Changzhou, China**, is the world's no. 1 in deployed capacity and in a recent tender, Maersk Line was awarded 50% of the company's volumes. Agility is key to catering for the ever-growing volumes of Trina Solar.

"The biggest vessels cannot call

"I would like to give credit to our focus on technological innovation, high quality standard, and our success in globalisation"

Vice President and Head of Global Sourcing at Trina Solar, David Du.

Waigaoqiao terminal making it a bottleneck for any carriers if Trina Solar wants to load a huge order," says **Wilson Xu, Head of Shanghai and Yangtze River Sales at Maersk Line.**

"At Maersk Line we saw this and we are considering the possibility of introducing an additional call to Yangshan terminal, which solves the problem. Even with the biggest orders, they will never have a headache making the shipment," says Wilson Xu, adding that the partnership between Trina

Solar and Maersk Line has been developing and growing since 2009.

The potential for collaboration is increasing. According to Greentech Media, a media and research company that covers the area of green technology, global shipments of solar panels grew by 42% in 2015 to 59.7 GW. McKinsey and Company, a management consultancy firm, also sees the solar industry poised to assume a bigger role in global energy markets with widespread and significant impact on businesses and consumers as it evolves.

Going global

For Trina Solar, globalisation has been just as important as anything else to its success. Serving customers in over 63 countries, shipping is an integral part of its value proposition.

"I would like to give credit to our focus on technological innovation, high quality standard,

high gear



Photo: Scampix



Photo: Anders Rosendahl

"As a leader in the industry, Maersk Line has the ability to serve our needs," says Dave Du, Vice President and Head of Global Sourcing at Trina Solar. Based in China, the company has customers in North America, Latin America, Europe, Africa, Australia and India.

and our success in globalisation," says Vice President and Head of Global Sourcing at Trina Solar, Dave Du, when asked how a company founded in 1997 has managed to take the industry lead.

"Excellent shipping services ensure that our customers receive products on time and at competitive costs so they can meet their project timelines and financial goals," says Dave Du and elaborates on Trina Solar's partnership with Maersk Line.

"Maersk Line provides efficient and reliable shipping services at competitive prices. It is all about quality, costs, on time delivery, and flexibility that differentiate a world-class logistics provider from the rest."

In its infancy, the solar industry depended heavily on subsidies, but as it continues to drive down cost, the point where it can compete head-to-head with conventional energy sources is approaching fast. 'Grid parity' describes the situation when a clean energy like solar costs the same as a conventional energy form from the grid.

"Solar will reach grid parity in places like Germany, Italy and California within two to three years and we are optimistic that solar energy will reach grid parity globally by 2020, when we expect solar to become the number one source of energy in the world," says Dave Du.

Thus, there is no breathing room on the cards for either Trina Solar's production line or Maersk Line's agility. ■

News in brief

Maersk Line teams up with the two largest ports in the US

Maersk Line and the ports of Los Angeles and Long Beach are partnering to measure the environmental benefits of a USD 125 million upgrade on the part of 12 Maersk container ships.

This will involve the installation of high-tech equipment to track vessel emissions and energy efficiency over the next three years, enabling more transparency and ultimately reducing the environmental impact of vessels calling **at the San Pedro Bay port complex.**

The two ports are contributing a combined USD 1 million to real-time tracking systems that represent an industry leading application to pinpoint vessel emissions while ships are at sea and at berth. Unprecedented in its scope and scale, the three-year data collection and analysis project called "The Connected Vessel Programme" builds on the USD 125 million Maersk Line has invested in its "radical retrofit" program to reduce fuel consumption and increase the capacity of the vessels that regularly call at the San Pedro Bay ports.

"Maersk Line's extraordinary commitment to cleaner, more efficient vessel operations represents a quantum leap in the environmental progress of our entire industry," says Port of Los Angeles Executive Director Gene Seroka. "We applaud Maersk Line for its leadership and innovation, and we are eager to do our part to advance fundamental change that will result in cleaner air for our surrounding communities and around the world."

Integrating Group and business support functions

The next level structure of the Transport & Logistics division has been defined, integrating the Group and business support functions even further.

