European Opportunities and Challenges

The ability of the Venice Offshore Port to meet current and future requirements

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**Introduction**

- The initial plans, layout and design of the V.O.O.P.S. offshore port have developed over time.
- Most recent plan adjustments and re-calculation of terminal efficiency date from December 2014.
- Since that date, a number of major changes in the world container transportation industry have happened.
- Each of them may have its impact on the V.O.O.P.S. offshore port.
- Challenging the development options of the scheme within the boundaries as provided by the concept and current layout itself, EIA related conditions and permits.
Changes, Challenges and Opportunities

- **Changes** in the world container transportation industry:
  - Continuous **shrinking margins**
  - Expansion of the **Suez Canal**
  - Further consolidation in liner **Alliances**
  - Further optimization in **Economy of Scale**

- **Challenges** due to these changes:
  - The use of larger, more cost- and energy effective vessels
  - Larger parcel sizes per call
  - Need for increased efficiency per call
  - Steady growth, also for the long(er) term

- **Opportunities**, as a result of these challenges:
  - Optimization of the plan for efficiency, economic and commercial reasons

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Development Options Operational to accommodate potential growth and enhance efficiency:

- **Capacity of the Container Terminal**
  - Current concept seems to be planned and designed in the tradition of a land based container terminal rather than an Offshore Container Transshipment Facility
  - The latter of which would deliver a higher throughput
  - Expanding to the long(er) term capacity needs of the terminal could ask for innovative solutions

- **Arrangement of the Barge Operations**
  - Current mooring, berthing, unmooring and Mama-vessel arrangement and procedures advised to be optimized
  - Ditto, introducing an alternative container loading and offloading methodology
Development Options Financial, related to the financial and commercial viability of the overall plan:

- **Capacity and Operations**
  - Terminal and berthing arrangement
- **Reduce Construction Costs**
  - Breakwater length and type advised to reconsider
  - Overall construction method, making use of different construction approach, elements and materials
- **Commercial**
  - Reduction of the investment cost per net square meter operational area
  - Multiple Operators
  - Multi Stakeholder engagement, other functions
  - Enhanced Sustainability by appealing to more functions which may be triggered by an alternative construction approach
Development Options towards the future

• What’s presented is a healthy and robust concept
• Providing possibilities for expansion and optimization within the existing contour of the project
• Meeting the requirements of the current EIA and permitting
• Add quality with respect to feasibility and flexibility and so to the financial, commercial, sustainable and economic viability of the project
Upper Deck Arrangement for Outgoing Containers
Lower Deck Arrangement for Incoming Containers
Conventional Terminal Arrangement

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Overall Terminal Arrangement with Sustainable Breakwater
Conclusions

• The configuration and layout of the V.O.O.P.S. offshore port have developed over time
• Recent developments in the container industry make that the plan may need updating in terms of capacity and operations
• The V.O.O.P.S. concept is believed to be able to deal with current and future capacity requirements
• Optimizations are recommended in order to enhance the operational, financial and economic feasibility of the project
• Proposed optimizations do fit within the current physical boundary conditions of the plan, EIA requirements and permitting
• Offshore Infrastructure is often considered to be too valuable to build for one single purpose only. Multiple stakeholder engagement is therefore recommended
• Alternative construction options can attract such engagements
• Further detailing is advised