



Untapped potential:

Marine access solutions for
Africa's offshore energy market



The Walk to Work (W2W) market in Africa holds considerable potential for growth. As the continent's offshore energy market is rapidly evolving, there is a rising demand for safe, reliable, and cost-effective access to a growing number of offshore installations. Driven by rising exploration, new well developments and increasing local control over existing fields, cost-effective offshore access solutions are becoming increasingly important to the African offshore energy sector.

In this dynamic environment, W2W solutions have a critical part to play in the development of offshore Oil and Gas (O&G) in Africa. Historically, accessing platforms on the open sea has been a complex and risky process. Remote structures were commonly accessed by swing ropes, baskets, ladders, or by jumping from a vessel (bump and jump).

Recently, W2W has established itself as a safer, more reliable and cost-effective alternative. Dutch offshore service provider Ampelmann pioneered the market more than 16 years ago. Since then, it has grown into a global company with a fleet of over 70 gangways. With strong local presence throughout the world, the company has operated in Africa for nearly 15 years.

Known for its innovative hexapod that enables its gangways to be completely stable in the roughest of seas, the company has a large selection of gangway systems that support its clients globally. By measuring and adjusting to the movements a vessel makes in real-time, the gangway remains stable, making offshore access safer and more efficient. Because of this they have considerable potential to support the development of Africa's offshore energy sector.



The potential of W2W in Africa

Africa's energy market is varied, diverse and changing. While onshore drilling continues to dominate its eastern and northern parts, slightly less than half of Africa's upstream production currently originates from offshore sources. There are more than 400 fixed and floating assets scattered across the entire African coastline. Most of these are centered in the Gulf of Guinea, where almost 75% of the local output is sourced from deep- and shallow water fields.

Long-standing O&G giants Nigeria and Angola make up the bulk of this production, but continued explorations and new discoveries throughout the region are fueling a quiet transformation within Africa's offshore heartland. International Oil Companies (IOC) are switching to deep-water explorations and developments, handing Brownfield assets on the Shelf over to local national consortia, like Renaissance in Nigeria.

In the short term, there will be increased activity on maturing fields, particularly in the Niger Delta, where local operators are working to extend asset life and maximise the value of the existing infrastructure. At the same time, rising investments in deep water fields will mean increased work on FPSO's throughout the decade.

With significant space for growth, the African offshore market is not only booming, but also rapidly changing. As it does, so will the demand for safe, reliable, and cost-effective access solutions. In this evolving landscape there is a lot of diverse work where Ampelmann's W2W services can offer flexible, proven solutions to getting personnel where they need to be.

