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Table of Contents

Table of Figures	3
Table of Tables	3
1 Scope of the document	4
1.1 General terms	4
1.1.1 Port and infrastructure / Definitions	4
2 Introduction of the Port Management Models	9
2.1 Operation and management models in ‘name of your country’	17
2.2 Analysis of the port management and operation model in	20
2.2.1 Characteristics of the operation models	20
2.2.2 Nature and content of the contractual relationships	22
2.2.3 Rules and legislation.....	23
2.2.3.1 Relevance of Regulation (EU) 2017/352.....	25
2.3 SWOT – analysis of Port Management Models.....	31
2.3.1 SWOT analysis of port management model 1	31
2.3.2 SWOT analysis of port management model 2.....	32
2.4 Potential success factors	33
2.4.1 Success factor 1	33
2.4.2 Success factor 2	33
2.4.3 Success factor 3	34
2.4.4 Success factor 4	34
2.4.5 Success factor 5	34
2.5 Applicability of the identified success factors for best practices on port management and operation model	35
2.5.1 Relevance.....	35
2.5.2 Applicability.....	36
2.5.3 Comparability.....	38
3 Best practices	38

Table of Figures

Figure 1: Inland waterways in Croatia

Figure 2: Liquid cargo terminal Vukovar

Figure 3: Multipurpose terminal Vukovar

Table of Tables

Table 1: cargo volumes Vukovar Port 2010

Table 2: Transshipment of cargo per year at terminals concession granted in Vukovar Port

Table 3: Transshipment of cargo in Croatian ports (maritime and inland) 2011-2016

1 Scope of the document

The business strategies applied by the inland cargo ports in the Danube Region are the scope of this document and how efficiently they are implemented are related to the port management models employed all along the river. **When we use the term of ‘ports’ in this document, it only means the inland cargo ports in the Danube Region. If a port is both maritime and inland cargo port, the activities shall be split between the inland and maritime port functions.** In order to ensure a balanced development of the Danube port sector and enable it to become a key element in the EU transport network, first there needs to be a clear analysis performed in regard to the status-quo. This activity will deal with this topic by first assessing the current practices in the Danube region on the port management and operation models applied and providing for a SWOT analysis thereof. In order to present the port management models of European ports, the key definitions of port operation should be presented as follows.

1.1 General terms

In the context of the port management models of Danube cargo ports, the key definitions of port operation should be understood as follows according to the Commission Regulation (EU) 2017/1084 of 14 June 2017 as regards aid for port and airport infrastructure.

1.1.1 Port and infrastructure / Definitions

Port

‘Port’ means an area of land and water made up of such infrastructure and equipment, so as to permit the reception of waterborne vessels, their loading and unloading, the storage of goods, the receipt and delivery of those goods and the embarkation and disembarkation of passengers, crew and other persons and any other infrastructure necessary for transport operators in the port.

In Croatian Inland Navigation and Inland Ports Act, Article 4. Par. 1. Subpar. 43. (“Official Gazette” nr. 109/2007, 132/2007, 51A/2013 and 152/2014) port is defined as *“part of the waterway and land area immediately adjacent to it that is designated and equipped for mooring, anchoring and protection of vessels, loading, unloading and storage of goods and embarkation and disembarkation of passengers, where various complementary activities take place which are economically, transport and technologically-wise directly associated to goods or to a vessel.”*

Inland port

'Inland port' means a port other than a maritime port, for the reception of inland waterway vessels.



Figure 1: Inland waterways in Croatia, Source: <http://www.mppi.hr>

Inland waters are defined as “rivers, canals and lakes except the rivers of the Adriatic watershed in the part of their course where maritime service is operated. Inland navigation is navigation on inland waters.” (AINIP Art. 4. Par. 1. Subp. 1. And 2.).

Danube River in Croatia is 137,5 rkm long. Port of Vukovar is situated on 1335+000 rkm of the Danube River, on the right bank, near to mouth of the Vuka river (tributary to Danube).

Vukovar Port is the biggest river port on Croatian waterways and only cargo port on Croatian part of Danube River¹. The port stretches towards the East and West and it is 1700 meters long and 45 meters wide. The port is very well situated on the Danube which makes it possible for the port to be accessible during the entire year regardless of the water level. This is so even during the period of the lowest water levels.

The entire port was destroyed during the Homeland war. The port was not operational between 1991-1997. It was opened again in 1998.

Port of Vukovar is connected to the cities of Županja, Vinkovci and Brčko (Bosnia and Herzegovina) via M55 road. The same road connects it to the highway E-75 connecting Zagreb and Belgrade (Republic of Serbia). It is also connected with road M2 with city of Osijek and with corridor VC (Budapest-Osijek-Sarajevo-Ploče).

The port is located on Danube River that is Pan European corridor VII and it is part of the Rhine-Danube Core Network Corridor.

Port infrastructure

‘Port infrastructure’ means infrastructure and facilities for the provision of transport related port services, for example berths used for the mooring of ships, quay walls, jetties and floating pontoon ramps in tidal areas, internal basins, backfills and land reclamation, alternative fuel infrastructure and infrastructure for the collection of ship-generated waste and cargo residues.

In Croatian Act on Inland Navigation and Inland Ports there is no specific definition of port infrastructure and superstructure. There is only definition of port buildings, which are defined as buildings in sense of general building act which purpose is for port activities obtaining (Article 124 AINIP).

