

**OPENING ADDRESS BY MR CHEE HONG TAT
SENIOR MINISTER OF STATE, MINISTRY OF TRANSPORT AND MINISTRY OF
FOREIGN AFFAIRS
SMART PORT CHALLENGE 2020, 17 NOV 2020**

Ms Irene Cheong, Director, NUS Industry Liaison Office

Mr Niam Chiang Meng, Chairman, Maritime and Port Authority of Singapore

Distinguished guests,

Ladies and gentlemen,

1. Good afternoon. I am happy to join all of you today at the Grand Finals of the Smart Port Challenge 2020.

Innovation in the maritime sector

2. Smart Port Challenge started as a collaboration between the Maritime and Port Authority of Singapore and NUS Enterprise. The aim is to catalyse a vibrant innovation ecosystem for the maritime sector.
 - a. Every year, technology start-ups are invited to submit proposals based on innovation opportunities that MPA and NUS have curated, in collaboration with industry and partners.
 - b. The focus is on key trends and priorities of the maritime sector. This year is no different.

- c. The 17 innovation opportunities for Smart Port Challenge 2020 cover areas such as enhancing efficiency and safety within the maritime ecosystem, automation of manual work processes, and maritime decarbonisation.

- 3. Innovation has always been key to Singapore's success. And it must be how we tackle the three driving forces impacting maritime - Disruption, Digitalisation, and Decarbonisation.
 - a. COVID-19 has been a major Disruption to the world. And its impact on global supply chains will likely extend beyond the pandemic.

Throughout the crisis, we have kept our port open, and we have enabled the flow of essential goods to continue. This has strengthened our reputation and competitive position as a global hub port. We are now preparing ourselves for changes in global supply chains in a post-COVID world, and how the Port of Singapore can retain our connectivity and remain relevant in such an environment.

 - b. Second, Digitalisation is fundamentally changing the way businesses operate. Not only for the maritime sector but for all sectors – F&B, retail, university education. So this is a game-changer for companies to increase their productivity. The pandemic has given us a push, and we should ride on this momentum so that we can enjoy greater synergies across the maritime sector, and also strengthen the linkages with other industries like logistics and manufacturing.

- c. Decarbonisation is already changing how the maritime sector operates. In the future, the marine fuel we use, the vessels we design, and the ports we build will all be very different from today. Singapore supports the International Maritime Organization's emission targets to halve greenhouse gas (GHG) emissions from ships by 2050, from 2008 levels, and to pursue efforts to phase out such greenhouse gas emissions in this century. We will continue to pursue sustainable growth strategies and do our part in the fight against climate change.
4. To turn these three Ds from challenges to opportunities, innovation must continue to be the central focus of our maritime ecosystem, and our key value proposition as a maritime hub.
5. Today, I will focus on three aspects which we must strengthen to achieve this outcome: first, how do we strengthen collaboration among our tripartite partners; next, how do we encourage experimentation and risk-taking; and finally, how do we support innovation by working with stakeholders to review existing policies and rules. These three areas are interrelated. And if you do it well, they actually support one another.

Being innovative requires collaboration

6. Let me start with collaboration. Coming up with innovative ideas is not easy, and it is even harder when we are doing it on our own.

- a. Fortunately, we have a strong collaborative culture in Singapore, between MPA, academia, industry, unions and solution-providers such as technology companies.
 - b. This allows partners to jointly develop innovative ideas, and turn them into scalable solutions.
- 7. In just over three years since the establishment of PIER71, or Port Innovation Ecosystem Reimagined @ BLOCK71, more than 50 maritime partners have come together to co-create 66 innovation opportunities.
 - a. 58 start-ups have gone through our PIER71 Accelerate programme where we provide mentorship, masterclasses, and networking opportunities for innovators to meet other maritime partners and to take their ideas forward.
 - b. They also have access to funding opportunities from ESG and the Venture Capital (VC) partners, who have together committed up to S\$50 million for the start-ups to pilot their ideas.
- 8. One example is Performance Rotors, a Grand Finalist from the 2019 SPC.
 - a. Performance Rotors started out as a Singapore deep tech start-up that served the building and construction industry. Through the PIER71

accelerator programme, they discovered new opportunities in the maritime sector. They met new partners, such as Bernard Schulte, who provided the platforms to test-bed their ideas.

- b. Fast-forward 12 months: Performance Rotors has since developed a new service for the maritime sector – using drones to conduct inspections in confined spaces such as vessel hulls and ballast tanks.
 - c. Using drones removes the need for laying scaffolding, which would have been needed for inspections done by human inspectors. Not only is this more efficient, it is also safer.
 - d. Performance Rotors has received multiple class certifications to conduct remote surveys internationally. They are seeking to expand their services overseas in Asia, Europe and the US after securing funding from Royal Vopak, a Dutch multinational tank storage firm.
 - e. So this is an example of how a start-up can develop an idea in Singapore, test it out with partners here to prove that it works, and scale it up by taking their ideas and expanding it overseas.
9. By working together, we generate more innovative ideas and increase the chances of success.

