

Purpose: Provide keynote opening remarks at the International Propeller Club Convention, a business network dedicated to the promotion of the maritime industry, commerce, and global trade. The theme is “Modernizing Ports for the Future.”

Media: Open. Industry interest expected.

Strategic Objective: Bolster support and advance MTS strategic intent.

Duration: 45 minutes (30 minutes of remarks followed by 15 minutes of Q&A).

OPENING / SCENE SETTER

Your theme - “Modernizing Ports for the Future” – gets right at an issue on the top of my mind lately. Not just in our ports, but in general, how do we modernize for the future?

When I was about 7 years old the cartoon “The Jetsons” originally aired. I couldn’t imagine I’d ever see some of the things those writers came up with - the robots doing all the work... the cars driving themselves...

Although we haven’t quite colonized outer space yet, when I last visited Long Beach Container Terminal, I’ll tell you, I felt like I was witnessing *that* future.

Long Beach is the second-busiest port in the United States – it moves 180 billion dollars worth of cargo annually. And *everything* is automated.

Automated vehicles move the containers to the automated stacking cranes... It knows when it’s battery is low, and drives

itself to the charging station... There you had it, I was witnessing The Jetsons!

While I couldn't help but feel like I was staring into the future, the reality is I was already looking at the past.

Look, when I was watching The Jetsons, there was no internet. None. In 1984, there was a mere 1000 objects connected to it. In 1992 that number was a 1 million. 10 years ago, 10 billion. And in just 3 more years it's expected that 50 billion objects will be connected to the internet.

Our digital landscape is shifting right underfoot.

Technological advances are accelerating at incredible rates and operating in this evolving world is one of the most difficult economic and national security challenges we face today.

And when we talk about the digital world, we're not just talking about upgrading our systems... it's not just new tools to do business the same way we've always done it.

We have an opportunity to move past technologies as simply upgrades to technologies as transformational tools. Look, you have taxicab drivers using cell phones instead of radios. Or... you have Uber.

It's probably too much to say that we need to keep pace... especially in the federal government, there really is no "keeping pace."

But we need to at least stay in the race.

And to do so, we have to embrace a culture not just willing to advance but eager to seek out innovative solutions. If we don't, we won't just maintain the status quo, we'll become obsolete.

HURRICANES

That couldn't have been more apparent than it was last month in our Nation's response to the historic triad of hurricanes.

No - don't worry – I'm not saying the Coast Guard was obsolete! We were anything but. In fact, our men and women saved nearly 12,000 lives.

But, we wouldn't have been as successful had our men and women not displayed incredible initiative and come up with some innovative solutions to unique problems... and then had an organizational culture that said, "hey, great idea; let's execute" and not, "shame on you for looking outside policy and not asking for permission first..."

- For instance, being given street addresses in lieu of a lat and long, our pilots and navigators adapted and overcame using different software and mobile devices to vector into survivors needing rescue;
- When people couldn't get through on 9-1-1, they took to social media. So our CGCyber workforce waived policy and enabled our SAR controllers to monitor those sites. We had junior officers directing the helos and punt boats based on Instagram messages;
- And our cadets, not to be outdone, stood up a watch at the Coast Guard Academy's Geographic Information System (GIS) lab where they tracked and mapped social media distress calls and sent heat maps to our SAR controllers.

It is just that type of innovation that we need to foster in our organizations. And when new ideas about how we can do business better are presented, our organizations can't have a mentality of "how we've always done it works just fine."

Heck, I always talk about my incredible 21st Century workforce – we are bringing in some of the most talented men and women I've ever met. What's the point of having a 21st Century workforce if we don't provide anything but 20th Century tools and a 20th Century work environment?

MAERSK / RISK

I visited Maersk after their Petya incident to hear their lessons learned. Number one lesson – they were able to upgrade to Windows 10 in just 5 days. I’ve been trying to upgrade the Coast Guard to Windows 10 for the majority of my time as Commandant...

Our Service will never be as agile as the private sector – we’ll never be that hero for the teller at Best Buy who gets the commission of a lifetime by dropping our credit card and simply buying 92,000 workstations like Maersk could.

But we take the lessons and we push toward modernization... in our ports, our waterways, and our organizations.

But everything must be balanced with the risk and vulnerabilities. I think something worth exploring at IMO is having completely autonomous ships. If it’s hacked, are there safeguards in place? What redundancies should be required?

Advancements are only as good as they are secure and as we modernize, sharing best practices across the board is vital. Currently, 28 of our 43 Area Maritime Security Committees have dedicated cyber-subcommittees. And it is imperative those subcommittees talk to each other as well.

VALUE PROPOSITION

In our Maritime Transportation System, if someone asks if the investment is worth it, I tell them: *4.6 trillion dollars.*

4.6 trillion dollars! That's the amount of economic activity, annually, attributed to our ports and waterways. But that incredible economic activity is beholden to our 1920's technology.

[Infrastructure] About 2 weeks ago yet another lock seized up near Paducah, KY on the Ohio River. It was closed for less than 24 hours but in that time the vessel queue already grew to 66. That equates to serious money.

More than half of our locks are over 50 years old and there is an average of 52 service interruptions a day throughout the system.

To serve a growing economy and compete internationally, we need to get after this issue. The good news is that Olmsted is getting closer to completion.

[ATON Optimization] And as we modernize, we continue to explore ways to optimize the mix of both physical and electronic ATON.

[Inland Tenders] But one place I don't see the physical aids going anywhere is in our inland rivers. But investment *is*

needed in our Coast Guard fleet of 35 vessels that work to establish, maintain, and repair the buoys on these waterways. The average age of this fleet is 52 and some vessels are over 70 years old – they should be in the Smithsonian, instead of facilitating the critical movement of hundreds of thousands of dollars of commerce. The entire fleet is well past the end of its designed service life and recapitalizing this tired fleet is one of my highest priorities. You balance the cost of that recapitalization with 4.6 trillion dollars – the math is easy.

CLOSING

In the wake of those historic hurricanes, our number one priority was to save lives. The second priority was to restore the ports and get critical life sustaining supplies to those people desperately in need.

Despite shouting about the 4.6 trillion dollars, people often don't pay attention until disaster strikes. Even those 66 tugs tied up in Paducah didn't really break squelch. Maybe these hurricanes did.

The infrastructure of our ports and waterways must be maintained *and modernized*. And when you think about it, investing here should be a national security priority. Our economic prosperity requires a foundation of security... and securing our ports and waterways is fundamental to securing our future! I look forward to hearing your thoughts...