Total port area of Vukovar port is around 26 ha with no space for the further development. The railway infrastructure modernization and electrification project is in progress and it will reduce the existing port area for approximately 5,8 ha. Port of Vukovar is an open shore type port with no port basins. It has a maximum draft of 2,6 meters and a cargo handling capacity of 2 mil. Tons per year. There are no capacities for container handling in the port at this moment. There are capacities for high and heavy and out-of-gauge cargoes.

There are 7 terminals in the port which all have access to road, rail and IWW:

- Bulk cargo terminal,
- Grains terminal

¹ beside Vukovar cargo port there are other river cargo ports in Croatia which are also ports of specific interest for the State: Sisak and Slavonski Brod (also a core port according to AGN) on Sava river and Osijek on Drava river.

- Break bulk (general) cargo terminal
- Two liquid cargo terminals
- Multipurpose cargo terminal
- Palletized cargo terminal.

Length of the quay is 1700 m, 260 m is a vertical quay and 1000 m sloped quay. There is also a 400 m of undeveloped quay. Port has 3 road entrances with 6 lanes. Total length of quay side railway track is 800 m, total length of the railway tracks is 3000 m.

Capacity of the storage is 13000 m² for dry bulk and general cargo and 10000 m³ for liquid cargo. Bunker supply is provided in the bunker area. The port has facilities for ship generated waste as well as for the used oil but this equipment is not in operation at the moment.

The New port of Vukovar project encompasses the construction of infrastructural port facilities, vertical bank, road and railway, communal infrastructure, port loading and unloading equipment as well as construction of administration building. At this moment project is under suspension.

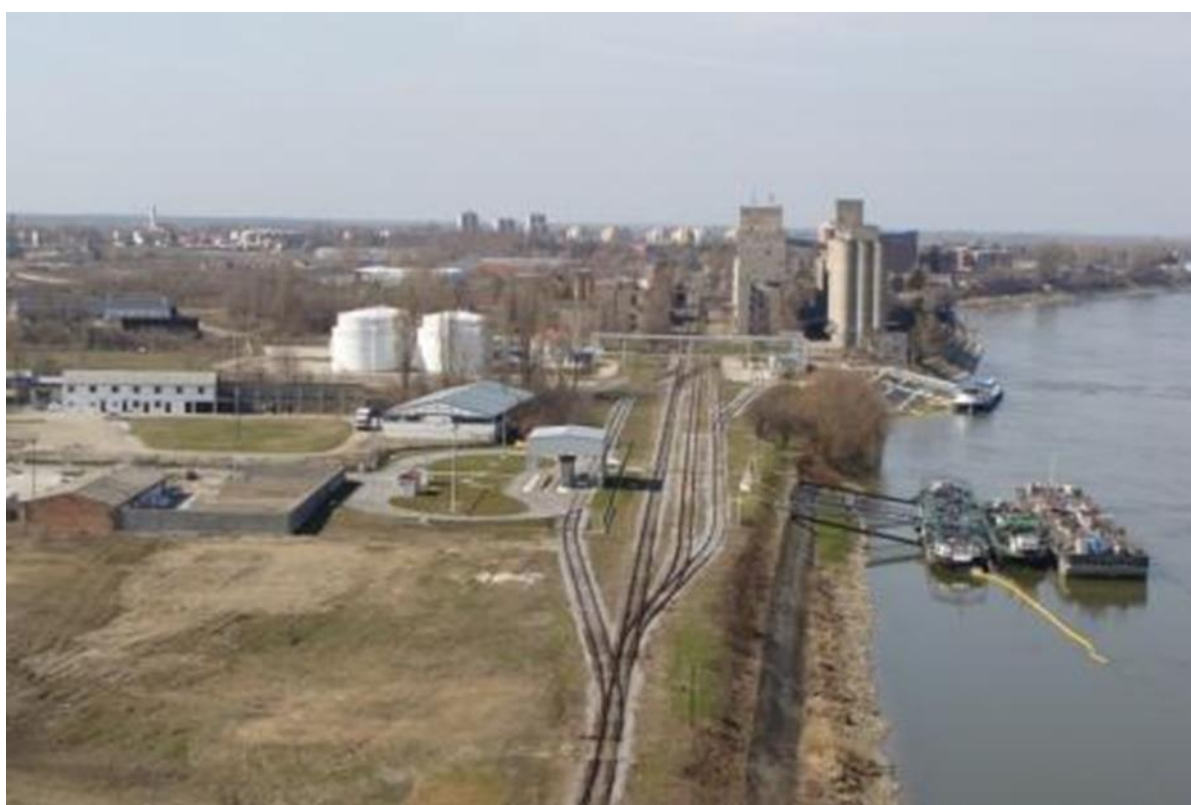


Figure 2: Liquid cargo terminal, source: port Authority Vukovar



Figure 3: Multipurpose terminal, source: Port Authority Vukovar

1. **Privatization:** Process of incorporating the private sector into the port operations, administration and investments.
2. **Concession:** Rent or leasing of existing facilities, equipment and infrastructure along with the right to grant services using those assets, and the right to charge for those services. This includes the commitment to make specific investments to improve the quality and amount of those services in a long-term period.
3. **Canon:** Cost to the private agent by the use of facilities or services.
4. **Tariffs:** fee charged to the users of the harbour facilities, for the utilization of the ports services.

