

SPACE MATTERS: Volume 1: No. 1
August 2017

**The New Ocean and the Blue Economy:
Where They Intersect, Business Benefits**

Now is the time to take longer strides, time for a great new American enterprise, time for this Nation to take a clearly leading role in space achievement, which in many ways may hold the key to our future on Earth...space is the new Ocean, and we must choose to sail upon it.

John F. Kennedy, May 1961

President Kennedy loved sailing and served in the Navy during World War II, so it was natural for him to compare space with the ocean in his speech to Congress announcing the Apollo program more than 45 years ago. Today, the real oceans on Earth and the metaphorical ocean of space are linked again, this time with real-world applications that are changing the way we use a resource that covers more than 70 percent of our planet.

Two people who have recognized the opportunities that link Kennedy's "New Ocean" and today's "Blue Economy" are Michael Jones, President of The Maritime Alliance and Stuart Martin, CEO of the Satellite Applications Catapult. Both are now deeply engaged in applying space-based assets to maritime challenges, though neither of them began their careers with that in mind.

Michael Jones was enjoying his work in San Diego as an investment banker, helping people to buy and sell companies and raise financing. One day in 2005, he identified an opportunity with an undersea robotics company. Alongside his investment banking, he invested in the company and acted as part-time CFO. As he dug deeper, he realized that his city was home to a large "maritime cluster" and he

began spending more and more time organizing that community. In 2007, convinced that the “blue economy” held great promise, he founded The Maritime Alliance, a “cluster” organization that brings together academia, industry, and policymakers to “Promote sustainable, science-based ocean and water industries.”

Many years earlier, Stuart Martin was a boy growing up in the UK. He knew that space exploration and development just had to be his future, possibly as an astronaut. However, he did not think he could realize his dream if he stayed in England.

“I thought I would have to go to the United States to be involved in space, but while I was filling out my applications to US graduate schools, I found a small UK company called Logica doing some cool stuff for the European Space Agency, so I joined up,” he says today. “The company grew rapidly, and I ended up staying there for 23 years, working in projects around the world. There, I learned the value of satellites and their applications to life on Earth. That became my new focus.”

When Martin was offered the opportunity to manage the Catapult, an incubator for space applications to various terrestrial industries, including maritime, he jumped at the chance. This brought him back to England and to an interest similar to that of Jones.

Two Perspectives: Same Conclusions

Jones and Martin both see great synergy between the space and maritime industries:

“Both are international in nature and different from anything that is happening on land,” says Jones.

Perhaps even more important, to his mind, is the revolution in ocean management that satellites and other space-based assets have brought to the maritime industry:

“We can do things in the ocean today that were impossible five years ago and that is a parallel to what is going on in the space industry,” he says. “In space, we have evolved from very large satellites that are expensive to launch to cubesats that cost a fraction as much—capabilities are up and costs are down.”

More satellites means having much more information: “We see the oceans heating up and we know there are great islands of plastic. We can monitor unreported and unregulated fishing from space, and find vessels that ‘go dark.’”

Summing up the transformation that space has created on the oceans and quoting a UK colleague, Jones says, “We have gone from a situation of ‘sea blindness’ to one of ‘sea vision.’ We can see everywhere now.”

Martin agrees wholeheartedly.

He is convinced that satellites are transforming how humans use the oceans. “We have a situational awareness we never had before,” he says, “and we can build up a comprehensive picture of what is happening on the water.”

Looking ahead, Jones says that “ubiquitous” satellite coverage is essential for the “next big thing” in maritime shipping: robot ships. “There has been a lot of talk about driverless cars,” he says, “but almost no one is talking about autonomous ships.” In Jones’s view, autonomous ships will be sailing in the near future because satellites will be there, guiding them 24/7. Martin goes even further, predicting that the first autonomous ships will be plying the high seas by 2020. Likening it to flying

a drone, or fleet of drones, he says, “It will be a form of remote piloting, with one operator managing 10-20 ships.”

Space-based technologies are also poised to bring huge savings to the maritime industry, in part because you can cut turnaround time when a ship is in port. Jones says, “Previously, a supply ship would return and wait for several days to be loaded, at a cost of \$50-100,000 a day. Using satellites and stocking software, the vessel can be redeployed in hours, not days,” Jones points out.

Martin agrees and says, “Soon, we will have ‘smart ports.’ In the past, we could only estimate within two to three days when a ship would arrive in port. Now it can be accurate to within half a day. This means that we will not have truck drivers sitting around for days, as they do now, waiting for their cargo.”

“Eyes in the sky” can point fishermen, recreational and commercial, in the right direction as well, according to both Jones and Martin. Satellites can provide information directing boats to schools in approved locations, where they can spend three hours in productive activity, rather than searching (sometimes without success) for fish for eight hours.

While Jones lauds the specific applications of space-based assets for the blue economy, he does not overlook the big picture of sustainability, as we move into an uncertain future:

“Sustainability is not a goal, but an obligation. The ocean is the ‘goose that lays the golden egg,’ and we need to take care of it.” Martin agrees and says, “Everything we are doing ties into asset management and protecting this valuable resource.”

Jones and Martin are also strong advocates of the benefits SpaceCom offers to the industry. Jones, who has spoken at the past two gatherings, says:

“SpaceCom understood the importance of the blue economy from the beginning, and are bringing this previously invisible industry to the forefront. I commend them for the early recognition of the importance of the intersection of space and the oceans.”

Martin says, “Anyone in the maritime industry who wants to be more efficient and effective while improving sustainability should attend SpaceCom this year.”

So you can be sure that The Maritime Alliance and the Satellite Applications Catapult teams will be there when SpaceCom 2017 convenes in December. Will you?

For more information on SpaceCom 2017:

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