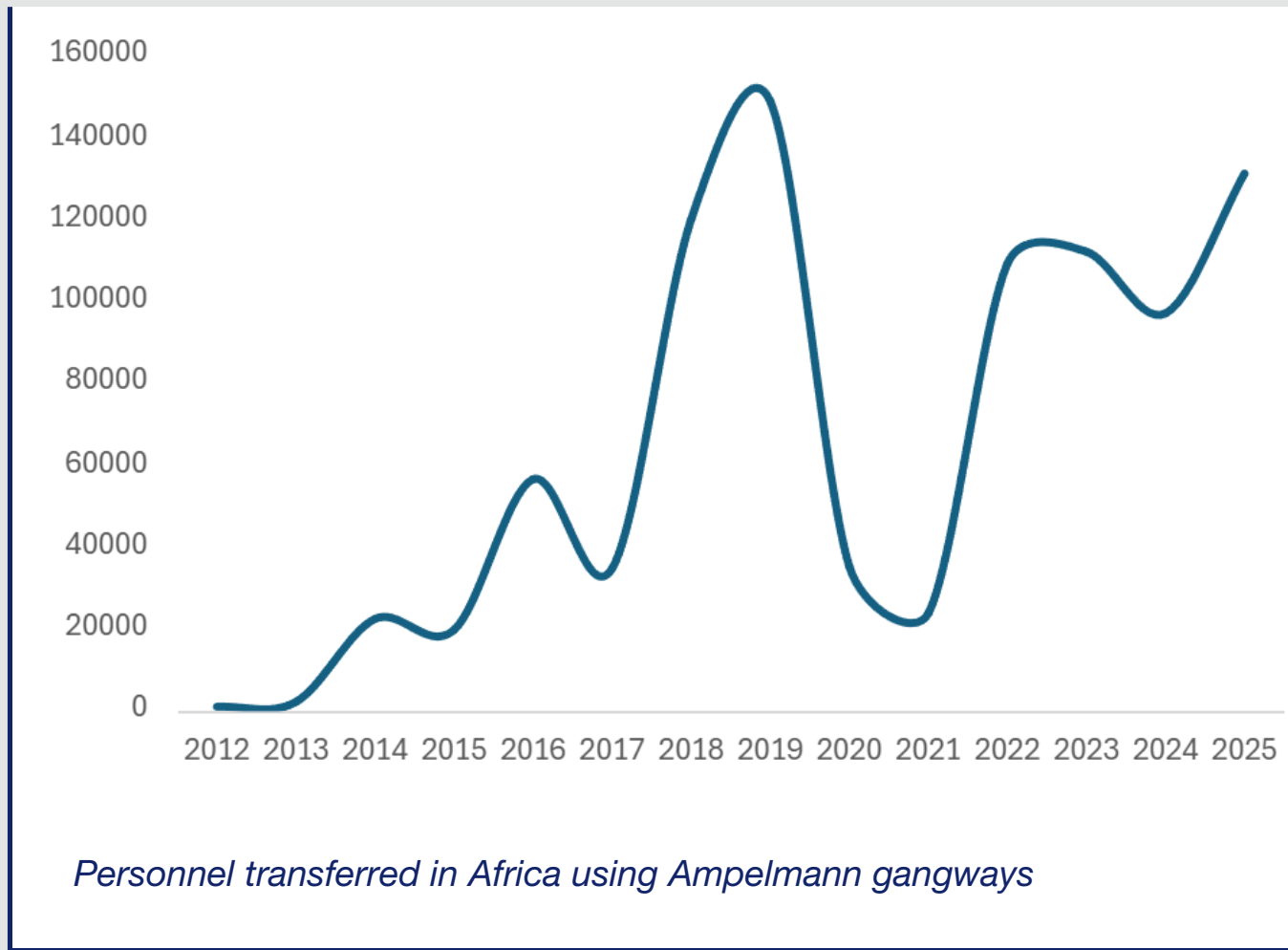


Trusted Solutions: The W2W market in Africa

For Ampelmann, the region offers a bit of everything: FPSO operations, maintenance, shutdowns of aging assets, decommissioning campaigns, crew change and infield transfers. W2W solutions can provide a valuable alternative to traditional methods like helicopters and simple permanently installed gangways.