5. **Employment agency:** Database that contains personal and professional information of capable people to carry out a determined task and that it can be consulted by the employers according to their necessities.
6. **Stevedore Company:** is a company in charge to carry out the port operations of manipulation of the merchandise. Generally, it holds an administrative concession granted by the corresponding port authority, which authorizes to use, with exclusive character, a space located at wharf edge.

Port superstructure

‘Port superstructure’ means surface arrangements (such as for storage), fixed equipment (such as warehouses and terminal buildings) as well as mobile equipment (such as cranes) located in a port for the provision of transport related port services.

2 Introduction of the Port Management Models

Main actors of port management and operation

Port owner

‘Port owner’ of a (public) port shall mean the owner / trustee of the port area.

The area of a national public port shall be owned by the state or managed by a trustee company established by decisive state majority. There are also private ports.

In Croatian Act on Inland Navigation and Inland Ports there is not a definition of the “port owner” as such. In national public ports there is a definition of the port manager – port authority (Art. 4. Par. 1. Subpar. 52. AINIP). Inland ports are subjects of special economic interest for the Republic of Croatia and they enjoy its protection (Art. 2 AINIP)

For the port area in the national public port, it is defined that it is managed by the port authority (Art. 4. Par. 1 Subpar. 47. AINIP).

There are also private ports. (Article 117. Par. 1. AINIP).

Port manager

‘Port managers’ of a port shall mean a business company or organization responsible for keeping the entire port in a state suitable for proper operation, as well as for the coordinated operation and development thereof – as owner of the port in case of a public. Port managers’ tasks shall be as follows:

- Tasks of operation, including:

- organization, operation, and management of port logistics activities;
- organization, operation, and management of services operations within the port;
- operation, upkeep, maintenance, and renovation of port facilities as specified in the contract;
- completion of environment protection tasks in the port;
- organization and operation of the logistics / information system of the port;
- Completion of tasks related to utilization contracts;
- Performance and management of development tasks, with particular regard to drawing up the principles of further port developments;
- Completion of marketing tasks.

The port managers may also own superstructures within the port area.

Port operator

A (public) port is most often operated by a business company. The 'port operator' shall be the owner of the floating establishment / port, and any party entitled to operate such floating establishment / port by contract or on any other title. In our wording, this may include the port owner, the port managers, as well as the port operators of the (public) port.

Public and Private Participation

- a. Please indicate the cargo volumes operated during the 2010 on: terminals run by private entities; in public ports terminals that have been given in concession; and in not conceded state ports (run by the state or through stevedores companies)

Tons per year 2010	Private Ports	Terminals Concession-granted	Ports not given in concession
Solid bulk cargo	0	188.654	0
Liquid bulk cargo	0	16.831	0
Containers	0	0	0
General bulk cargo	0	13.020	0

Table 1: cargo volumes Vukovar Port 2010

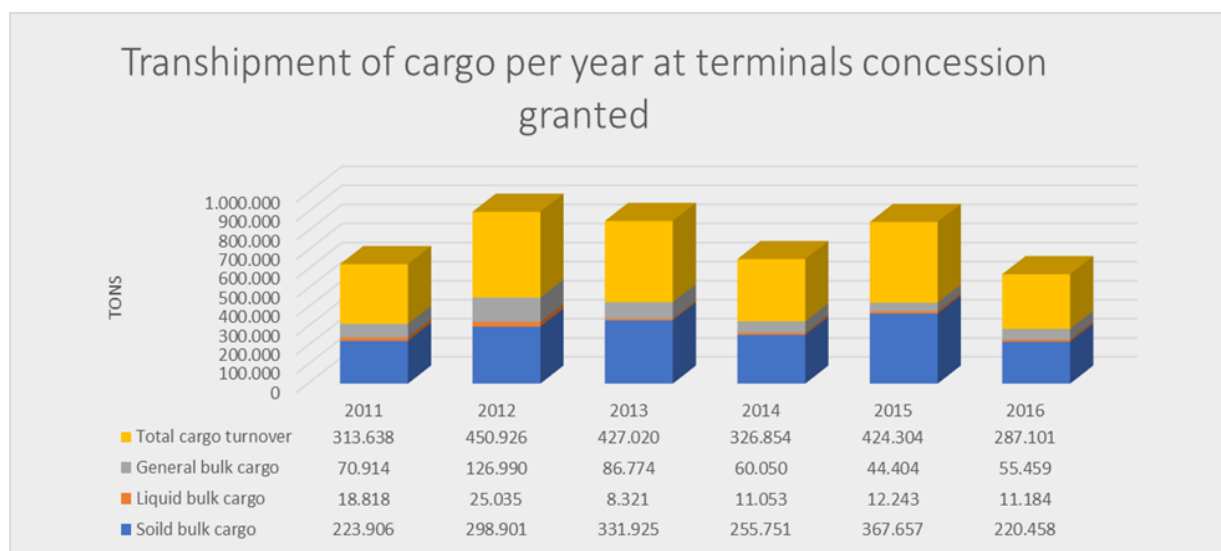


Table 2: Transhipment of cargo per year at terminals concession granted in Vukovar Port

Transhipment of cargo in Croatian ports thousnds tons (000 t)	2010.	2011.	2012.	2013.	2014.	2015.	2016.	I. – VI. 2017.
Total transhipment in maritime and inland ports	12.693	11.806	10.020	8.512	9.183	9.582	8.948	5.114
Transhipment in maritime ports	11.789	11.014	9.169	7.762	8.499	8.802	8.228	4.871
Transhipment in inland waterway ports	904	792	851	750	684	780	720	243
Transhipment in Port of Vukovar	219	314	451	427	327	424	287	99

Table 3: Transhipment of cargo in Croatian ports (maritime and inland) 2011-2016

- b. Calculate and explain what is the relative participation of the ports (at national level) in which operates the private sector.

