

THE PORT OF GAŽENICA

Intermodal junction

Zadar – Position and Economy

Zadar is the administrative, economic and cultural center of the Zadar County. Since ancient times, it has the transport importance on maritime routes, and by the development of inland waterways in the 20th century, it gets the role of a significant transport hub. Since 1966 it is linked by rail with Knin, where it connects to the main railroad Zagreb - Split. Through the city the Adriatic highway passes, and the city and the entire county, by the modern highway A1, are connected via Zagreb to Central Europe. By the international shipping line it is connected to the Italian city of Ancona. The Zadar port accepts cruise ships, ships for liquid and bulk cargo and in the foreseeable future also container and ro-ro ships. The Zadar airport is about 10 km away from the city and its port Gaženica.

The economy of the Zadar County has an annual turnover of 1.5 billion EUR, it employs approximately 20,000 workers, while in total there are between 48,000 and 54,000 employees, due to large seasonal fluctuations in employment. In the structure of total revenue and number of employees, leading are the sectors of trade and manufacturing industry, mainly in the processing of food and beverages based on local raw materials from the sea and the fertile hinterland. Significant is also the metal processing industry with a number of specialized activities. The Zadar County is a leader in the Croatian fisheries and especially aquaculture, farming of white fish and Bluefin tuna. In Zadar the largest Croatian shipping company, specialized in the transport of oil and oil products, has its seat. The entire economy is dependent on the transport connection with the sales and procurement markets, and by a further development of the port Gaženica the existing activities of transshipment and storage will enhance and the processing industry and supporting activities related to port operations will develop. Particular expectations are related to the further development of tourism. Tourism is an activity which, thanks to its rapid growth, has softened consequences of the economic crisis experienced by the

City, the County and the whole of Croatia since 2009. Not only the natural beauty of the Zadar region, but also large private investments in tourism, infrastructure development, urban planning and world-renowned tourist attractions, increased in recent years the tourist trade, employment and income of the tourism sector.



Among many awards, the last one was received by a prominent tourist site European Best Destinations which proclaimed Zadar the best tourist destination for 2016.

Basic information about Port of Zadar

The port of Gaženica in Zadar represents the most significant economic and business zone in the Zadar County, although formally it has no such status. This area consists of two main parts: the existing transshipment port in the Industrial and the storage zone and the New port Gaženica - modern passenger and cargo terminals. The existing transshipment port, for many years, thanks to the port logistics and storage capacities, serves as a reception point for liquid and bulk cargo. The new port Gaženica is only for a year in the partial function of the fishing port and the ferry and cruisers' terminal. It should be in full operation by 2018 when a modern terminal building and container terminal will be ended. The port is an extraordinary intermodal hub. Modern high-speed road, which connects it to the 20 km away highway A1, touches the shore, practically entering into the heart of the Port Gaženica. Trucks that take containers and other goods on the way to Zagreb, Slovenian or Hungarian border, do not have any crossing or traffic lights. The railway also by industrial tracks enters the industrial and warehouse area, the storage of liquid cargo (oil products) and bulk cargo (mainly soybean). The Zadar airport is only 7 km away from the port, with flights to more than 30 cities in Central and Western Europe. The port of Gaženica is located near the center of the city of Zadar, the top tourist destination with numerous hotels and restaurants.

The Gaženica Port under construction in 2014



Geographic and strategic position

With its location in the center of the northeast coast of the Adriatic, Zadar is an ideal transport link to overseas countries, not only of Croatia, but also of the countries of Central Europe. Smart specialization and specific strengths can put it side by side with rival ports of Trieste, Koper and Rijeka. The road and air connections are ensured, all the facilities of the Port of Gaženica will be fully operational in two years and the revitalization of the railways is expected, which in past decades was the main link for overseas cargo. As a ferry port closest to Ancona on the neighboring Italian coast, Zadar is currently lagging behind Split in passenger and freight transport on this route, however, by the planned completion of the terminal, comparative advantage of the geographical position will come to the fore, less crowded and less distance to the north Croatian and other end points of departure and destinations. Thanks to its central position on the Croatian coast and high storage capacity, Zadar is also the ideal terminal for the coastal transportation of oil products.