In practice, this means that Group Functions will organisationally be reporting into the T&L Management Board, while maintaining certain activities to also deliver its services to the Energy division where needed.

Each functional leadership team will commence work and follow a defined process to ensure their respective organisations are fit for purpose and optimised to meet the needs of each of the brands in the best possible manner. This process has been designed to be as quick as possible to reduce uncertainty, while ensuring all Brands and Group are represented in the organisation design process.

In a career, up is not

DUAL CAREERS MATTER TO GLOBAL TALENT | Spouses of internationally mobile employees can have a difficult time finding work in a foreign country, as Ayesha Hartlett discovered. But thanks to her ingenuity, and a new network supported by Maersk, she found a way.

BY MONIKA CANTY

➤ **As a global company, thousands of Maersk's international employees work in a foreign country.** Moving to

a new job in a new country is a challenge in itself. But that challenge gains a new dimension when considering that many of these people are accompanied by their spouse or partner who may have given up their own job to follow them abroad.

According to global HR consultancy Mercer, one of the main reasons for expat workers to leave a foreign assignment is that their partner has not found a job and is unhappy in the new country. In a 2015 report, 41% of the multinational companies surveyed labelled 'spouse / partner unhappiness' as a key reason why international assignments fail.

A daunting experience

HR professional Ayesha Hartlett experienced this situation first-hand when she left her friends and family in South Africa, to follow her husband to Denmark when he landed a job at Maersk in Copenhagen.

"It was a daunting experience to come to a new country where you don't know anyone, you have no network, you're not working and you're faced with one rejection

letter after the other," says Hartlett. To kick-start her job search, Hartlett got involved with the International Dual Career Network (IDCN). Maersk is a founding member of its Copenhagen branch, which aims to facilitate the job search of mobile employees' partners, as well as provide companies with access to a highly qualified international talent pool.

The network is run on a volunteer basis by partners, who arrange events on topics such as the local job market and interview techniques, as well as networking opportunities with recruiters from member companies.

Tough in the beginning

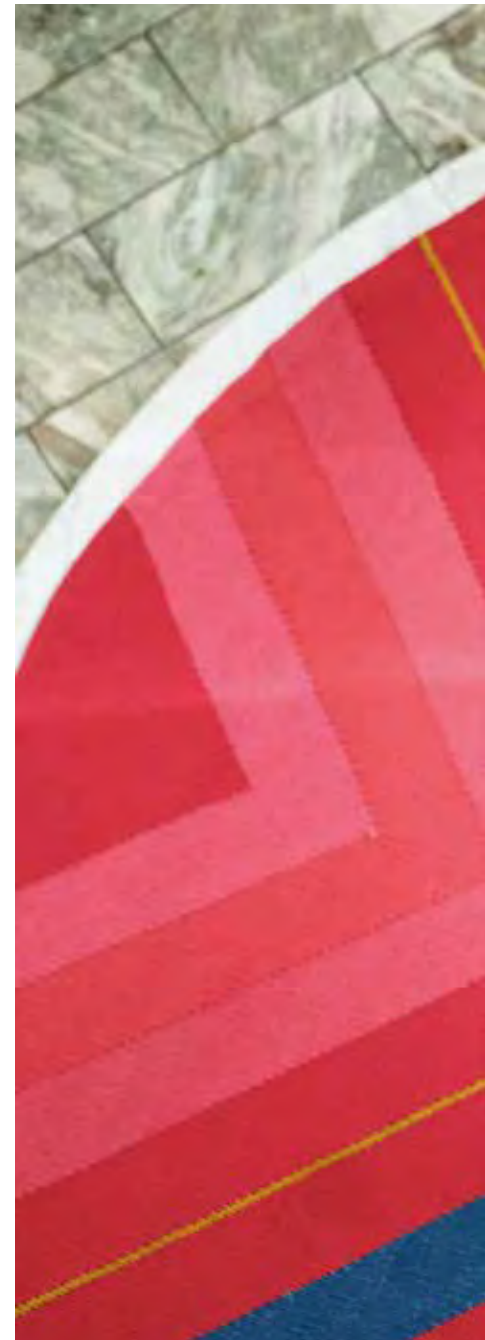
Through the network, Hartlett contacted Maersk and offered to volunteer in its HR department as an intern.