As mentioned and presented in the tables above, it is visible that transhipment of cargo in inland ports is applied only to terminals which are part of a public port Vukovar and that are given in concession.

In this chapter importance of Pot of Vukovar could be shortly analysed according to collected data of transhipment in Croatian ports. It obvious that Port of Vukovar is only port located on the Danube River on the Croatia, right side of the river, hence all cargo transhipment on the Danube ports in Croatia refers to the Vukovar port. Nevertheless, comparing total transhipment share of

cargo in the Port of Vukovar with the total transshipment in all inland ports (on Sava and Drava River) is approximately (depending on the year) around 45%.

From the other side, comparing with the maritime ports transshipment of the cargo in all Croatian inland ports is only 7% of the total cargo transshipment in ports (both, inland and maritime).

Port authority

The 'port authority' is the organisation responsible for the planning, authorisation, coordination and control of services within the port. In some instances, it also provides services.

The port landlord is the entity that owns the land on which the port is constructed and will usually own the essential infrastructure (e.g. the quays and breakwaters) as well. The port landlord is the entity practising the ownership rights: therefore, it is the owner itself or somebody entitled by the owner. Typically, the port authority is also the port landlord, although the landlord may be a separate entity. Port Authority activities are the following:

Vukovar Port Authority is a public institution founded by the Republic of Croatia in 2001 for management and development of the Vukovar Port and all wharfs of public interest on Danube River in Croatia. Port Authority is responsible for port management and the functionality of the port.

Activities of Port authority:

- Organization and supervision of vessel berthing and maneuvering in the port,
- Control of port traffic, entry and exit of means of transport and cargo to/from the port,
- Maintenance of common port facilities in the port area,
- Maintaining order, high level of safety and environmental protection in the port,
- Construction and modernization of port facilities on behalf of the Republic of Croatia,
- Managing the free zone in the port area established by Decision of the Government of the Republic of Croatia pursuant to regulations governing free zones,
- Carrying out professional tasks in connection with granting of concessions,
- Supervision of the concessionaire's work and performance of obligations under the concession contract,
- Marketing and promotion of the port route in the transport market,
- Promotion of investment on ports based on public-private partnership model,
- Ensuring general interest services providing or services which are not of economic interest for other economic operators,

- Preparation of plans for inland port system development,
- Technical assistance for local self-government bodies on inland ports and wharfs development area,
- Other work defined by law. (Art. 138. AINIP).

Beside the Port Authority there is a Ministry of the Sea, Transport and Infrastructure which is responsible for the development strategies, setting up a provisions and measures for the development including fiscal and administrative measures.

Agency for Inland Waterways is a public institution for technical maintenance of the River Danube and other inland waterways in Croatia (Art. 112. AINIP).

Harbour Masters Office Vukovar is responsible for the safety of the navigation and port state control. It is a component of the Ministry.

Municipality of Vukovar is a local government responsible for implementing policies at the local level.

Port service providers

In order to use a port, a range of intermediary services is often required, which can be provided by the port itself or by independent intermediary parties.

- Towing is a service provided by tug boats which move larger ships that either should not or cannot power themselves.
- Cargo-handling involves the movement of cargo in and around a port. This includes marshalling services (the receipt, storage, assembly and sorting of cargo in preparation for delivery to a ship's berth) and stevedoring services (the loading of cargo onto and discharging cargo from ships)

Do you have a Commercial Disbursement?

- Cash management services

All port operators in the Port of Vukovar have their own account departments so every operator is responsible for issuing invoices for port services that they provided. After the port service is done port operator issues invoice to the customer (shipping company) and disbursement of the port services is done through bank account.

- Port cost solutions

Solution to collect all expenditures that could be generated when ship visits a port could be done at one point. In that case, after the port services are done port agent collects all invoices for the port services and other costs (police, customs, port authority) and issues one invoice to the shipping company. After the payment, the money would be transferred to the bank account of the competent institutions. Furthermore, some port operators have port agents within their companies so expenditures for the provided port services (loading/unloading) and other port costs could be combined together in one invoice. This is not the practice at this moment.

- Port suppliers contract management

Port Authority does not control or supervise the business relations between port operator and the users of their services (shipping companies). Port services are commercial but in public port operators have to have same conditions towards all clients. In private ports operators can have discounts etc.

For port fees and other costs for public bodies as port authority, border police and customs no discount is possible.

Do you have E- customs, digitalization and automation? If yes, please describe it.

n/a

Do you have information sharing platforms? Port communication & information exchange? If yes, please describe it.

River information services (RIS) is an integrate service which has the purpose to ensure nautical information, data on traffic and transport, statistical information, information for the customs and police services, information on accidents as well as port and other dues costs. The National RIS Centre is managed by the Agency for Inland Waterways that is in charge for administering it etc.

Besides RIS, Port of Vukovar has internal platform named e-Port. Port Authority Vukovar administrates this platform. E-port is used for supervising of traffic in Vukovar port by Port authority and for sharing all relevant information about ships that are port users to all platform users such as port operators, port agents, border police, harbour masters and customs.