Geographic position of the Port of Zadar



Zadar as the focal point of the Adriatic Sea

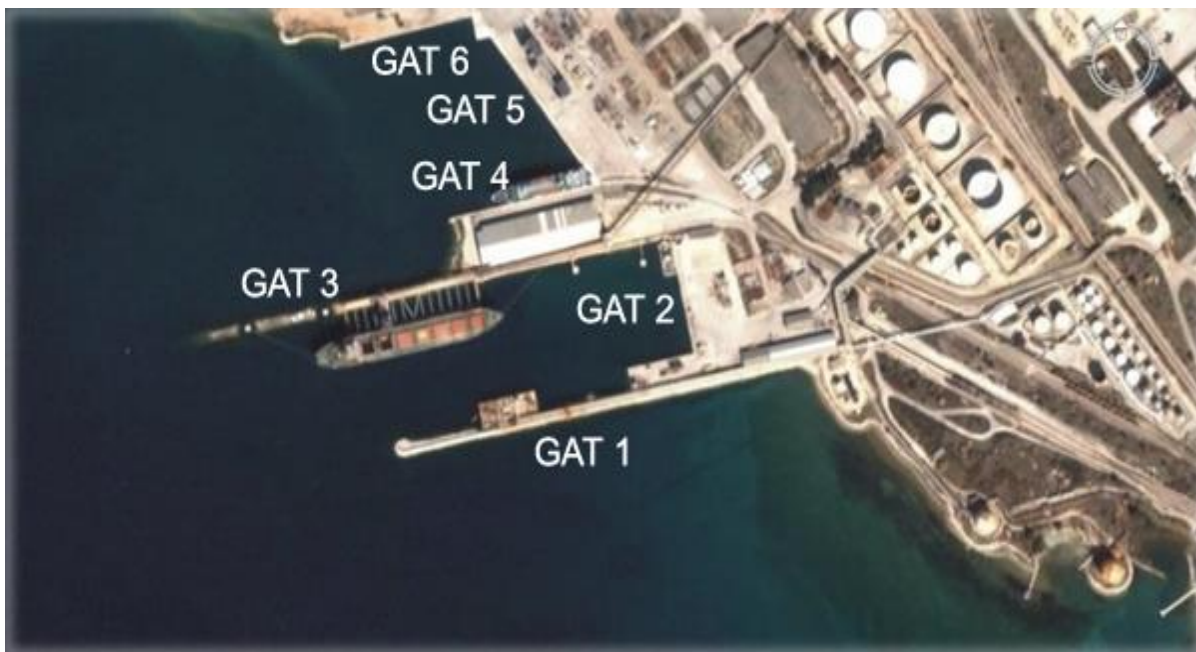


Existing Cargo Port Zadar

Characteristics:

- ✓ 4 km south-east from the center of Zadar
- ✓ Terminals for liquid, bulk and general cargo
- ✓ Surface area approx. 230.000 m² and six berths
- ✓ No possibility for accepting container cargo
- ✓ Possibilities and phased development of the cargo port are defined in the “Master plan for the cargo port Gaženica” and physical planning documents
- ✓ 2014. extension of concession for Luka d.d. (pending)
 - 25 years period
 - planned investments HRK 215 mil. / EUR 28 mil.
 - within existing cargo port there are liquid cargo terminal (berth 1), oil platforms supply terminal (berth 2), dry bulk (berth 3), tropical fruits (berth 4), general cargo (berth 5), wood, cement and ro-ro cargo (berth 6)

The existing piers



Industrial and warehouse zone

The total area of the industrial and warehouse zone Gaženica is 139.9 ha (without waters). Users of larger functional units are:

	user	contents	area (ha)
1.	Tankerkomerc d.d.	fuel tanks	4.70
		„spheres“ on the shore	3.50
		undeveloped space	7.25
2.	Sojara d.d. with the terminal	processing of soybeans	7.20
3.	Kepol terminal d.o.o.	management, terminal and others	10.75
4.	Luka Zadar d.d.	storerooms / piers	35.00
		undeveloped space	6.50
		port waters in concession	50.00
5.	other smaller occupants	-	3.00
6.	traffic areas / roads and railway	-	12.00

In the physical documentation of the town Zadar and Bibinje, in this area realization of production and ancillary functions is planned, such as:

- buildings of production and processing purposes
- buildings of handicraft and service activities that are compatible with the primary purpose of the space
- buildings for storage and trade (fuel and chemicals tanks, refrigeration plants, depots and silos of building materials, repositories of food items that are found in the port's transshipment system, wholesale trade and other similar purposes)
- service contents of the core business, and they relate to various services, catering, recreation and the like.