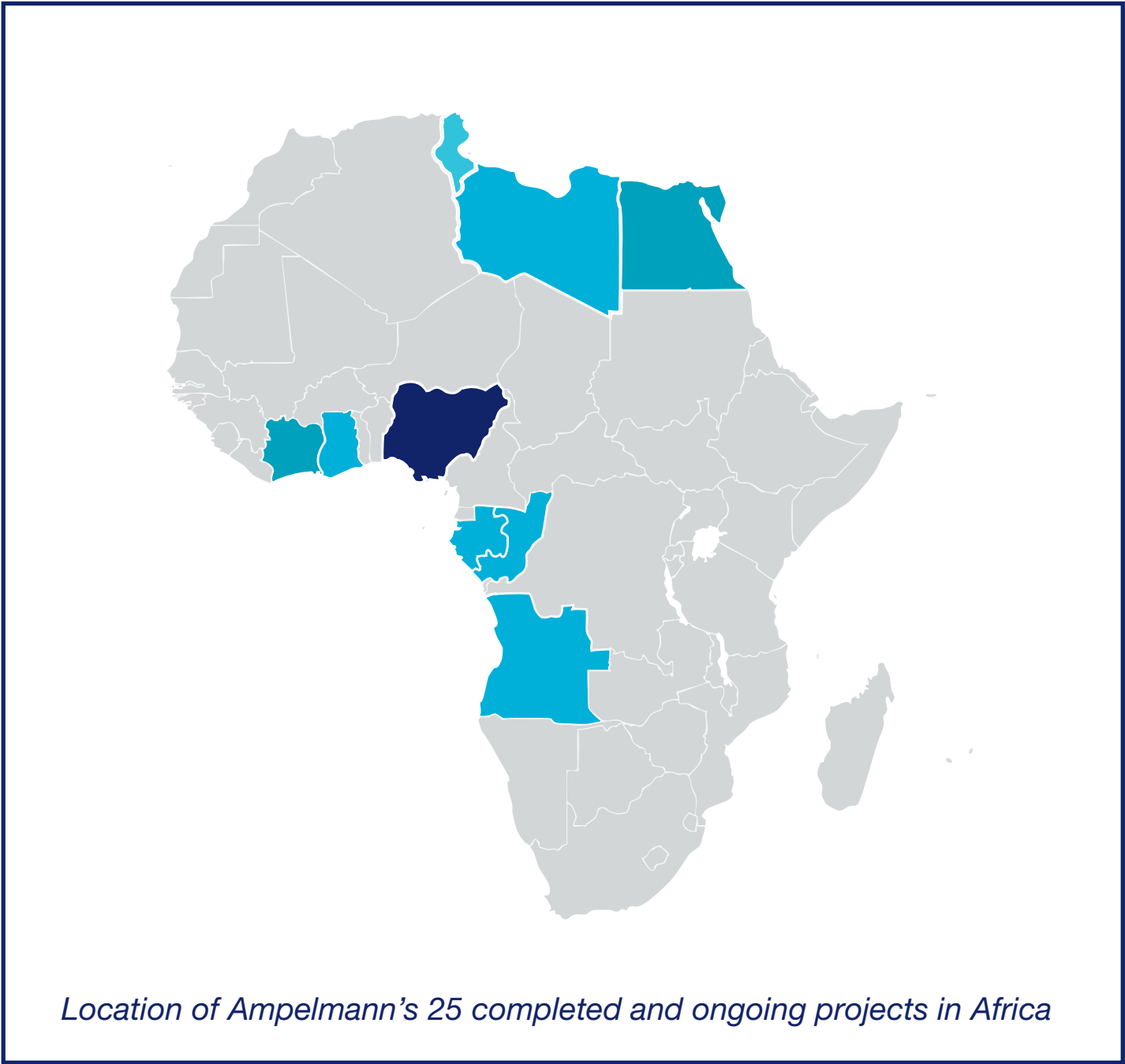
W2W is certainly not new in Africa. Ampelmann’s introduced its first gangway to the continent in 2012. Starting out north of the Sahara, it soon found its home in the Gulf of Guinea where it deployed its first gangway in Nigeria two years later. Today, the company has transferred nearly 900,000 crew members, technicians, and personnel to and from African offshore installations. With 25 short- and long-term projects already completed or ongoing, W2W has spread with the fortunes of the regional O&G market.

Both the company’s A-type and the L-type have been successfully deployed on projects throughout the African offshore sector. Thanks to the reliability and versatility of the hexapod, the A-type has been used on a wide range of projects in both deep and shallow water fields. The L-type, on the other hand, is designed for continuous crew transfers on smaller vessels in calmer sea conditions. Because of this it has primarily supported infield transfers on the Nigerian Shelf.



Alongside sustained work on FPSO’s and maturing assets in Nigeria, Ampelmann has safely transferred more than 600,000 personnel in Cote d’Ivoire (Ivory Coast) for its long-standing client Canadian Natural Resources (CNR). An A-type gangway system, installed on the MMA Privilege, performed long-term maintenance and revamping of their FPSO. For several years, the system safely transferred an average of 300 crew members per day.

