ONE HUB
New Horizons

Development Concept for the Port of Thessaloniki after Privatization
Potential for Railfreight

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ThPA SA, Port of Thessaloniki, Greece

INTERNATIONAL RAIL FREIGHT BUSINESS ASSOCIATION
Athens, April 4, 2019
Since end of March 2018, the port is managed by a private consortium who bought 67% of the shares:

- Deutsche Invest Partners (47%)
- Terminal Link (33%)
- Belterra Investments (20%)

Terminal Link (JV between CMA CGM & China Merchants Ports) acts as the technical partner to the project.

As part of the mandatory obligations of the new consortium, 180M Euros will be invested in the expansion of the port, with special focus on the Container Terminal.

Deadline for new investment is 2025, but expectation is to anticipate agreed schedule, and have new container facility completed by the end of 2022.

The Consortium will transform the port of Thessaloniki into a state-of-the-art facility served directly by the biggest lines and vessels operation in the Mediterranean market.
THESSALONIKI PORT INFRASTRUCTURE & FUNCTIONS

Port of Thessaloniki

- Container Terminal:
  - The container terminal is located in the western part of Pier 6 (Quay 26).
  - The 585m long and 340m wide Container Terminal can berth ships with a draught of 12m.
  - It covers a surface area of 254,000 m² with an on-site storage capacity of 5,000 TEUs in ground slots.
  - The container terminal is linked with a double track railway to the national railway networks.

- Conventional Cargo:
  - It occupies the largest area of the Port of Thessaloniki, across Piers 3, 4, 5 and the eastern part of 6th Pier.
  - It serves general cargo, solid and liquid bulk cargo as well as Ro-Ro vehicles.
  - Rail connection to all berths makes the port very accessible.

- Passenger Terminal:
  - The passenger port of Thessaloniki is located between Piers 1 and 2 (Quays 4-8) and includes the building of the Passenger terminal, the Warehouse No 8 as well as the land area of the 2nd Pier.
  - It has a Quay of a total length of 400m with a depth of 8m. The Quay has 4 positions for stern berthing.
  - The port basin provides sufficient space and depth for cruise ship maneuvering and is well protected by a wave-breaker.

- Space Exploitation (Real Estate):
  - ThPA has a series of warehouses, sheds and open spaces that are leased (short and medium term leases) to third parties for storage and value added services (port activity).
  - It also exploits a number of warehouses and open spaces within Piers 1 and 2 for commercial non-port activities such as conferences, seminars, exhibitions and two outdoor parking areas with a total capacity of 595 vehicle parking spaces.

Existing infrastructure overview of the port:

1. Real Estate
2. Cruise Terminal
3. Ferry – Coastal Terminal (passengers, Ro-Ro Pax, Ro-Ro vessels)
4. Bulk cargo terminal, Service stations for various vessels
5. General Cargo and Dry Bulk Cargo Terminal
6. General & palletized Cargo and Bulk Cargo Terminal
7. Container Terminal (East side)
8. Container Terminal (West side)
9. Liquid Bulk Cargo with pipelines terminal & Ro-Ro vessels
THESSALONIKI PORT STRATEGY – AN INTEGRATED APPROACH

ThPA’s strategic approach

Port bound strategy
- Develop a high performance Container terminal via expansion, deeper Quays and modern handling & storage equipment, as well as front-end digital technology, in order for the port to be well connected to the digital systems of other ports and/or entities
- Develop a state-of-the-art Conventional port with increased bulk cargo vessel accommodation capacity, improved rail transport use and special cargo handling capabilities, to serve both import and export needs of the port, setting the ground for the development of the regional conventional cargo market
- Develop a modern Passenger port and associated supporting activities via establishing Thessaloniki as a cruise destination (home port) and a new cruise terminal

Beyond the port strategy
- Leverage on port’s location to establish a combined transportation network for Balkans and SEE countries
- Develop a logistics center adjacent to port facilities
- Develop or work with a rail freight operator
- Develop or operate dry ports or other rail-related freight facilities within strategically selected areas of the direct market neighboring countries (Bulgaria, FYROM & Serbia)

The management strategy
- Develop a unified management strategy across port activities to exploit synergies in market and support operations
- Setup of a lean and efficient organizational structure
- Follow a Customer oriented strategy
THESSALONIKI PORT STRATEGY – THE EXTENDED GATE APPROACH & DRY PORTS