In terms of organization, this space is divided into two main areas, namely:

- the area between the road D8 (Jadranska magistrala) and the railway line. In this area there are complexes of Agrokor (Sojara d.d.), silos of Kepol-terminal d.o.o., Luka Zadar d.d., Tankerkomerc d.d. and a number of smaller users.

- the area of the culvert with the waters which is predominantly state-owned or administered by the Port of Zadar. In this area there are also the spaces of fuel tanks (Tankerkomerc d.d.), chemicals and transshipment facilities on the existing piers (Sojara d.d.), pumping plants for fuel and chemicals, and other smaller facilities. The concessionaire of the port quays and associated warehouses is Luka Zadar d.d.

Areas of the company Tankerkomerc d.d. held for sale (framed in yellow)



The company Tankerkomerc d.d. owns a terminal for oil and oil products of a total capacity of 62,000 m³ in 13 tanks. Reloading is done via the port pier for smaller

tankers, industrial railway track or truck loading facility. The plant is supplied with steam boiler of capacity of 5 tonnes / hour, power transformer station of 600 kVA, diesel engine that delivers 250 kVA and 50-ton truck scales. The company, in the area above the track in the Industrial and the storage zone, has attractive land held for sale of 7.5 ha of land at the sea southeast of the terminal of 3 ha size.

Contacts:

Tankerkomerc d.d., Obala kneza Trpimira 2, Zadar

General manager: Roberto Motušić, tel +385 23 204 730, fax +385 23 331 164

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Tankerkomerc d.d. Terminal tekućih goriva (Terminal of liquid fuels), Gaženica bb, Zadar

Director of the terminal: Boris Jurić, tel +385 23 341 315, fax +385 23 341 305

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Sojara d.o.o., located on the ideal touch of continental and maritime routes, is engaged in processing of soybeans. It has a tank of capacity of 36,000 m³ in 55 cells with underfloor storage space of capacity of 110,000 m³. Loading and unloading of the ship is done with modern systems for handling bulk cargo. Speed of unloading bulk cargo is 400 mt / h, and of edible oils 80 t / h.

Contact:

Sojara d.o.o., Gaženica bb, Zadar

Director: Metka Stipčević, tel +385 23 204 300, fax +385 23 204 311

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Kepol terminal d. o. o. is another owner of the storage capacity for liquid cargo in the Industrial and the storage zone. The total capacity of the reservoir for chemicals (21 reservoir of individual capacities from 350 to 2000 m³) is 15,650 m³, and an oil terminal of 6 tanks with total capacity of 60,000 m³ is under construction. Transport pipelines lead to dock pier, private industrial track and truck loading facility.

Contact:

Kepol terminal d.o.o., Gaženička cesta 34, Zadar

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Gaženica cargo port is under the jurisdiction of the Port of Zadar.

Contact:

Lučka uprava Zadar (Port of Zadar), Liburnska obala 6/l, Zadar

Director: Emil Bilić, tel +387 23 201-201, fax +385 23 201-212

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Luka Zadar d. d. is the primary concessionaire of the manipulative coast with docking piers. A total of six piers are individually specialized:

Pier 1 is for liquid cargo, 60 m length, (tying of boats to 190 m in length); depth of the coast 10.3 m to 12 m with the possibility of berthing of ships up to 40,000 DWT of size. This terminal also uses tanks for petroleum products (Tankerkomerc) of capacity of 60,000 m³, tanks for chemicals (Kepol-terminal) of capacity of 15,000 m³ 16 pipelines, floating protective dam 300 m long. The terminal is equipped with a fire alarm and fire-protection system for firefighting by foam, and reference cargoes for it are: diesel, petrol, VCM.

Pier 2 is a terminal for oil platforms supply, includes the coast 180 m long (depth of the coast is 4.8 m to 7.1 m), the 9 m long ramp, open store area of 20,000 m³, closed

warehouses and workshops. Reference cargoes for the terminal are spare parts, supplies and other materials, various equipment.

