

Testimony on 21 May 2014 to the Subcommittee on Coast Guard and Maritime Transportation from Thomas W. Altshuler, Ph.D., Vice President and Group General Manager, Teledyne Marine Systems

The oceans are one of the most exciting economic opportunities of the 21st century. The global reliance on ocean resources and dependence on the marine environment will result in a continued growth in the so called "Blue Economy" worldwide. The United States has a unique leadership position in many aspects of the Blue Economy. The U.S. is the biggest single market, has a clear front runner position for advanced technology, and has an established role as a thought leader. With all these advantages, and the immense growth potential in the Marine markets, the Blue Economy is likely to provide U.S. businesses with strong returns over the next decade through both the domestic market and more importantly, international markets.

As a business leader for a group of companies within Teledyne Marine, called Teledyne Marine Systems, I have been privileged to participate in a portion of the growth of the marine segment of Teledyne Technologies, Incorporated Teledyne recognized the huge potential of the Blue Economy over a decade ago and has systematically grown its presence in the marine market. Currently, Teledyne Marine is a **growing** group of 13 established, well-reputed, undersea-technology companies whose collective size has expanded from \$6M in 2000 to \$600M in 2013, with approximately half of that revenue resulting from international sales of product. These companies have developed and introduced some of the most innovative technologies and products that have revolutionized diverse marine markets: from offshore to inshore and oceanographic to defense. Teledyne Marine has achieved this growth by a combination of acquisitions of technology leading companies and organic growth of those companies. This collective approach has resulted in strong, high technology job growth with direct and substantial impact on our local economies. Employing 2000 people, our marine companies provide high technology jobs nationwide from Cape Cod to San Diego, Seattle to Daytona Beach, and New Hampshire to the Gulf Coast. We have strong businesses in almost every pocket where technology innovation is driving the Blue Economy.

Our product portfolio spans a wide-range of capabilities. We provide undersea technologies including unmanned vehicles, measurement sensors, imaging and surveying systems, underwater communications systems, and underwater connectors. The benefits gained from the associated high-performance, reliable products have ranged from new scientific discoveries to operational efficiencies in very harsh environments worldwide.

As Teledyne Marine looks to the future, we see exciting opportunities for growth. Ours, and our market peers' current technologies, and technologies under development, will revolutionize how we understand and leverage the ocean. In the oceanographic arena, which is core to our understanding of the marine environment, the United States has a clear leadership position. Through programs such as the Integrated Oceanographic Observing Systems (IOOS), led by National Oceanographic and Atmospheric Administration (NOAA), the regional partnerships between Federal and State Governments, academic institutions, and the private sector have resulted in a leap-ahead understanding of the coastal marine environment, its influence on fisheries and the local economies in the U.S., and even weather forecasting. These regional partnerships facilitated by IOOS are viewed worldwide as a highly successful example of how to effectively leverage human talent and resources for costal marine studies, and have resulted in the growing export of marine technology to the international community.

Other key Federal programs include the Ocean Observatories Initiative (OOI), funded by the National Science Foundation, have resulted in an acceleration of advanced technology for both coastal and deep ocean observation. The fledgling success of the OOI has resulted in similar programs in Europe and even China. In all cases, U.S. technology will play a crucial role.

As with the Oceanographic market, the Defense/Security and Offshore arenas both fund the development of, and exploit, corporate internal research and development to ensure that Teledyne Marine and its peers can provide the most advanced technologies into the worldwide Blue Economy. With existing and emerging technologies, both the domestic and international markets will provide long term manufacturing job growth for our U.S. based businesses. As we compete with foreign developed technology, our technology advantages can be short-lived. Facilitating export of product is a key to sustained positive economic impact within the Blue Economy.

Overall, because of the partnership across Federal and State Governments, Academic and Not-For-Profit organizations, and privates business, the U.S. will lead the Blue Economy into the next decade.