PORT OF THESSALONIKI
The port in a nutshell

Positioning

- Multipurpose port handling all type of goods
- Gateway port to Balkans and South Eastern Europe.
- Close to major motorways and railway networks.
- In 2018, the port handled 425K TEUs and 3.8 Million tonnes of conventional cargo
- YTD increase (Feb 2019) for Conventional Cargo is 111% and for Container Terminal (Feb 2019) around 10%

Port Throughput in '000 TEUs

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>296</td>
<td>318</td>
<td>322</td>
<td>350</td>
<td>351</td>
<td>344</td>
<td>402</td>
<td>425</td>
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</table>

Port Characteristics and Equipment

<table>
<thead>
<tr>
<th>Quay Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>6,200 meters (6 piers)</td>
</tr>
<tr>
<td>Container 550m</td>
</tr>
<tr>
<td>Conventional 4200m</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quay Cranes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 STS</td>
</tr>
<tr>
<td>2 MHC</td>
</tr>
<tr>
<td>28 cranes for Bulk &amp; Break Bulk</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Yard Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Straddle Carriers</td>
</tr>
<tr>
<td>2 Reach Stackers</td>
</tr>
<tr>
<td>2 Front Loaders</td>
</tr>
<tr>
<td>1 RMG</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
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<tbody>
<tr>
<td>9 to 12 meters</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>155 Ha</td>
</tr>
<tr>
<td>Container 31.7 ha</td>
</tr>
<tr>
<td>Conventional 90 ha</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Container 500,000 TEUs</td>
</tr>
<tr>
<td>Conventional : 5,000,000 Tons</td>
</tr>
</tbody>
</table>

Areas & Functions

- Container Terminal
- Liquid Bulk Terminal
- Dry Bulk Terminal
- General and Bulk Cargo Terminal
- Cruise and Ferry Terminal
THE HINTERLAND & THE EXTENDED GATES STRATEGY

SERVING A DIRECT HINTERLAND OF OVER 20 MILLION PERSONS
Preferred Gateway to the Balkans and Black Sea

- Gateway port to the Balkans and South Eastern Europe
- Strategically located in close proximity to major motorways and railway networks.
- Direct access to the Balkans, Russia and Turkey through existing road networks.
- 5 country capitals within a range of 600Km, make of Thessaloniki a true gateway for the Southern Balkans

**Road Distance (in km)**

<table>
<thead>
<tr>
<th>Road</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skopje</td>
<td>219</td>
</tr>
<tr>
<td>Sofia</td>
<td>280</td>
</tr>
<tr>
<td>Tirana</td>
<td>424</td>
</tr>
<tr>
<td>Bucharest</td>
<td>608</td>
</tr>
<tr>
<td>Belgrade</td>
<td>609</td>
</tr>
</tbody>
</table>
Thessaloniki is part of two EU Pan-European corridors which will aim to improve existing rail & road connections to Central and North Europe.

- **Corridor IV**, connecting Thessaloniki with Dresden in Germany.
- **Corridor X**, connecting Thessaloniki with Salzburg (Austria) and crossing passes through Austria, Slovenia, Croatia, Serbia, FYRO Macedonia and Greece.

**Thessaloniki is part of two EU Pan-European corridors which will aim to improve existing rail & road connections to Central and North Europe.**
### Container Operations
- Most important port in Greece for export cargo.
- Natural gateway serving the Southern Balkan market (FYROM & BULGARIA)
- Currently limited to medium-small container vessels due to draft limitations (12mts)
- 425K TEUs in 2017

### Conventional Operations
- 14 dedicated berths capable of handling all kinds of Bulk and Break Bulk.
- Total quay length of 3.750mts
- All berths linked by rail
- 670,000m² of outdoor storage space + 45,000m² of covered warehouses (including reefer area)
- 3.6 Million tonnes handled in 2017

### Passengers
- Upcoming destination for cruise ships.
- Broad array of facilities (bunkers, slops etc.)
- Located close to major tourist destinations
- Fully compliant with International Ship and Port Facility Security code (ISPS)