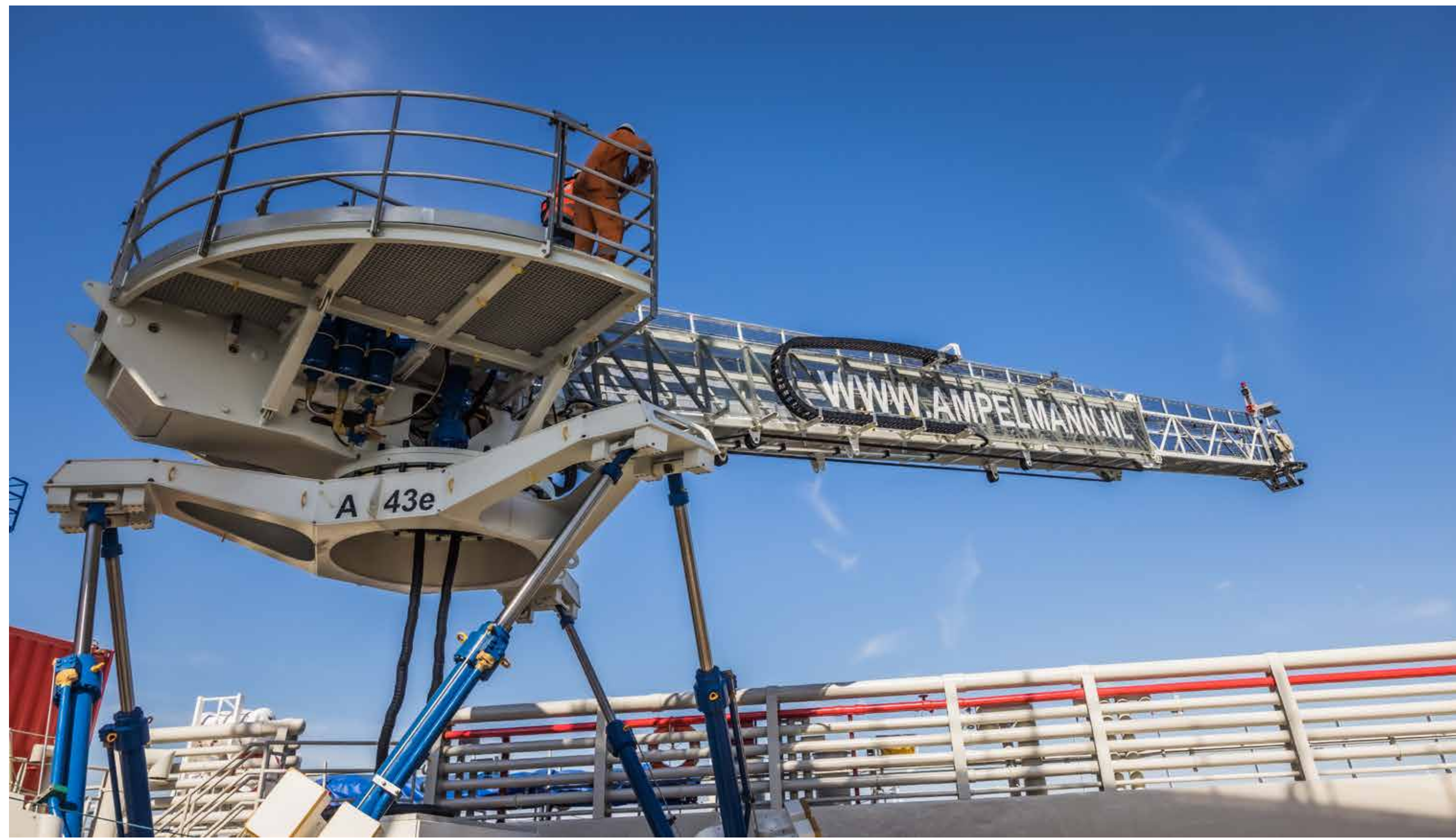
More recently, interest in the company’s gangway systems was reignited as new projects were initiated in Nigeria, Angola and the Republic of Congo. A visible trend is emerging. Operators are moving more and more towards marine-based access. While there is still a way to go, the market is steadily embracing the advantages of vessel-based offshore access and the efficiencies that W2W can bring to their operations.



Challenges and opportunities

Despite the continued success of Ampelmann's involvement in West Africa the true potential of W2W is not fully recognised. Weather conditions off the coast of West Africa may not be as harsh as those in the North Sea, they are not nearly as benign as one may think. Long period swells of up to 1.5m Hs, wind changes and seasonal sandstorms like the Harmattan can cause sudden disruptions. Often shutting down traditional methods of transfer, these conditions cause operational delays throughout the year.

W2W solutions can continue to support operations despite these challenges. Full motion compensation technology helps reduce operational costs while simultaneously guaranteeing the safety of personnel. These gangways provide reliable access, extend weather windows and increase overall workability. By decreasing the duration of campaigns, they can also act as alternatives to capital-intensive assets, such as jack-up rigs and heavy lift vessels.



