



II SUSTAINABLE BLUE ECONOMY

INVESTMENT FORUM

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ESTORIL CONGRESS CENTER . CASCAIS . PORTUGAL

PANEL 3

Ocean as a Data and Energy Highway (Smart & Power Cables: funding for the digital use of the Sea.)

The ocean floor is home to a complex system of undersea cables and other infrastructures that enable the transmission of large amounts of data across the globe. Undersea cables together with ducts are also fundamental to the global energy sector, transporting electricity and gas. The importance of these infrastructures has been evidenced shortly after the Russian invasion on Ukraine.

In fact, the role of the ocean as a data and energy highway has become increasingly important in recent years as the world becomes more interconnected and reliant on digital technology. The demand for high-speed internet and other digital services continues to grow, and the ocean's vast network of undersea cables plays a critical role in meeting this demand.

Undersea cables are the backbone of the global telecommunications network, carrying more than 99% of all international data traffic. These cables are typically made of fiber-optic materials and are laid on the ocean floor by specialized vessels. They are designed to withstand the harsh conditions of the ocean environment and can transmit data at incredibly high speeds, allowing people and businesses to communicate and share information across the world in real-time.

In addition to telecommunications cables, the ocean floor is also home to a network of pipelines and cables that transport oil, natural gas, and other energy resources, as well as electricity, from offshore production facilities to onshore processing plants and, in the case of electricity, onshore substations.

As the world becomes increasingly connected and reliant on digital technology, the importance of the ocean as a data and energy highway is only set to grow, making the sustainable management and protection of the ocean environment more important than ever.

The development of smart undersea cables technology has the potential to revolutionize ocean data collection and digitalization. These cables are designed to not only transmit data across oceans but also collect and transmit various data points, such as temperature, pressure, and ocean currents. This real-time data collection will enable better oceanographic research, weather forecasting, and marine resource management.

However, the development of smart undersea cables also brings new challenges. For example, the installation and maintenance of these cables can be costly and challenging, especially in deep ocean waters. Additionally, there may be concerns around data privacy and security, as the transmission and collection of sensitive information may be vulnerable to cyber-attacks.