Pier 3 is used for transshipment of bulk cargo, includes the 140 m long coast, depth of the coast is 12 m with the possibility of berthing of ships of size of up to 80,000 DWT. Terminal capacity is 500,000 tons per year with the capacity of unloading and conveyor of 500 t / hour. The terminal also uses the railroad of capacity of 60 wagons per day of grain, or 40 cars per day of oil. The terminal has the possibility of simultaneous loading into wagons on two railway tracks. The terminal also uses a foot indoor storage of 30,000 m³ and grain silo of 38,000 m³ of capacity. On the terminal there is also a loading station with the possibility of unloading of trucks and railroad cars of 240 t / hour. Reference cargoes for the terminal are soy, wheat, corn and other cereals.

Pier 4 is a terminal for handling and storage, includes the coast 135 m long, depth of the coast is from 7 m to 11.4 m with the possibility of berthing of ships of up to 10,000 DWT. Terminal capacity is 35,000 tons per year. The terminal also uses railway track and conditioned warehouse with five separate cold rooms of total area of 3,400 m² with a total volume of 17,000 m³.

Piers 5 & 6 are terminals for transshipment of general cargo and cement, include the coast 150 m long, depth from 8.7 m to 10.2 m with the possibility of berthing of ships of size of up to 20,000 DWT. The terminal uses a 24 m long RO - RO ramp, closed warehouse area of 34,000 m³ and an open storage area of 150,000 m². The terminal also uses industrial railway track of capacity of 140 wagons per day. Reference cargoes for the terminal are sea salt, iron fittings, wood, various palletized loads, heavy loads; equipment for drilling sets and special cargoes: the windmills. The terminal for the transshipment of cement has annual capacity of 80,000 tons, with the possibility of unloading of a ship on both piers for general cargo, distribution on trucks and weighing up to max. 50 tons.

Contact: Luka Zadar d.d., Gaženička 28, Zadar

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Port terminals – Summary

Warehousing area:

- | | |
|------------------------------|------------------------|
| - Opened warehouse | 150,000 m ² |
| - Closed warehouse | 30,600 m ² |
| - Conditioned warehouse +0°C | 3,400 m ² |
| - Tanks for liquid cargoes | 75,000 m ³ |
| - Tanks for VCM | 9,000 m ³ |

New port of Gaženica - passenger-cargo terminal

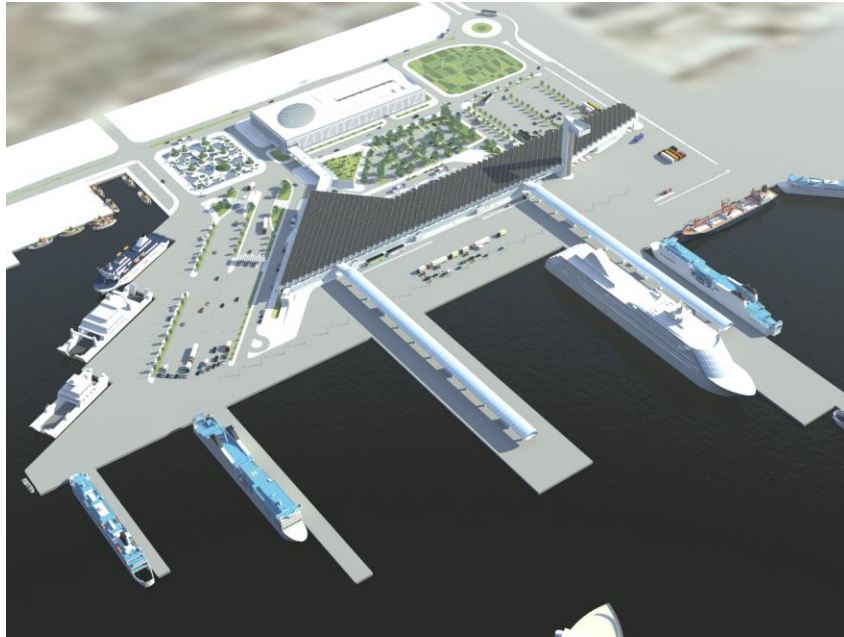
Position of the New port Gaženica in Zadar



The passenger-cargo terminal of the new port Gaženica is in operation from spring 2015. The local ferry traffic has been moved from the city center, international passenger line Zadar-Ancona and the largest cruise ships' docking. The Croatian government gave up the construction of a modern terminal building and a shopping center predicted by the original project and is in the process of finding a concessionaire to whom it would impose the completion of this investment. Meanwhile, passengers can use the modest terminal building built on a small part of the planned space.

