Accelerating Digitalization
Critical Actions to Strengthen the Resilience of the Maritime Supply Chain

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A Need for Digitalization in Maritime Supply Chain

- The COVID-19 pandemic has upended lives and brought major disruption to economic activity across the world, precipitating an unprecedented global health and economic crisis.
- Maritime transport remains the backbone of globalized trade and the manufacturing supply chain, with more than four-fifths of global merchandise trade (by volume) carried by sea.
- However, the maritime ports are also just one node in a complex logistical chain involving a number of interactions; digitization is vital to improving the competitiveness of that chain.

Source: UNCTAD (2023)
A Need for Digitalization in Maritime Supply Chain

- A number of global organizations, such as UNCTAD, UNECE, WCO, WTO, and IMO have been advocating the accelerated digitalization of cross-border processes and documentation.
- A country should have a plan of the immediate, short, and medium-term measures considered necessary to strengthen the resilience of the maritime and logistics sector, to build back better, and more importantly ensure countries realize the significant potential efficiency gains of digitization.
- The immediate measures are followed by, but could also be in parallel to, the short-term measures to meet the mandatory requirements, as defined in the IMO’s Facilitation (FAL) Convention (IMO 1965).

Figure 3: Proposed Road Map of Maritime Digitalization
Critical Points on Maritime Single Window

- The FAL Convention: “single window” as a facility that allows submission of standardized information covered by the FAL Convention to a single-entry point.
- Clearance processes: combining common and harmonized data elements into a single message according to commonly agreed standards and format and sent electronically to a single official destination, rather than being sent to each authority separately.
- The FAL Committee issued revised guidelines for setting up an MSW6 to serve as a source of information, advice, and guidance for interested member states.

Figure 4: Coverage of MSW
Critical Points on Maritime Single Window

Case of VUMPA, Panama

In 2017, the Panama Maritime Authority and the Panama Canal Authority announced the launch of an initiative to develop the Panama Maritime Single Window System (VUMPA),

- Despite the advantages, the number of countries that have developed a fully functional Maritime Single Window (MSW) remains low
- To date, many countries have developed parallel single windows addressing the needs of different authorities, requiring traders to submit the same information more than once to several single windows.
- Thus, realizing the full benefits of the MSW concept will involve a consolidated move toward a definitive single window covering all aspects of regulations and business to government exchanges of data.

1) Reduced the need for more than 300,000 paper forms
2) Improving the efficiency and carbon footprint of transhipment procedures
3) Saving up to 3,260 person hours annually.
Lesson Learned from Indonesia

- Inaportnet features approval for
  - Ship entry and exit
  - Stevedoring services
  - Pilotage services
  - Services billing
  - Movement permit
  - Goods declaration
  - Issue service

- Inaportnet has been utilized in 109 ports

- The related stakeholders and users
  - Port Authority - MoT
  - Pilotage and tugboat
  - Stevedores
  - Ship owners
  - Harbormaster - MoT

Figure 5: Zooming in to maritime supply chain systems in Indonesia
Lesson Learned from Indonesia

- Impact of Inaportnet
  - Ease the coordination and supervision of unload and loading process improvement
  - Easiness in cargo tracking
  - Reduces dwell time
  - Reduce man hours for personnel
  - Reduce waiting time of trucks in container terminal

- Lesson for improvement
  - **Governance setup**
    - Alignment with relevant ministries
      - Data privacy
      - Cloud storage
      - Institution setup
  - **Capacity Development**
    - Standardize human resource capability in each branch of ports
  - **Advanced data analytics and port community system (NLE—in Indonesia)**