Do you have in your country clearness, transparency and partnership with the private sector? If yes, please describe it.

n/a

Port users

A wide range of customers make use of ports, including freight shippers, ferries, cruise ship operators and private vessels. Depending on the specific port, users may access different parts of the port.

End-customers

The ultimate users of port services are passengers or freight customers who consume a good that has been shipped through a port. Freight forwarders are companies that specialise in arranging shipping services for their customers and thus act as intermediaries to the ultimate consumers of the freight goods. The area in which these customers are located is known as the port hinterland.

In order to better understand the particularities and specialties of different port management and operation models, in the Danube region countries, it is of high importance to analyse in detail how the operation and management structure is set up in the different inland cargo ports.

As defined in the previous chapter there are many different roles and thus actors in most of the ports who mostly define the given operation structure individually?

Public and Private Roles in Port Management: There are five main port management models based upon the respective responsibility of the public and private sectors. They include the public service port, the tool port, the landlord port, the corporatized port and the private service port. Each of these models concerns ports that have different characteristics concerning the ownership of infrastructure, equipment, terminal operation and who provides port services such as pilotage and towage. While service and tool ports mostly exist to promote public interests, landlord ports attempt to balance public and private interests. At the other end of the spectrum, private service ports are maximizing the interests of their shareholders.

- **Public service ports.** The port authority of public service ports performs the whole range of port related services, in addition of owning all the infrastructure. They are commonly a branch of a government ministry and most of their employees are civil servants. Some ancillary services can be left to private companies. Because of the inefficiencies they are related with, the number of public service ports has declined.

- **Tool ports.** Similar in every aspect to a public service port, the tool port differs only by the private handling of its cargo operations, albeit the terminal equipment is still owned by the port authority. In several cases, a tool port is a transitional form between a public service port and a landlord port.
- **Landlord ports.** Represents the most common management model where infrastructure, particularly terminals, are leased to private operating companies with the port authority retaining ownership of the land. The most common form of lease is a concession agreement where a private company is granted a long term lease in exchange of a rent that is commonly a function of the size of the facility as well as the investment required to build, renovate or expand the terminal. The private operator is also responsible to provide terminal equipment so that operating standards are maintained.
- **Corporatized ports.** Concerns ports that have almost entirely been privatized, with the exception that ownership remains public and often assumed as a majority shareholder. The port authority essentially behaves as a private enterprise. This management model is unique since it is the only one where ownership and control are separated, which lessens "public good" pressures landlord port authority are facing and "shareholder value" pressures private ports are facing.
- **Private service ports.** The outcome of a complete privatization of the port facility with a mandate that the facilities retain their maritime role. The port authority is entirely privatized with almost all the port functions under private control with the public sector retaining a standard regulatory oversight. Still, public entities can be shareholders and thus gear the port towards strategies that are deemed to be of public interest.

In the table below, please provide information on the actors of the Danube ports in your country

2.1 Operation and management models in Croatia

Name of port	Port (land) owner(s)	Port authority	Port manager(s)	Port operator(s)	Owner(s) of superstructure	Owner(s) of the port equipment	Who define(s) the tariffs of the port	Who is the provider of the different port services	Public service obligations if relevant
Port of Vukovar	Mostly owned by Republic of Croatia and managed by port authority	Port Authority Vukovar	n/a	Luka Vukovar d.o.o – multipurpose terminal; Bulk cargo terminal; Break bulk (general) cargo terminal; Palletized cargo terminal	Mostly port operators but with some exceptions (for example one port crane is owned by the state and port operator uses it within concession)	Port operator	Port operator – proposes maximum tariffs and Port authority approves tariffs and makes them public (on the web etc.)	Port operator – owns a tug boat and manages cargo handling processes	n/a

Port of Vukovar	Mostly owned by Republic of Croatia and managed by port authority; partially owned by public bodies – national railway company	Port Authority Vukovar	n/a	Nautica Vukovar d.o.o – liquid cargo terminal – bunker station	Port operator	Port operator	Port operator – proposes maximum tariffs and Port authority approves tariffs and makes them public (on the web etc.)	n/a	n/a
Port of Vukovar	Mostly owned by Republic of Croatia and managed by port authority;	Port Authority Vukovar	n/a	Lukoil Croatia d.o.o – liquid cargo terminal	Port operator	Port operator	Port operator – proposes maximum tariffs and Port authority approves tariffs and makes them public (on the web etc.)	n/a	n/a
Port of Vukovar	Owned by a private owner -	Port Authority Vukovar	n/a	VUPIK d.d. Vukovar –	Port operator	Port operator	Port operator – proposes maximum	n/a	n/a

	concessionaire			grains terminal			tariffs and Port authority approves tariffs and makes them public (on the web etc.)		
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2.2 Analysis of the port management and operation model in Croatia

2.2.1 Characteristics of the operation models

There is one cargo port on Croatian part of Danube and it is Vukovar Port, situated on 1335,00 rkm on the right bank of the river. The total length of Danube in Croatia is 137,5 km.

Regarding the operational structure, in accordance with the main inland navigation and inland ports Act, inland ports in Croatia can be either public or private. Public port can be open for international traffic and for domestic traffic (Art. 117. AINIP).

A public port has to provide, within the limits of available capacities, equal conditions of use for all vessels and all persons, without discrimination (Art. 118. AINIP).