Nevertheless, W2W has not figured prominently in the hearts and minds of African operators and regulators. Moving away from established practices is neither easy nor is it a fast process. In the Niger Delta, for instance, helicopters are the main method of getting personnel to and from offshore platforms, mainly because of security reasons. While there is no doubt that helicopters will remain crucial for offshore operations, batch-based transfers come with diminishing returns over longer periods of time, especially during infield transfers between shallow-water rigs.

On the other hand, deep-water operations on FPSO's have typically relied on large accommodation vessels (flotels) to get personnel to and from their worksites. These vessels house massive crews of over 400 Persons on Board (POB) and use simple, permanently installed passive gangways instead of active motion compensated ones.

As more of these flotels are leaving the Gulf for work in the booming Brazilian offshore O&G market, there is room for smaller vessels, like barges equipped with gangways, to fill the gap left by their departure. In fact, because of their leaner crew composition less tool time is lost on congestion during crew changes and when planned across multiple assets can provide a powerful complementary solution to flotels. By scaling the required number of personnel on board up and down, these W2W solutions optimise offshore workflows according to specific operational needs.

A common misconception is that because W2W systems do not have a 24/7 physical connection, they cannot function as the primary means of evacuation during emergencies. However, Ampelmann's A-type can make a secure connection to an FPSO within 1.5 minutes and with the slideway installed allows for continuous transfers without the need for a disconnection. This capability enables safe and rapid evacuation of a large number of personnel in emergency situations.

The recent success of W2W in the FPSO dependent market of Brazil, demonstrates that these solutions can effectively address these operational demands. Ampelmann's W2W systems are especially capable of Ship to Ship (S2S) operations on FPSO's as well as supporting vessels and have been doing so for over a decade. Even in extreme conditions such as those at the construction of the largest floating wind farm to date at Hywind Tampen as well as a recent maintenance campaign on Single Point Moorings (SPM) in Abu Dhabi the gangway has very high workability.

New horizons

Given the surge in developments in the African O&G market it is an exciting time to be in offshore access. Because of new exploration activity and increased local ownership over shallow water rigs, streamlining maintenance operations and shortening the time to first oil in deep water fields will be critical. Reliable, trustworthy access needs to be provided by experienced offshore service providers through the development of robust partnerships between all stakeholders. In these shifting markets it will be especially important to strengthen existing partnerships and create new connections with national and international operators, vessel owners and gangway providers.