"Up is not the only way forward in a career," says Hartlett. "I was open to taking a sideways step through an internship. I accepted it would be tough in the beginning but I think doing so showed I was determined, pro-active and willing to get involved."

Her determination paid off. Hartlett used her time at Maersk to

International Dual Career Network (IDCN)

IDCN is a global non-profit organisation founded in 2011 by Nestlé in Switzerland to facilitate the job search of expat employee spouses, and provide companies with access to an international talent pool. As a global partner, Maersk works with IDCN chapters in 13 cities around the world, including Hong Kong, Singapore, Dubai and London, and the network is growing. www.idcn.info



deliver results on her projects, get a feel for the working culture and build relationships with relevant stakeholders. By the time her four-week placement was up, she had landed a job as Global HR partner at Maersk Container Industry (MCI).

Ricardo Sookdeo, Head of Group Talent Management says: "At Maersk we make an effort to

the only way



Ayesha Harlett: "Up is not the only way in a career. I was open to taking a sideways step through an internship."

Photo: Peter Elmholt

"It was a daunting experience to come to a new country where you don't know anyone, you have no network, you're not working and you're faced with one rejection letter after another"

Ayesha Harlett, Global HR partner, Maersk Container Industry (MCI).

support employees in making a smooth transition when relocating to a new country. That also means thinking of the reality their partners are met with when looking for a job. They are often very qualified people who really want to work, so we need to do everything we can to support them in finding job opportunities." ▣



Welcome support for working mothers

BY MONIKA CANTY

➤ **When Anaguelen Gonzalez had a baby in June, she was one of the first employees to benefit from Maersk's new global maternity leave policy.** Introduced in April, it entitled her to 18 weeks of leave, and a return to work with 20% reduced hours at full pay for six months.

Now back at work as Global Talent Deployment Manager in APM Terminals in The Netherlands, Gonzalez has opted to use her reduced hours to spend Thursdays at home with her four-month-old son, Diego.

"Usually, on weekdays I come home and put him straight to bed, so it means a lot to be able to spend an extra day each week with my son, while still being able to continue with my career. It has improved my work/life balance and has given me more time to see him grow," says Gonzalez.

"My manager has been very supportive. We worked together to agree on how to make it work for me and the business. I think it requires flexibility on both sides."

Good business sense

The new policy is designed not only to make life easier for new parents; it also makes good business sense. A study of 76 countries across the Group revealed that between 2012 and 2014, roughly a third of women left Maersk after having children. Approximately 80% did so within the first 12 months of their return from maternity leave.

Maersk aims to reach a global best practice maternity retention rate of 90%. "If we hit that ambitious target, it would mean a modest saving for Maersk, while at the



Photo: Private

"It means a lot to be able to spend an extra day each week with my son. It's a good message for Maersk to send that it values working mothers." Anaguelen Gonzalez, Global Talent Deployment Manager at APM Terminals, with her son Diego.

same time, giving mothers more time to spend with their new-borns in those first crucial months," says **Rachel Osikoya, Group Head of Diversity and Inclusion.**

"I come from Mexico where the standard maternity leave is just 40 days after birth and there is still no

concept of part-time work, so this is a very welcome policy for me," adds Gonzalez. "It's a good message for Maersk to send that it values working mothers. The challenge is to implement it without impacting the careers of the female workforce." ■

MY MAERSK

Rodrigo Arrea combined a passion for engineering with the stubborn pursuit of a dream to become the senior engineer in charge of his country's largest ever private infrastructure project – at the age of 31.



Photo: Jesper Schwartz

A big wave worth waiting for

BY JOHN CHURCHILL

✎ A decade after first hearing about its possible construction, and subsequently betting his education and career on the possibility, Rodrigo Arrea is right where he always wanted to be – and well aware of the odds he overcame.

"Ten years ago, everyone thought I was really nuts to go for a Master's degree in coastal and marine engineering. Not only was there no construction happening on our coasts, there wasn't even an education for it," laughs 31-year old Arrea, Senior Civil Engineer at APM Terminals Moin, the company's **USD 1 billion project in Costa Rica**.

