

Detailing and validation of use case A

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Table of Contents

- Executive summary 4
- Definitions and abbreviations 5
- 1 Introduction..... 6
 - 1.1 Objective..... 6
 - 1.2 Background..... 6
 - 1.3 Scope 7
- 2 Validation method..... 8
 - 2.1 Decision Support System..... 8
 - 2.2 Road transport simulations 10
 - 2.3 KPI validation 12
 - 2.4 Validating ICT system support..... 14
- 3 Detailing and assumptions 15
 - 3.1 The overall use case scenario 15
 - 3.2 Ship modelling 16
 - 3.3 Weather..... 16
 - 3.4 Machinery and fuel..... 18
 - 3.5 Battery containers 20
 - 3.6 Costs 21
 - 3.7 Cargo handling..... 27
 - 3.8 Cargo flow..... 28
 - 3.9 ICT Systems digital flows 29
- 4 Case studies..... 33
 - 4.1 Simulator workflow 33
 - 4.2 Base case (BC): Current logistic system..... 36
 - 4.3 Concept (C1): Two Mothers and two 60TEU daughters..... 38
 - 4.4 Concept (C2): Two Mothers and one 100TEU daughter 40
- 5 Results and discussion..... 42
 - 5.1 Logistic results 42
 - 5.2 Emission results 47
 - 5.3 Cost results 48
 - 5.4 Battery container infrastructure 52



5.5	Trade-offs	53
5.6	ICT Systems, functional suitability.....	54
6	Summary and conclusion	56
	References.....	57
Annex A.	DSS tool parameter list UCA.....	59
A.1.	Ships	59
A.2.	Locations.....	64
A.3.	Port Cost Schemes.....	66
A.4.	Remote Control Center (RCC).....	67
A.5.	Open questions	67
Annex B.	Full weather profile	68



Executive summary

This report presents an analysis of the AEGIS mother-daughter transport system along the coast of Norway. The analysis was performed based on simulations of the transport-system in the DSS developed in WP2 of the AEGIS project [3]. In order to perform the simulations presented in this report, interviews with stakeholders were performed to gather operational data not previously captured in earlier deliverables.

Through these interviews, details and assumptions regarding the transport-systems were clarified. Based on previous deliverables and these interviews, three concept cases were created. Figure 1, shown beneath, presents the method used to create, simulate/evaluate, and compare case studies.

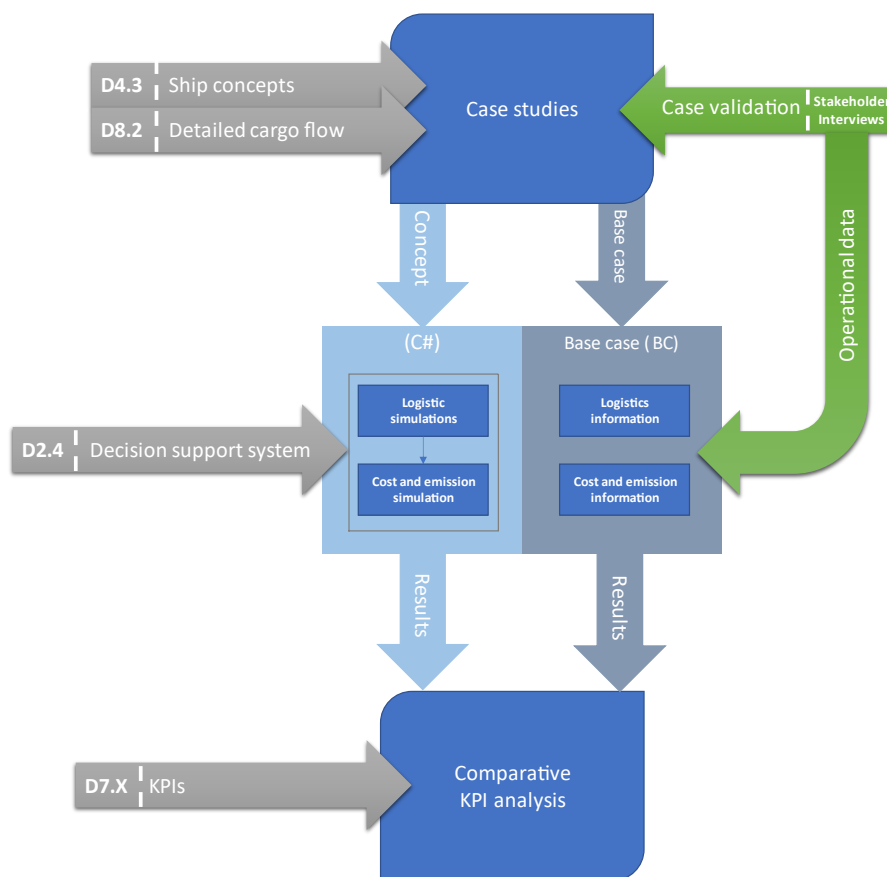


Figure 1 - The detailing and validation methodology

The three concept cases were designed to satisfy the cargo-demand detailed in D8.2 [2]. The first concept evaluates a transport-system utilizing two small 60 TEU daughter vessels operating in Trondheimsfjorden, while doing transshipment at the terminal in Sandstad, Hitra, to two methanol powered 1100 TEU motherships with sailing destination to Rotterdam. The second concept replaced the two 60 TEU daughters with a larger 100 TEU daughter, while maintaining transshipment in Sandstad as well as the two 1100 motherships.

Logistical, cost and emissions KPIs from simulating these transport-systems in the DSS were then presented, with an analysis of the relative performance of each transport system on KPIs.

The analysis concludes that there is no one concept outperforming the other in all KPIs. Each concept has strengths and weaknesses that should be considered. These relative strengths and weaknesses are presented to give decision support to the reader.