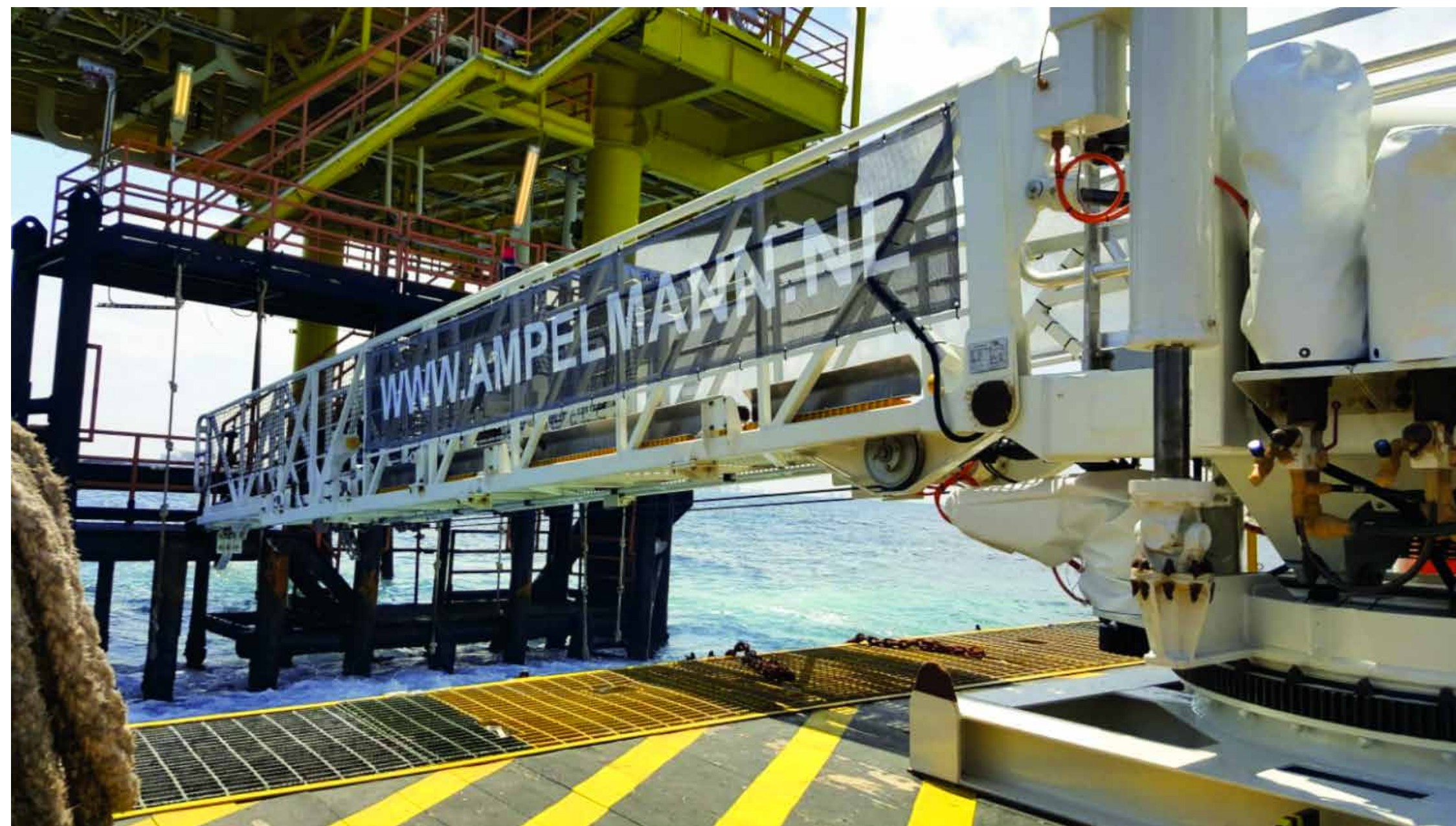
Clearly, W2W is often best used in combination with other offshore transfer methods. Those can include crew transfer vessels (CTVs) of different sizes and designs, helicopters as well as various types permanently installed gangways on flotels. The right combination of methods is crucial to enable safe, optimised, offshore access throughout the year.

Both short- and long-term commitment to the O&G industry is about keeping an eye out for unexplored opportunities and create tailor-made solutions to solve specific challenges. While the A- and L-type see frequent use throughout Africa, new energy efficient gangways are in development that are ideal for conditions in the calmer seas around the continent.

Ampelmann offers a variety of products and services that give its customers the right toolbox of options to gain access to their assets. Because it operates on a full-service business model it supplies its buying and renting clients with 24/7 operational support, maintenance and digital tools to ensure its systems always perform at peak capacity.



Future outlooks



Africa's offshore energy market is in the middle of a quiet transformation. New discoveries, growing local ownership and a rising domestic demand for energy are reshaping the sector's future.

As the O&G giants in Nigeria and Angola are joined by new operators across the Gulf of Guinea, explorations on the western and eastern coast highlight an upwards trend of the continents offshore production capabilities. Before long, the first offshore wind turbines are also expected to go online in Morocco, South Africa and Mozambique. By enabling safer, more efficient and cost-effective access, W2W has much to offer this evolving landscape.

Ampelmann's experience in the African market has shown that it can deliver reliable performance across a wide range of conditions, vessel types and offshore projects – from shallow-water shutdowns to S2S operations on deep-water FPSO's. Its service minded approach and proven solutions, like the A- and L-type, have facilitated offshore projects for over a decade and are well positioned to support the African offshore energy sector as it evolves and diversifies.

But untapping the full potential of W2W in Africa will require more than technology alone. It requires strong collaboration between reliable offshore service providers, vessel owners and local and international operators. Ampelmann is listening closely to its clients and relations in the region, continuously seeking innovative ways to meet their evolving needs.