The ideal position in the center of the Adriatic, near Zadar's old city center, the airport and the railway and with connection to the highway with a motor way without traffic lights and crossings, opens to this harbor great potential for development, especially as „home port“ for cruisers.

The original project of the New port Gaženica



At the same time, at the largest pier, three ships on cruise (cruisers), 250-350 meters long, can dock. At the same pier, acceptance of RO-RO ships is also possible, for whose manipulation there is space at the terminal.

General plan



Dimensions of dock for cruisers and RO-RO ships



Test call July 2014 – New Port Gaženica

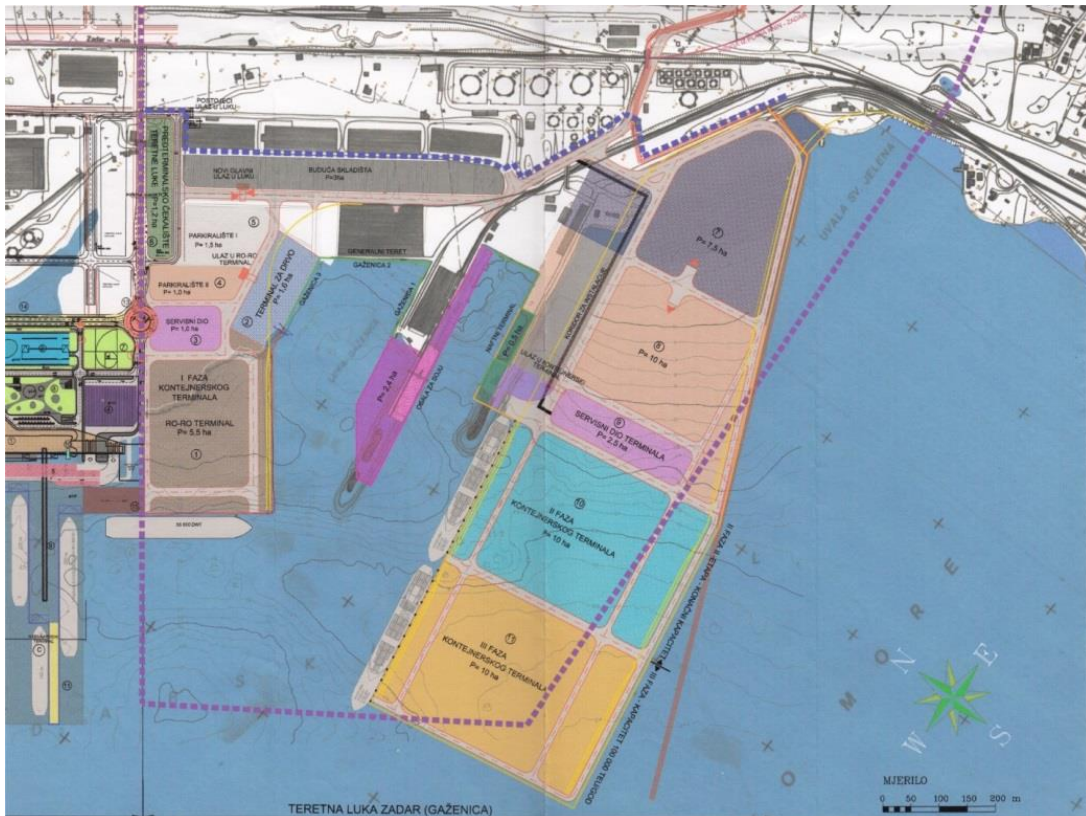


Future Terminal Building (2018)