Being innovative requires experimentation and risk-taking

10. Next, being innovative requires an appetite for experimentation and risk-taking. In other words, we must be prepared to accept some failure.

11. While the COVID-19 pandemic has caused a lot of hardship and disruption, it also presents opportunities for us to identify gaps that require new solutions.
 - a. As the world's largest transshipment port, Singapore is a good location for solution-providers to test bed new ideas. Solutions that work well in a busy hub port like Singapore could be adapted for other ports globally.

 - b. We need to support first-movers – individuals and companies who are willing to take risks and pioneer innovative solutions. And help those who fail initially to try again, when they come up with new proposals.

12. We do this by providing a safe-fail environment that encourages experimentation.
 - a. Earlier this year, MPA called for proposals from the maritime industry that aim to build resilience and competitiveness in a post COVID-19 era; and to deepen 3D printing capabilities in the maritime sector.

- b. **I am happy to know that about 40 proposals were received. Under our MPA Maritime Innovation and Technology (MINT) Fund, we are awarding around S\$1.6 million of co-funding to 11 consortiums.**
 - c. Five of these are joint industry projects to build stronger resilience and competitiveness, and six are projects focusing on additive manufacturing of marine parts.
13. One of them is a Singapore technology start-up called Shipsfocus.
- a. When Shipsfocus ventured into digitising passenger launch services in 2017, they faced initial resistance from industry players who were used to scheduling boats and passengers using pen and paper. Earlier attempts by other technology players were unsuccessful.
 - b. But Shipsfocus persevered, and eventually found customers willing to invest in their vision. Today, Shipsfocus will be collaborating with another Singapore maritime technology company, Innovez One, to develop contactless counter services at our piers to increase efficiency and improve passenger experience.
 - c. I'm sure COVID-19 accelerated this idea. But Shipsfocus would not have been able to seize the opportunity caused by COVID-19 if they had not developed the idea beforehand.

- d. Their pilot involves 10 counters and could reduce queues and achieve estimated cost savings of up to S\$180,000 per annum.
14. Additive manufacturing will play a critical role in achieving a more sustainable and efficient maritime industry. Current methods to replace marine spare parts can be costly and time-consuming. Sometimes, the cost of sourcing and bringing in a spare part may cost more than the part itself. And the most problematic issue might be the delay caused to the companies while waiting for the spare part to arrive.
- a. To deal with this, Wilhelmsen and Thyssenkrupp have joined hands to lead two of the consortiums on additive manufacturing to print and trial the use of 14 parts onboard Singapore-registered vessels across eight different shipping companies.
 - b. The collaboration brings together Thyssenkrupp's deep expertise in additive manufacturing with Wilhelmsen's maritime service and supply chain knowledge, to develop a solution that can make shipping more efficient and sustainable.

Being innovative requires an openness to review existing policies and rules

15. Let me now touch on the third and final area, on the need to review existing policies and rules to support innovation. We must continue to provide a regulatory environment which is flexible, forward-looking and open to new

possibilities, and where we welcome industry players to work together with government agencies to jointly develop new solutions.

- a. One example is the medical examination of seafarers on board vessels to ensure that they are fit to travel before they can disembark the vessel for crew change. This was a new requirement that arose due to COVID-19. Medical examination of seafarers entailed a doctor taking a launch boat, boarding the vessel, and physically examining the crew.
- b. This was costly, time consuming and carried a high risk of transmission. We had to quickly find a new way for doctors to examine the crew, while keeping our doctors safe. The solution? Telemedicine.
- c. MPA worked with the Ministry of Health to revise our crew change protocol and Port Marine Circulars. This allowed our doctors to examine crew remotely before they issued a Fit-to-Travel certificate.
- d. There will be other policies and rules which we need to review when new ideas emerge. The key is to keep communication channels open between government agencies and the industry, and to encourage feedback and suggestions from stakeholders on how we can work together to continually enhance our rules and practices.

Conclusion

16. To conclude, innovation is a key enabler to propel Maritime Singapore forward and to create jobs and opportunities for our people.

a. We will continue to invest in this area, by supporting collaborations, encouraging experimentation and risk-taking, and working together with the industry to proactively review our policies and rules.

b. Smart Port Challenge is a good example of this effort. I hope it has been a fruitful and exciting journey for all of you, and I look forward to learning more about your projects.

17. Congratulations once again to all the participants and finalists of Smart Port Challenge 2020! Thank you.