Public ports are, according to their significance in the port system, classified as:

- ports of national significance – port established by the Republic of Croatia and whose establishment, development and business operations are of interest for Republic of Croatia in terms of transport, economy and other.
- ports of county significance – is port established of the county and whose establishment, development and business operations are of interest of the county in terms of transport, economy or other.

Public ports are managed by port authorities. In public ports port authorities are obliged to ensure sustainability of business operations and financial stability by taking into consideration the economic criteria for valuation of the port service market (Art. 119. AINIP). Every port has a port area which is designated by the Government of the Republic of Croatia by a regulation designating the port area for each port in line with physical planning documents and water management master plan. Designating port area is recorded in land registers. A port area may encompass several port basins or several detached traffic and technology units (terminals) specialised for transshipment of certain type of cargo. The Republic of Croatia is entitled to pre-emption right on properties belonging to port area. (Art. 123. AINIP).

Within the port area, port owners can be different entities, which means Republic of Croatia, different public or private companies and even private owners. Port authority is in charge for management of the real estate owned by the Republic of Croatia, which are part of port area of the public port (Art. 131. Par. 1. Subpar. 1. AINIP). The Landlord model was the main idea of the Croatian port management model, but it was never established to its full meaning and

purpose. As we mentioned, there are different landowners in the port area but there could be only port activities obtained within it².

The current situation is that port development is slowed down with the ownership problems. All the land should be owned by the Republic of Croatia and managed by the Port Authority. That could be solved by buying off the land, but the process is slow and too expensive. When Port Authority Vukovar was established, in 2001 some of the port operators were already obtaining their activities in port from before and they were entitled to get so called “priority concession” without public tendering procedure. Those operators also owned infrastructure. The good thing is that the major operator “Luka Vukovar d.o.o.” was still state owned and Port Authority prepared and implemented division balance documentation so the land and the infrastructure is in this part today state owned. On the other hand, there are some previously state-owned companies who, in the meantime, become privately owned together with the land and infrastructure and they are today still situated in public port.

Other port operators are working on the land that is owned partially by the State and partially by the private or public (City) entities. Therefore, Port Authority has to ensure equal status for everyone when giving concessions and many times this is not an easy task to perform.

The port operator shall own equipment, which is port superstructure. Mostly, the current situation is like afore mentioned except of the one crane, which is owned by the Port Authority and given for use within the concession³.

The port authority for different port activities gives concession contracts. Concession in inland ports could be given for the port services, for the right to exploit common good and for public works.

Port Authority makes a concession giving plans (for 3 years ahead and for every year itself). The term for which concession is granted in public ports shall be determined based on the type of concession and planning documents based on which the concession is granted (Art. 144. AINIP).

² Port activities include port services and other economic activities carried out in a port area. Port services: 1. nautical services: mooring and unmooring of vessels, port towing service, reception and servicing of vessel at anchorage, supplying of a vessel, crew and passengers, receipting of regular waste generated on board vessel, which includes the activity of waste collection in accordance with a special regulation regulating sustainable waste management; 2. transport services: cargo loading, unloading, transshipment and stowage, storage, depositing and transport operations depending on cargo type, preparation and grouping the cargo for transport, services for reception and conveying of passengers, forwarding services and port agency; 3. Other economic activities involving cargo distribution and logistics, processing and improving of goods, industrial activities, including production, which render possible better economic exploitation port capacities and activities of waste usage and disposal. (Article 141. AINIP)

³ The crane was bought from different financial sources – state funds, donation etc.

Port operators apply to public open tender procedure for concession. Based on the decision on granting a concession, the port authority executes a concession agreement with the concessionaire (Art. 144. Par. 3. AINIP).

There are also private ports – ports that do not provide public services, but are rather used by the port user for performance of their basic economic activity (Article 117. Par. 1. Subpar. 2.).

2.2.2 Nature and content of the contractual relationships

The Port Authority prepares the contracts after concession grant public procedure is done. Contracts differ depending on whether the port is public or private and whether port user in public port uses land in port.

a) Public port

- For port operators whose activities relate to exclusive right for port land using fixed and variable fee is foreseen. Fixed fee relates to the amount of the port area that is used and type and number of different port activities that operator is obtaining. Variable fee is depending on operator's business activity as a percentage of the income in the certain period (Art. 4 and 5 Ordinance on Concession Fee Defining for Inland Ports and Piers "Official Gazette" nr. 72/15).

The concession contracts regulate as follows: activities that are subject of the concession and that operator is allowed and obliged to perform, term of validity for the contract, fixed and variable fee amounts, obligations regarding the concessionaire business plan achieving, reporting obligations for the operator, tariffs defining, maintenance of the port buildings and equipment, environmental protection provisions, rules for the joint port buildings - their building and maintenance, insurance regulations, contract supervision, contract terminating rules etc.

- For the performance of forwarding services and shipping agency services in the port area no concession is needed (Art. 143. Par. 6. AINIP). It is required, for the port operator, to have oneself entered in the list of providers of the mentioned services, which is kept and published by the Port Authority (Art. 144a. par. 1 AINIP). No fee for these activities shall be paid. The entry in the list referred of providers shall be decided by the Port Authority by a virtue of a decision which represents an administrative act (Art. 144a. par. 3. AINIP).
- Same rules as for forwarding and shipping agency companies apply for operators for quality control activities in public port and other similar activities.

b) Private port

Port services in private ports and private wharfs are carried out based on concession for the right to exploit common good or other goods (Art. 143. Par. 2. AINIP). The Port Authority with the approval of Ministry grants concession (Art. 143. Par. 4. AINIP).