Container Terminal

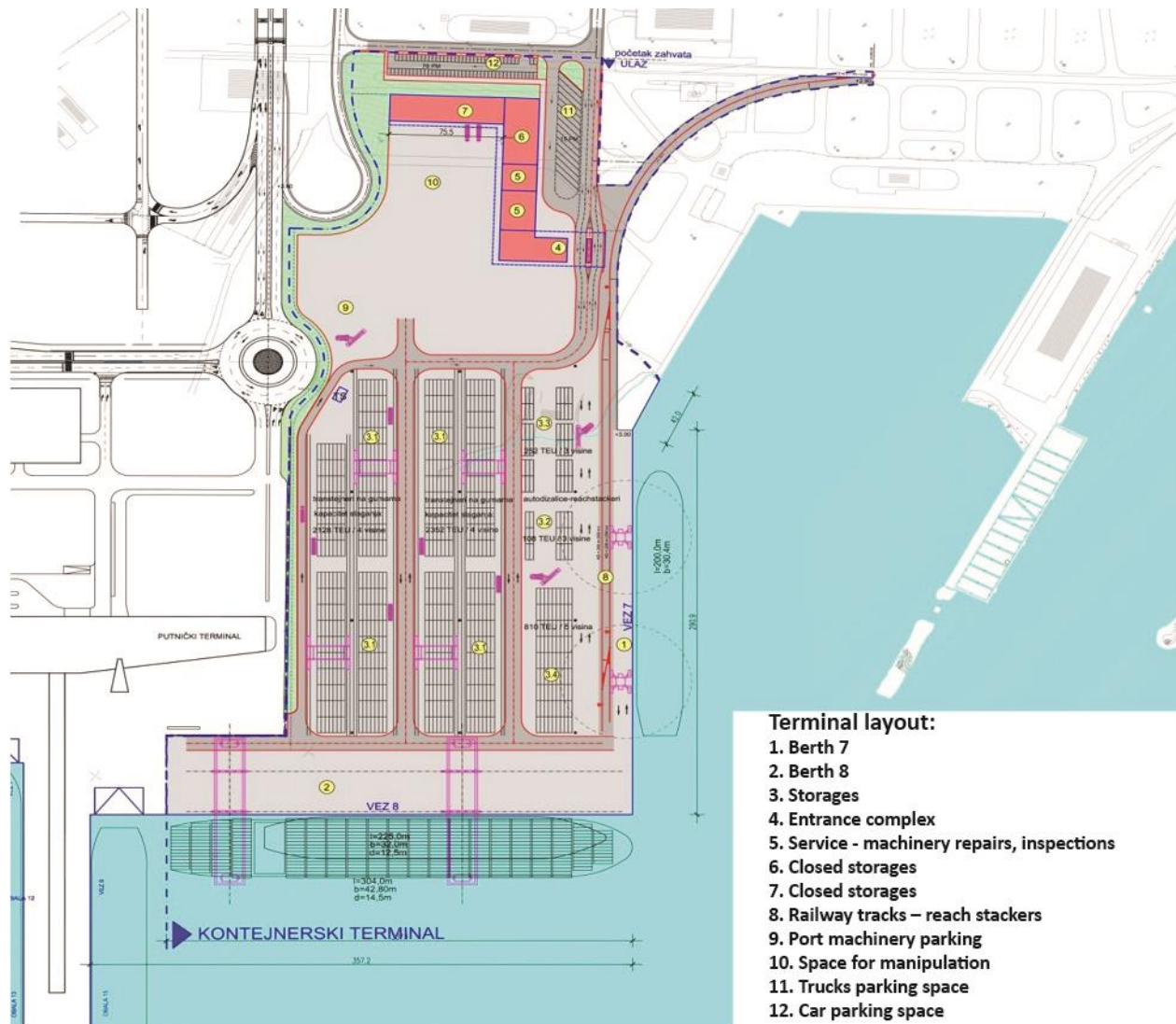
Container Terminal - Master plan



It is an additional part to the original project of New Port Gaženica. There are several economic reasons for that:

- potential market of new CT of Zadar can be:
 - traffic generated by local demand of Zadar region and traffic of the new Crno business zone (400 ha)
 - traffic generated by the foreign trade from neighboring countries from CE and SEE
- the gap between the projected container traffic likely to transit in Northeast Adriatic CTs and the projected capacity of all CTs in NE Adriatic (except for the new CT Zadar) is potential container traffic likely to be attracted by Zadar
- road and sea distances are significantly shorter than via Hamburg which result in shorter transport time and lower transport costs
 - Average speed of 14 knots – it takes 3 days for a ship to transport goods over a 1000 nautical miles distance
- infrastructure cost estimates

	Quantity	Unit	Unit Cost €	Cost k€	Sub Share
Earthworks	600 000	m ³	3,30 €	2 000 k€	4%
Pavement & drainage	118 000	m ²	53,30 €	6 300 k€	13%
Main quay	190	ml	53 300 €	10 100 k€	21%
Side Quay	260	ml	26 700 €	6 900 k€	15%
Utilities, rail etc.	30% of abov		25 300 000 €	7 600 k€	16%
Entry Complex	1700	m ²	1 500 €	2 600 k€	6%
Workshops and warehouses	4 600	m ²	800 €	3 700 k€	8%
					0%
Total (1)				39 200 k€	83%
Contingencies	20% of total		39 200 000 €	7 800 k€	17%
TOTAL INFRASTRUCTURE COST				47 000 k€	100%



Implementation phases

Location Permit defines implementation phases to be carried out one by one, depending on needs.

