



## AutoMated Vessels and Supply Chain Optimisation for Sustainable Short SEa Shipping

### MOSES Pre-pilot Integration Test

#### AGENDA

<b>Date:</b>	16-20/10/2023
<b>Venue:</b>	Faaborg port, Denmark
<b>Organiser:</b>	TUCO
<b>Version:</b>	Draft



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# CONSORTIUM

1	<b>NATIONAL TECHNICAL UNIVERSITY OF ATHENS - NTUA (NTUA)</b>
2	<b>ENGITEC SYSTEMS INTERNATIONAL LIMITED (ESI)</b>
3	<b>CORE INNOVATION AND TECHNOLOGY OE (CORE)</b>
4	NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO (TNO)
5	STICHTING MARITIEM RESEARCH INSTITUUT NEDERLAND (MARIN)
6	ELLINIKI ENOSI PLIOKTITON RIMOULKON, NAYAGOSOSTIKON, ANTIRIPANTIKON KAI PLION IPOSTIRIXIS IPERAKTION EGKATASTASEON (SAT)
7	DANAOS SHIPPING COMPANY LIMITED (DANAOS)
8	<b>FUNDACION DE LA COMUNIDAD VALENCIANA PARA LA INVESTIGACION, PROMOCION Y ESTUDIOS COMERCIALES DE VALENCIAPORT (VPF)</b>
9	DNV GL HELLAS SA (DNVGL)
10	<b>ASTILLEROS DE SANTANDER SA (AST)</b>
11	STATHMOS EMPOREVMATOKIVOTION PEIRAIA AE (PCT)
12	DIMOTIKO LIMENIKO TAMEIO MYKONOU (MHM)
13	NAYTILIAKES METAFORIKES KAI EPIKOINONIAKES EPIXEIRISEIS SEABILITY EPE (SEAB)
14	<b>TRELLEBORG RIDDERKERK BV (TRELL)</b>
15	CIRCLE SPA (CIRCLE)
16	MACGREGOR SWEDEN AB (MCGRSWE)
17	<b>PROZERO INTERNATIONAL APS (TUCO)</b>

Time	Activity	Partners
<b>Monday 16/10/2023</b>		
09.00 – 13.00	Technical partners' travelling	CORE, NTUA, ESI, TREL <sup>1</sup>
13.00 – 14.00	Lunch Break	All
14.00 – 15.30	<ul style="list-style-type: none"> <li>Commissioning of equipment</li> <li>Sensor installation (TB1 Router, TB2 Sonar, TB1&amp;2 IMU, TB1&amp;2 Lidar, TB1 GPS, Shore RPI)</li> </ul>	CORE, NTUA, ESI, TREL
15.30 – 17.30	Testing of communication network and components' operation ( <u><i>no sailing during 15.35 – 16.05 due to ferry arrival/departure</i></u> )	CORE, NTUA, ESI, TREL
17.30 – 18.00	Debriefing and next-day planning	CORE, NTUA, ESI, TREL
<b>Tuesday 17/10/2023</b>		
09.00 – 13.00	Extensive testing of all sensors, components and processes ( <u><i>no sailing during 09.45 – 10.05 and 11.45 – 12.05 due to ferry arrival/departure</i></u> ) <ul style="list-style-type: none"> <li>Communication network</li> <li>Exchange of sensors' data and data storage</li> <li>Tugboat control (throttle, gear, steering)</li> <li>Autopilot performance</li> <li>Communication with AutoMoor and triggering</li> <li>Barge mooring</li> <li>Visualization at SCS</li> </ul>	CORE, NTUA, ESI, TREL, VPF
13.00 – 14.00	Lunch Break	All
14.00 – 17.00	Detailed execution of manual tests and scenarios	CORE, NTUA, ESI, TREL, VPF
14.00 – 14.30	<ul style="list-style-type: none"> <li>Debugging and modifications</li> </ul>	
14.30 – 15.35	<ul style="list-style-type: none"> <li>Manual tests and measurements</li> </ul>	
15.35 – 16.05	<ul style="list-style-type: none"> <li>Reconfiguration (<u><i>no sailing due to ferry arrival/departure</i></u>)</li> </ul>	
16.05 – 17.00	<ul style="list-style-type: none"> <li>Testing of both scenarios' steps (TC-AT/AD-2.01, TC-AT/AD-2.02)</li> </ul>	

<sup>1</sup> TREL will visit Faaborg one week earlier (9-13/10) to test the performance of AutoMoor and the mooring of the barge. During this week, CORE may also test remotely the communication with TREL and the autonomous activation of AutoMoor.