The concession fee for economic use of common or other resource in the port area of private ports area shall be payable as fixed part, which shall correspond to the basis for calculation of concession fees. The basic criteria for determining the bases of fixed part of concession fee shall be the costs of administering the port falling within the competence of the port authority (Art. 136b. AINIP). Operators do not pay variable fee in private ports.

The concession for private port is granted directly upon application of an economic operator if such operator's existing and/or planned economic activity at a certain location and the subject of concession being applied for comprise an indivisible technological or functional unit, and the concession is used solely for the performance of that economic activity. The applicant has to submit evidence of having resolved property adjustment relations for the area for which concession is requested (Art. 146. Par 3. and 4. AINIP).

All port users must keep separate accounts for each port activity they have been granted the concession for and keep separate accounting records of the revenue from port activities and other revenue. (Art. 155. AINIP).

2.2.3 Rules and legislation

a) Port operating rules

The Act on Inland Navigation and Inland Ports define the main rules for operation in ports. Concession awarding procedure is also defined by the Act on Concessions ("Official Gazette" nr. 69/17) and Act on Public Procurement ("Official Gazette" nr. 120/16).

Ordinance on Concession Fee Defining for Inland Ports and Piers ("Official Gazette" nr. 72/15) is defining the criteria for fixed and variable concession fee for different port activities. The Ministry of the Sea, Transport and Infrastructure prepares and puts the ordinance into force.

There is also Regulation on Order in the Port and Conditions for Port Use in the Port of Vukovar Port Area defined by the Port Authority Vukovar, which defines rules about ship arrival in the port, order in the port, unmooring and departure of ships and emergency measures.

Port Authority initiates the process of granting the concession for port activities in accordance with the medium-term (three-year) plan for granting concessions and other planning documents. The Ministry may, based on the Development Strategy for Inland Waterway

Transport in the Republic of Croatia and the medium-term development plan for inland waterways and inland ports, limit the number of concessions being granted for private ports and wharfs if this may significantly disrupt the business operations of concessionaires in public ports. (Art. 147. AINIP).

Port Authority is in charge for public bidding procedure conducting and implementing. After concession award is prepared, Ministry of the Sea, Transport and Infrastructure gives its approval on it (Art. 143. Par. 4. AINIP).

b) Tariffs

Port operators provide port service at a fee the maximum amount of which shall be established within the framework of port rates for particular types of cargo and particular types of services. Port rates shall be approved and published by the port authority. Port rates are an integral part of the concession contract (Art. 154. AINIP).

Port users must keep separate accounts for each port activity they have been granted the concession for and keep separate accounting records of the revenue from port activities and other revenue (Art. 155. AINIP).

c) Downsides and burdens recognized

The rules for concession tender procedure and for concessions implementing are very strict and that gives no possibility to be flexible in port development and operation. Flexibility is necessary to be ensured in economic activities in general and in port services. Concession contracts on one side tend to be on longer period concluded (in order for investments to be cost-effective); on the other side such long periods contracts have to be able to adjust to some changes that are happening every day. However, rules defined in Act on Concessions⁴ in this regard are very strict and this is a problem for port authority and for operator.

General economic situation is also a burden. Port operators are often unable to achieve their goals (investments and transshipment level) that they are obliged to by their business plans due to economic factors. At the same time there are no other interested companies who would obtain those services instead.

One of the major port operators Luka Vukovar d.o.o. is still state-owned company that is to be changed and this company is planned to become privately owned but this process is slow. That means lot of procedures they must implement that are slowing them in their work.

VUPIK d.d. is also a port operator who is operating in Vukovar port. This company was also state owned but today it is a private company. In the privatization process all the land and infrastructure become private. Today Port Authority faces the situation when they have to

⁴ Article 62. defines possibilities for concession contract changes

make a public tendering procedure for concession and to ensure same conditions for all potential concessionaires on the land which is privately owned in port area of the public port.

To resume, biggest downsides and burdens are: strict and complicated legal procedures, general economic situation, slow privatization and property rights issues.

2.2.3.1 Relevance of Regulation (EU) 2017/352

The Regulation (EU) 2017/352 was issued in 2017 after several years of preparation and consultation with various stakeholders of the European port industry. This regulation has a binding force only on maritime ports, the inland ports are not covered by the legislation. However, rules similar to those laid down in this legal act, might have relevance in the IWW sector. In frame of the current activity, we would like to assess the scale and scope of applicability of these rules for Danube ports in the participating countries.

For this purpose, each project partner should evaluate of applicability of Regulation (EU) 2017/352 - specific to maritime ports – for inland freight ports of their country. For each of the regulatory items below, please explain whether in your country there is already a regulation in place for the specific topic described by the Regulation (EU) 2017/352 according to the following (The entire legislation is at the following link: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017R0352>.):

Regulation (EU) 2017/352	Regulatory item	Answer	Comments
Article 4 (1)	<i>“According to the regulation the managing body of the port, or the competent authority, may require providers of port services, including subcontractors, to comply with minimum requirements for the performance of the corresponding port service.”</i>	Yes	
Article 4 (2)	In your country is there any minimum criteria determined by the managing body of the port, or the competent authority in relation to the following: (a) the professional qualifications of the provider of port services, its personnel or the natural persons who actually and continuously manage the activities of the provider of port services;	Partially	Those criteria are in most cases defined and demanded within a tendering procedure for the concession grant.
Article 4 (2)	(b) the financial capacity of the provider of port services;	No	Financial capacity is also demanded within a tender procedure, afterwards it is not controlled.
Article 4 (2)	(c) the equipment needed to provide the relevant port service in normal and safe conditions and the capacity to maintain this equipment at the required level;	Yes	Within a tender procedure and associated business plan.