His fascination with how things are made began as a boy growing up in the Costa Rican capital of San Jose, he says. Both his father and grandfather were engineers and he was always interested in their work. As a young man, he was interested in mechanical engineering but later on he shifted to civil engineering because of its link to construction.

Soon after graduating with his degree in civil engineering, Arrea heard rumours of plans for a new port. "Right then I decided I wanted to be a part of it, but I also thought it would probably get built while I was in school," he recalls.

With no Master's programme available in Marine and Coastal Engineering in

RODRIGO ARREA

Age: 31

Nationality: Costa Rican

Family: Wife and one daughter

First job: Superintendent with Van Oord Dredging and Marine Contractors

Current job: Senior Civil Engineer at APM Terminals Moin

Interests: Family, surfing and staying busy

Costa Rica, he completed the **EU Erasmus Mundus programme** instead. In 2009, he graduated into a global recession. With no news of the port, he kept busy building a bridge and a greenhouse for family members, and surfing.

He managed to land a job as an assistant superintendent with Van Oord in Mexico. One year later his dream came true: a new port was to be built in Moín. He applied for a job on the project and was the first Costa Rican engineer to be hired by APM Terminals.

Living the dream

"It really was my dream to work on this project, so it's a special experience to actually be here. There's a joke among engineers that everything in our country was built by our grandparents," says Arrea. "They could have hired an experienced person to replace

me, but they haven't. I've been involved since day one. As an engineer and a Costa Rican, it is fantastic."

The port is currently in its construction phase. Two international contractors, Van Oord and Bam International, are handling this phase together as a consortium. Activities include the creation of the 400,000 square metre artificial peninsula, the dredging of the access channel and eventual top-side civil works for the terminal.

Arrea's team consists of seven engineers. They are responsible for the design of the terminal but also for ensuring that the project is progressing according to plan and budget. If anything is wrong or changes need to be made in the terminal design, they are the ones responsible for implementing them.

"Changes have a ripple effect on other areas of the terminal, so it's quite a challenging process," he says.

The changes are plain to see in the many technical drawings of the port that cover the walls of the engineers' shared office space. Aerial photographs show the progress of the project since it began in 2015. Outside, the construction is constant.

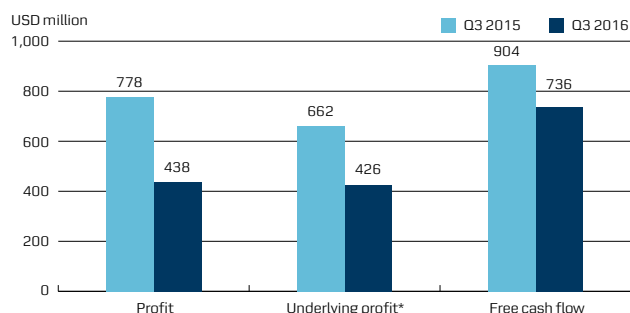
"The most exciting part of this job is seeing how the efforts of the project team are reflected in the progress of the construction – to see everything we developed on paper coming to life out there in Moín Bay." ✨

Who should we feature in the next MyMaersk?

If you have an inspiring colleague who leads an extraordinary life inside or outside of work, nominate them for MyMaersk by sending an email to maerskpost@maersk.com.

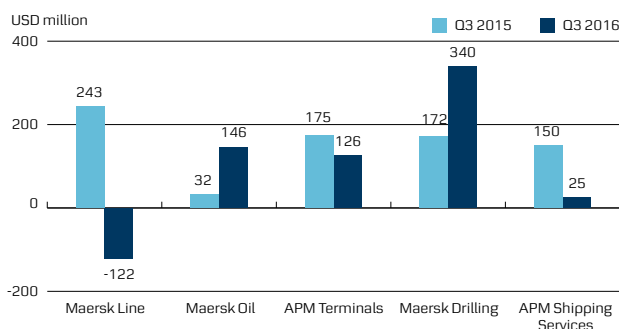
Profitable business, cost efficiency and increased focus on synergies

Group Financial Highlights, Q3 2016



* Underlying profit is equal to the profit or loss for the period excluding net impact from divestments and impairments.