17.00 – 18.00	Debriefing and next-day planning	All
<b>Wednesday 18/10/2023</b>		
09.00 – 13.00	Detailed execution of tests from D7.1 (tables 9-12) and KPI measurements	CORE, NTUA, ESI, TRELL, VPF
09.00 – 09.45	<ul style="list-style-type: none"> <li>D7.1 tests and KPIs</li> </ul>	
09.45 – 10.05	<ul style="list-style-type: none"> <li>Reconfiguration (<i>no sailing due to ferry arrival/departure</i>)</li> </ul>	
10.05 – 11.45	<ul style="list-style-type: none"> <li>D7.1 tests and KPIs – cont.</li> </ul>	
11.45 – 12.05	<ul style="list-style-type: none"> <li>Reconfiguration (<i>no sailing due to ferry arrival/departure</i>)</li> </ul>	
12.05 – 13.00	<ul style="list-style-type: none"> <li>D7.1 tests and KPIs – cont.</li> </ul>	
13.00 – 14.00	Lunch Break	All
14.00 – 16.05	Detailed execution of tests from D7.1 (tables 9-12) and KPI measurements – cont.	CORE, NTUA, ESI, TRELL, VPF
14.00 – 15.35	<ul style="list-style-type: none"> <li>D7.1 tests and KPIs</li> </ul>	
15.35 – 16.05	<ul style="list-style-type: none"> <li>Reconfiguration (<i>no sailing due to ferry arrival/departure</i>)</li> </ul>	
16.05 – 17.00	Demo scenarios' dry run (TC-AT/AD-2.01, TC-AT/AD-2.02)	Pilot 1 partners
<b>Thursday 19/10/2023 (full day video recording)</b>		
09.00-10.05	<ul style="list-style-type: none"> <li>Setup of equipment for video recording</li> <li>Final installations and testing (<i>no sailing during 09.45 – 10.05 due to ferry arrival/departure</i>)</li> </ul>	CORE, NTUA, ESI, TRELL, VPF
10.05 – 11.00	Demo scenarios' dry run (TC-AT/AD-2.01, TC-AT/AD-2.02)	CORE, NTUA, ESI, TRELL, VPF
11.00 – 13.00	Pilot execution	CORE, NTUA, ESI, TRELL, VPF
11.00 – 11.45	<ul style="list-style-type: none"> <li>Scenario 1 (TC-AT/AD-2.01)</li> </ul>	
11.45 – 12.05	<ul style="list-style-type: none"> <li>Reconfiguration (<i>no sailing due to ferry arrival/departure</i>)</li> </ul>	
12.05 – 12.50	<ul style="list-style-type: none"> <li>Scenario 2 (TC-AT/AD-2.02)</li> </ul>	
12.50 – 13.00	<ul style="list-style-type: none"> <li>Evaluation and Q&amp;A</li> </ul>	
13.00 – 14.00	Lunch Break	All
14.00 – 15.00	Reconfiguration and integration test (if needed)	CORE, NTUA, ESI, TRELL, VPF
15.00 – 17.00	2 <sup>nd</sup> run of pilot execution (if needed)	CORE, NTUA, ESI, TRELL, VPF
15.00 – 15.35	<ul style="list-style-type: none"> <li>Scenario 1 (TC-AT/AD-2.01)</li> </ul>	
15.35 – 16.05	<ul style="list-style-type: none"> <li>Reconfiguration (<i>no sailing due to ferry arrival/departure</i>)</li> </ul>	

16.05 – 16.50	<ul style="list-style-type: none"> <li>Scenario 2 (TC-AT/AD-2.02)</li> </ul>	
12.50 – 13.00	<ul style="list-style-type: none"> <li>Evaluation and Q&amp;A</li> </ul>	
17.00 – 18.00	Debriefing	All
<b>Friday 20/10/2023</b>		
08.00 – 11.00	a) Final testing and pilot execution (if needed) <i><u>(no sailing during 09.45 – 10.05 due to ferry arrival/departure)</u></i> b) Equipment decommissioning	CORE, NTUA, ESI, TREL, VPF