### Exploitation of Spaces
- Parking lots offer around 600 parking spaces in Pier 1 and 2, respectively
- Leasing of renovated warehouse venues for events conferences and leisure activities, making it a prime area for the city
Container Terminal – facilities

- Capacity to handle 550K TEUs p.a.
- 570m of berth with depth of 12m
- 4 STS cranes capable of handling vessels up to 6,000 TEUs.
- Round-the-clock vessel operations, 361 days per year.
- Gate open between Monday and Friday 08.00hrs -22.00hrs and Saturday from 08.00 – 15.00hrs, but upon customer need can be extended beyond this period

- 30ha of yard for container operations, offering a static capacity of 4,500 ground slot TEUs.
- Yard handling ensured by 12 Straddle Carriers.
- 2 Reach Stackers + 2 empty handlers
- Approximately 400 plugs for reefer containers

- Rail link to the Container Terminal connecting the port to the Eastern and Central European markets.
- 3 rail lines with around 400mts each, served by one RMG and 2 reach stackers.
Access to Gate 16 is done through 3 lanes in and 2 lanes out. On a daily basis, the port processes 800 trucks.

- Gate 16 is dedicated road access to the port of Thessaloniki.
- Until 2023, significative road and rail improvements will be put in place by the Government as part of Greek state obligations.
- Working time: Monday-Friday 08.00hrs to 22.00hrs
  Saturdays 08.00-15.00hrs
Access to the Container Terminal

Gate 16 entrance: 5 lanes in + 4 out

OCR (Optical Character Recognition): Export containers cross OCR lanes for Optical recognition, before turning right to the Container Terminal’s Gate.

Interchange are between yard machines and external trucks. Area provided for parking of trucks that come to deliver and/or pick-up containers.

Accepted delivery and pick-up in the same truck cycle

Dedicated area for empty containers

Area belonging to THPA but temporarily rented to depots. After April 2019 land will return to THPA’s possession.

Area belonging to THPA to be developed in the future.

CCTV system monitoring Terminal 24/7
Reception/Delivery & Stacking area

- Stacking area with capacity for simultaneous storing over 4,000 TEUs.
- Full containers are stacked two-high. In the future, the new Straddle Carriers will stack 3-high.
- Truck Interface area eliminates risks of collision with Straddle Carriers.
- Rail yard, with 3 lines, also clearly separated from Truck and yard area.
- Segregation between full and empty containers. Dedicated area for empty units.
Logistic activities

- 45,000 sqm of covered space for different types of logistic activities; crossdocking, un/stuffing of containers, package & labeling and storage of dry and refrigerated cargo.

- Several logistic companies installed in the free zone, offering logistic & distribution services

- Reefer warehouses for the storing of perishable goods.

- Ample open-spaces for the storage of all types of cargo, including project cargo.

- Available spaces for rental and development of logistic centres, benefiting from location inside the free zone area.

A major logistic hub & distribution center to the Balkan market
**Liner services calling the port**