1. PHASE – waterfront walls and earthworks of the overall surface
2. PHASE – southern plateau up to the level of +3.00

3. PHASE – entrance/exit point: road, parking area and facility
4. PHASE – northern plateau up to the level of +3.00, without the facilities
5. PHASE – all installations
6. PHASE – railway access
7. PHASE – service complex 1
8. PHASE – service complex 2
9. PHASE – closed storages
10. PHASE – parking and green areas
11. PHASE – planned road with the connection to the roundabout

Phases 1 to 5 are necessary for the basic functioning of the terminal and form one functional unit.

Completed project design documents – Container Terminal

- Conceptual design, Rijekaprojekt d.o.o., May 2011
- Feasibility study of container terminal at Gaženica cargo port – Egis Bceom International, Zadar, January 2012
- Environmental Impact Assessment procedure (may 2011) was completed and a „Certificate on the acceptability of the project with the application of the environment protection measures and environmental monitoring programme“ obtained, Class: UP/I 351-03/11-02/55, n.: 531-14-1-2-10-11-12, Zagreb, December 2011
- Maritime security study, 2011
- Location Permit, Class: UP/I-350-05/12-01/54, n.:531-05-12-13, Zagreb, July 2012
- Main designs for Phase I, II, and VI were finalized in April 2013
- Building Permit – obtained 2014

Road connections

Highway A1 is the main connection of the Croatian south with the capital of Zagreb, indirectly to all parts of Croatia and neighboring countries. The port of Gaženica has an outstanding connection to highway by dual carriageway with two traffic lanes in each direction and with no crossings and traffic lights, which practically comes out on the coast. Zagreb can be reached in three hours, to Split and Rijeka the trip is shorter, to the main road crossings for Slovenia or Hungary for 4-5 hours. By this direction the entire road transport associated with the existing and planned facilities of the Port can be freely and smoothly carried out:

- Passenger transport from the passenger terminal and cruise port by car, taxi, bus;
- Trucking from ro-ro and container terminal
- Truck transportation of liquid and bulk cargo from the cargo terminal and storage of petroleum products and silos for bulk cargo;
- Truck transport of fresh fish from the fishing port.



Revitalization of the railway

The incorporation into the railway network of Croatia and Europe is currently the weakest link of the Port of Gaženica intermodal junction. Zadar and its reloading port were merged back in 1967 with Knin, and from there to the already existing transversal Split-Zagreb. In the picture of the network of the Croatian railway-tracks, we can see two ways by which the passengers and cargo were transported mainly to Zagreb: *Lika railway-track* (green line on the map) connects Knin with Oštarije, or the frequent direction Rijeka-Zagreb, while the *Una railway-track* (broken yellow line on the map) leads to an important direction Zagreb-Vinkovci and further towards Belgrade. Both directions, because of the terrain configuration, have certain restrictions related to the speed and axle load. Through decades before the Homeland War 1991-1995, the Una railway-track was more used because of higher average trains' speed and because of the large number of users of transport services who gravitated to the Bosnian railway-track section.



Because of the importance which the railway had in that period for the operation and development of the Zadar transshipment port, several industrial gauges were built directly to the plants, storage spaces and liquid cargo tanks. Today, unfortunately, we have a situation that a year ago every traffic by railway to Knin was interrupted, and the Una railway-track, once by its entire route in the same state, at the beginning of the war in 1991 was interrupted and is still quite neglected.

The full development of the Port of Gaženica as an intermodal junction is possible by re-establishment of the traffic between Zadar and Knin. The rehabilitation and modernization of the Una railway-track is desirable, and for that the engagement of both countries' diplomacies is necessary, considering that this railway route multiply crosses the border between Croatia and Bosnia and Herzegovina.



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