

Schema for capturing interactions of STM ships making port approaches to STM ports

To overcome the different strategies adopted in validating the STM concepts in activity 1 (with planned focus months) and activity 2 (with continuous installation of onboard capabilities) it is proposed to the different ports that special attention is directed to particular port calls in-between focus months. This requires an up-and running infrastructure at each STM port. This is to be combined with the final focus months that is being pushed to be pursued in August / September this year conducted in all STM ports as a final validation of the PortCDM concept (port-to-port in applicable cases, within ports, and ship-to-port for approaching STM ships).

Below a stepwise plan is elaborated on that has been discussed with the Living Lab participants in Port of Gothenburg. The same procedure is also proposed to be adopted in the other STM ports as well (besides the Italian ports that we do not know the status of). The purpose of this step-wise model is to elaborate on interaction patterns for the collaborative decision-making process of making recommendations to approaching ships. Tools for submitting recommendations are PortableCDM, PACT, and possibly also the RTA-doodle within the port call synchronization tool. Tools using different parameters for optimization for automatic provision of basis for issuing a recommended time of arrival is also being developed but needs to be thoroughly tested. One of the purposes of the step-wise model elaborated on below is to derive interaction patterns for creating basis for making well-founded decisions. This should also be matched with ensuring that the captain shares its route and his desire to accept recommendations.

Step 1: Attention is needed!

- STM ship approach is identified by STM Shore Center
- Heads-up email is generated from STM Shore Center to local Living Lab facilitator, which then send it out to all Living Lab participants encouraging them to register manually on the accurate port call when automatic connector does not exist. This also includes sending an email to the ship encouraging them to share the route. This Email should contain the text of the meaning of RTA.

Step 2: Coordinate the port call

- At a particular time the facilitator (in the Gothenburg case: Port control) call for a meeting between:
 - Port Control (facilitator)
 - Involved ship agent
 - Involved terminal operator
 - local Living Lab facilitator
 - STM Shore Center, (Involved people from Shore Center)
- Arrive at a common understanding whether the port call is well coordinated in all its steps (from arrival to port area until the fulfillment of the purpose of call).
 - If YES: Monitor the progress of the port call continually and document the basis for the decision.
 - If NO:
 - Identify a potential need of recommended time of arrival dependent on ill-coordinated port call (as e.g. too much waiting time at some point of the port call). This is done in collaboration with Port Control, Terminal, Ship Agent, STM Shore Center and local Living Lab facilitator
 - Decide upon who shall send the RTA given the different circumstances
 - Generate/Suggest potential RTAs.
 - Send RTA (possibly also communicate manually with the captain to accept/reject the RTA) and await new TTA. When a RTA is generated an Email should be sent to involved actors mentioned including the ship
 - When new TTA is submitted by the ship and received by the port, monitor the emergent adjustments for involved actors
- Repeat this step until the port call has been finished

Step 3: Reflect and document

- Ensure that each involved participant (including the captain) reflect over the collaborative decision-making process
- Interview key actors
- Document the outcomes from the reflections