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>ROUTE</th>
<th>LINE</th>
<th>Slot Purchaser</th>
<th>Vessel Operator</th>
<th>Frequency</th>
<th>Ports of call</th>
<th>Vessel size (TEUs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSLMED Turkey North Africa Express (TURAF)</td>
<td>Intra Med</td>
<td>CMA CGM</td>
<td>CMA CGM (3)</td>
<td>weekly</td>
<td>Malta, Izmir, Piraeus, Thessaloniki, Gemlik (Gemport)</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>North Europe-Greece-Turkey Agean Service</td>
<td>North Europe to East Med</td>
<td>MSC</td>
<td>MSC (4)</td>
<td>weekly</td>
<td>London-Gateway, Rotterdam, Antwerp, Gioia Tauro, Piraeus</td>
<td>4 x 5000</td>
<td></td>
</tr>
<tr>
<td>Hellenic Shuttle service</td>
<td>Intra Med</td>
<td>MSC</td>
<td>MSC (1)</td>
<td>weekly</td>
<td>Thessaloniki, Damietta, Iskenderun, Mersin, Aliaga, Tekirdag, Thessaloniki</td>
<td>1 x 850</td>
<td></td>
</tr>
<tr>
<td>Aegean Sea Feeder 2 EX2</td>
<td>North Europe to East Med</td>
<td>MSC</td>
<td>Seago</td>
<td>weekly</td>
<td>Piraeus, Volos, Thessaloniki, Piraeus</td>
<td>1x900</td>
<td></td>
</tr>
<tr>
<td>Greece-Turkey Service</td>
<td>Intra Med</td>
<td>EMES</td>
<td>Maersk</td>
<td>weekly</td>
<td>Malta, Thessaloniki, Piraeus, Thessaloniki, Malta</td>
<td>1,500</td>
<td></td>
</tr>
<tr>
<td>Greece &amp; Turkey service (GTS)</td>
<td>Intra Med</td>
<td>Italia Maritima</td>
<td>Xpress Line</td>
<td>weekly</td>
<td>Piraeus, Istanbul, Haydarpa, Thessaloniki, Piraeus</td>
<td>1700</td>
<td></td>
</tr>
<tr>
<td>Greece-Limassol Service</td>
<td>Intra Med</td>
<td>SBS Samothrakitis Shipping</td>
<td>SBS (1)</td>
<td>weekly</td>
<td>Thessaloniki, Limassol, Thessaloniki</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>AGT</td>
<td>Intra Med</td>
<td>COSCO</td>
<td>Cosco (2)</td>
<td>weekly</td>
<td>Piraeus, Rijeka, Koper, Venice, Ancona, Piraeus, Izmir, Thessaloniki, Gemlik, Gebze, Istanbul, Piraeus</td>
<td>1,400</td>
<td></td>
</tr>
</tbody>
</table>

8 weekly services calling the port offering connections to/from key hubs, Intra-med destinations and North Europe.
Operational KPIs

- In December, the terminal handled 38 vessel calls (+9% vs Dec17) with the highest Net Crane Rate of the year of 19.91 moves/hour.
- Gross Crane Rate (GCR) including all stoppage times was 18.17 moves per hour, a good performance considering the equipment’s condition and capabilities (old equipment and no twin-lift).
- Less number of calls in 2018 (-5% vs 2017) but higher number of moves per call (+11%), helps to increase the productivity.
- Better availability of yard equipment (SCs) with an average of 9 units available vs 5-6 when Management took over in March.
- Between April and December, the average vessel waiting time was 15.28 hours.
- Key factors affecting waiting time are still the strong pattern of vessel arrival with calls concentrated on the weekends.

Overall excellent performance on crane productivity increase and reduction of vessel waiting times
Short-Term investments at Container Terminal (until 2020)

- Purchase of 12 new Straddle Carriers 1 over 3 stacking capabilities. Expected delivery by 2Q 2019.

- Award of 3 spreaders for STS (delivery 4Q 18) and 2 for MHC (delivery October 18).

- Comprehensive refurbishment programme of existing terminal equipment already started to improve availability and restore service levels: 4 STS + 9 SCs.

- Purchase of two new Gantry Cranes (delivery by 2020)

- Extension of stacking yard by 2.5Ha, ready by 1Q 19.

- Purchase of new Mobile Harbour crane, to be delivered by 1H 2019.

Total investment estimated at 50 Million Euros
New Yard equipment - A major milestone for Thessaloniki

- Purchase of 12 new Straddle Carriers, with stacking capacity of 1 over 3.
- SCs units to more than duplicated from 10 to 22 units.
- Higher stacking capacity than existing fleet will increase by circa 60% the stacking capacity of the yard.
- Erection works of the first 2 units ongoing. Full delivery to be completed until end of March.
- Deployment in Operations by 2Q.

Total investment estimated of close to 9 Million Euros only in new yard equipment to provide a better service to customers.
INVESTMENT PLAN OVERVIEW
Extension of Container Terminal by 460m with draft of -17.6m (design vessel capacity: 18,000 TEUs).

Construction of additional 300mts of yard alongside the new berth.

3 new Neo-Panamax STS able to handle the biggest container vessels calling the Med.

Total investment of 180 Million Euros. Extension of Container Terminal expected to be completed by 1H 2023.

Long-Term investment (Container Terminal)

<table>
<thead>
<tr>
<th>Current Length</th>
<th>Future Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>530mts</td>
<td>1.000mts</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current capacity</th>
<th>Future capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>500K TEUs</td>
<td>&gt; 1.2 Million TEUs</td>
</tr>
</tbody>
</table>
THANK YOU

www.thpa.gr