Underlying profit by activity, Q3 2016*



The Group delivered a profit of USD 438m (USD 778m) negatively impacted by lower container freight rates partly offset by positive impact of termination fees in Maersk Drilling. The return on invested capital (ROIC) was 4.9% (7.6%). The free cash flow was USD 736m (USD 904m).

GROUP HIGHLIGHTS

The Group's revenue decreased by USD 933m or 9.2% compared to Q3 2015, predominantly related to Maersk Line with a decrease of USD 659m due to 16% lower average container freight rates, Maersk Oil with a decrease of USD 95m due to 8.0% lower oil prices and decreased rates in Damco and Maersk Tankers. This was partly offset by 11% higher container volumes in Maersk Line and 7.0% higher volumes in APM Terminals.

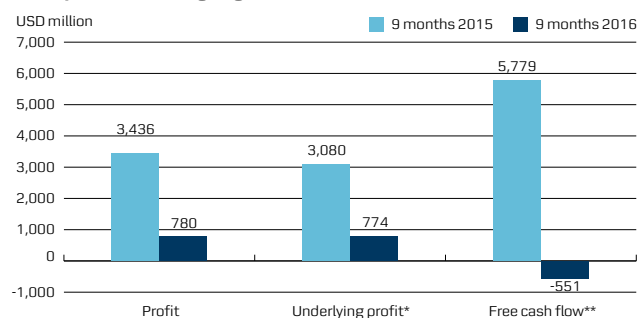
Operating expenses decreased by USD 573m or 7.3% mainly due to lower bunker prices and cost saving initiatives.



"The result is unsatisfactory, but driven by low prices. We generally perform strongly on cost and volume across businesses. We can take pride in the fact that in pretty much every business we are in, our businesses rank among the best"

Maersk Group CEO Søren Skou.

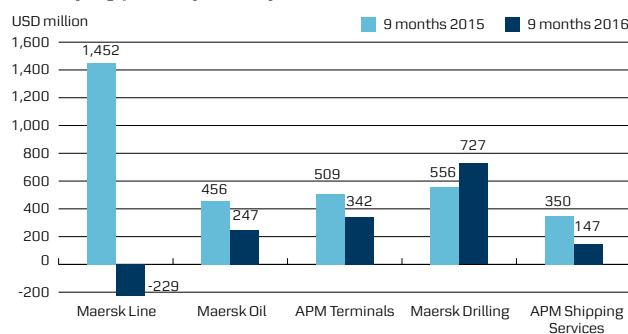
Group Financial Highlights, 9 months 2016



* Underlying profit is equal to the profit or loss for the period excluding net impact from divestments and impairments.

** Free cash flow for the first nine months of 2015 include the sale of shares in Danske Bank of USD 4.8bn.

Underlying profit by activity, 9 months 2016*



PORTFOLIO HIGHLIGHTS



Maersk Line gained market share with a volume growth of 11%, while continuing to improve network utilisation and maintaining unit costs below 2,000 USD/FFE. A significant part of the growth was due to more backhaul cargo at lower rates than headhaul.

Sustained pressure on container freight rates led to a decline in average freight rates of 16% and a loss of USD 116m (profit of USD 264m) in challenging market conditions. The result was favourably impacted by various positive tax developments. However, Maersk Line generated a positive free cash flow of USD 192m (USD 159m). ROIC was negative 2.3% (positive 5.2%).



Maersk Oil reported a profit of USD 145m (USD 32m) and a ROIC of 13.5% (2.1%) at an oil price of USD 46 (USD 50) per barrel, positively impacted by higher operational efficiency and lower costs. In a quarter with the usual planned maintenance shutdowns, entitlement production of 295,000 boepd (300,000 boepd) was in line with Q3 2015. Exploration costs of USD 57m (USD 82m) were 30% lower than the same period last year and Maersk Oil reduced its operating expenses excluding exploration costs by 21% securing a break-even level below USD 40 per barrel for 2016 versus previously USD 40-45.



APM Terminals delivered a profit of USD 131m (USD 175m) and a ROIC of 6.6% (11.6%). The profit was 17% above Q2 2016.

Profits remain under pressure in the commercially challenged terminals in Latin America, North-West Europe and Africa as a consequence of liner network changes and continued weak underlying market conditions. The terminals in the oil related countries are experiencing diverging performance. Nigeria showed small positive improvements, Russia stabilised while imports into Angola continues to be severely impacted by the remaining low oil price. Grup Maritim TCB contributed with a positive profit in Q3.



Maersk Drilling delivered a profit of USD 340m (USD 184m) and a ROIC of 17.2% (9.0%). The profit was positively impacted by an early contract termination of Maersk Valiant of USD 210m.

Maersk Drilling reduced its costs by 11% compared to Q3 2015, and since the launch of the cost reduction and efficiency enhancement programme in Q4 2014, Maersk Drilling has reduced its costs by more than 18%.

At the end of Q3 2016, Maersk Drilling's forward contract coverage was 68% for 2016, 55% for 2017 and 45% for 2018. The total revenue backlog by the end of Q3 amounted to USD 4.1bn (USD 5.8bn).



APM Shipping Services reported a profit of USD 25m (USD 154m) and a ROIC of 2.1% (13.1%) negatively impacted by a loss of USD 11m (profit of USD 45m) in Maersk Supply Service and a loss in Maersk Tankers of USD 1m (profit of USD 59m).

	Q3	Q3		FY
(USD million)	2016	2015	Change	2015

Maersk Line

Revenue	5,359	6,018	-11%	23,729
Reported profit	-116	264	N/A	1,303
Operating cash flow	368	694	-47%	3,271
Volume (FFE '000)	2,698	2,427	11%	9,522
Rate (USD/FFE)	1,811	2,163	-16%	2,209
Bunker (USD/tonne)	244	324	-25%	315
ROIC (%)	-2.3	5.2	-7.5pp	6.5

Maersk Oil

Revenue	1,226	1,321	-7.2%	5,639
Reported profit	145	32	353%	-2,146
Operating cash flow	478	548	-13%	1,768
Prod. (boepd '000)	295	300	-1.7%	312
Brent (USD per barrel)	46	50	-8.0%	52
ROIC (%)	13.5	2.1	11.4pp	-38.6

APM Terminals

Revenue	1,062	1,046	1.5%	4,240
Reported profit	131	175	-25%	654
Operating cash flow	259	224	15%	874
Throughput (TEU m)	9.5	8.9	7.0%	36.0
ROIC (%)	6.6	11.6	-5.0pp	10.9

Maersk Drilling

Revenue	733	646	13%	2,517
Reported profit	340	184	85%	751
Operating cash flow	630	382	65%	1,283
ROIC (%)	17.2	9.0	8.2pp	9.3

APM Shipping Services

Revenue	1,091	1,307	-17%	5,080
Reported profit	25	154	-84%	446
Operating cash flow	153	255	-40%	806
ROIC (%)	2.1	13.1	-11.0pp	9.5

Guidance for 2016

In line with previous expectations the Group still expects a result significantly below last year (USD 3.1bn) and specifies an expected underlying result below USD 1.0bn. Gross cash flow used for capital expenditure is still expected to be around USD 6bn in 2016 (USD 7.1bn).

The Group's guidance for 2016 is subject to considerable uncertainty, not least due to developments in the global economy, the container freight rates and the oil price.

For more details regarding the financials for Q3 2016, please visit the Investor Relations website: <http://investor.maersk.com/financials.cfm>

Unless otherwise stated, all figures in brackets refer to the corresponding figures for the same period of the previous year.

Building the world's largest jack-up drilling rig

THE BIG PICTURE | A view of the Maersk Invincible, the world's largest jack-up drilling rig, as it nears completion at the Daewoo Shipbuilding and Marine Engineering (DSME) shipyard in South Korea. The Maersk Invincible is the fourth and final rig in a series of four ultra harsh environment jack-up rigs to enter Maersk Drilling's fleet. After delivery from the yard, the Maersk Invincible will mobilise to the North Sea and commence a five year firm contract with BP Norge for plug and abandonment work on the Valhall field in the Norwegian North Sea.



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