Article 4 (2)	(d) the availability of the relevant port service to all users, at all berths and without interruptions, day and night, throughout the year;	Yes	Port authorities are obliged to ensure sustainability of business operations and financial stability by taking into consideration the economic criteria for valuation of the port service market (Art. 119. AINIP); Decision of Port Authority on Determining a Official Hours and Continuity of Port Services in Vukovar Port
Article 4 (2)	(e) compliance with requirements on maritime safety or the safety and security of the port or access to it, its installations, equipment and workers and other persons;	Yes	AINIP Articles 160-168
Article 4 (2)	(f) compliance with local, national, Union and international environmental requirements;	Partially	Part of th tender procedure requirements and concession contract.
Article 4 (2)	(g) compliance with obligations in the field of social and labour law that apply in the Member State of the port concerned, including the terms of applicable collective agreements, manning requirements and requirements relating to hours of work and hours of rest for seafarers, and with applicable rules on labour inspections;	No	
Article 4 (2)	(h) the good repute of the port service provider, as determined in accordance with any applicable national law on good repute, taking into consideration any compelling grounds to doubt the reliability of the provider of port services.	No	

Article 4 (3)	Does a flag requirement exist for waterborne vessels predominantly used for towage or mooring operations in ports located on its territory?	Yes	
Article 4 (4)	Shall the minimum requirements: (a) be transparent, objective, non-discriminatory, proportionate, and relevant to the category and nature of the port service concerned;	Yes	
Article 4 (4)	(b) be complied with until the right to provide a port service expires?	Partially	
Article 4 (5)	Where the minimum requirements include specific knowledge of local conditions, shall the managing body of the port, or the competent authority ensure adequate access to information, under transparent and non-discriminatory conditions?	Yes	
Article 5 (1)	Shall the managing body of the port, or the competent authority treat providers of port services in a transparent, objective, non-discriminatory and proportionate manner?	Yes	
Article 5 (1)	Shall the managing body of the port, or the competent authority grant or refuse the right to provide port services on the basis of the minimum requirements established in accordance with Article 4 within a reasonable period?	Yes	Most of the requirements are part of the concessions contracts.
Article 5 (1)	If yes, shall any such refusal, by the managing body of the port, or by the competent authority, be duly justified?	Yes	
Article 5 (1)	or shall any limitation or termination by the managing body of the port, or the competent authority, of the right to provide a port service be duly justified?	Yes	

Article 6 (1)	May the managing body of the port, or the competent authority limit the number of providers of port services for a given port service for one or more of the following reasons: (a) the scarcity or reserved use of land or waterside space, provided that the limitation is in accordance with the decisions or plans agreed by the managing body of the port and, where appropriate, any other public authorities competent in accordance with the national law;	Yes	Port Authority Vukovar limited number of terminals for oil and oily products (ship fuel supply – bunker station) with an Decree due to limited land in port area
Article 6 (1)	(b) the absence of such a limitation is obstructing the performance of public service obligations as provided for in Article 7, including when such absence leads to excessively high costs related to the performance of such obligations for the managing body of the port, the competent authority, or the port users;	Yes	
Article 6 (1)	(c) the absence of such a limitation runs counter to the need to ensure safe, secure or environmentally sustainable port operations;	Yes	
Article 6 (1)	(d) the characteristics of the port infrastructure or the nature of the port traffic are such that the operations of multiple providers of port services in the port would not be possible;	Partially	
Article 6 (1)	(e) where it has been established pursuant to Article 35 of Directive 2014/25/EU that a port sector or subsector, together with its port services, within a Member State carries out an activity that is directly exposed to competition in accordance with Article 34 of that Directive. In such cases, paragraphs 2 and 3 of this Article shall not apply?	No	

Article 7 (1)	May the Member States decide to impose public service obligations related to port services on providers of port services and may entrust the right to impose such obligations to the managing body of the port, or to the competent authority, in order to ensure at least one of the following: (a) the availability of the port service to all port users, at all berths, without interruption, day and night, throughout the year;	Yes	
Article 7 (1)	(b) the availability of the service to all users on equal terms;	Yes	Article 118. AINIP
Article 7 (1)	(c) the affordability of the service for certain categories of users;	No	
Article 7 (1)	(d) the safety, security or environmental sustainability of port operations;	Yes	
Article 7 (1)	(e) the provision of adequate transport services to the public; and	Partially	
Article 7 (1)	(f) territorial cohesion?	Yes	
Article 7 (1)	Besides the above mentioned is there any rule or regulation concerning the following fields regarding the inland cargo ports in your country?	Yes	Article 118. AINIP Decision of Port Authority on Determining a Official Hours and Continuity of Port Services in Vukovar Port
Article 9	Safeguarding of employees' rights	No	
Article 11	Transparency of financial relations	No	
Article 12	Port service charges	Yes	Article 154. AINIP Maximum amounts should be confirmed by Port Authority and made public; tariffs are part of the concession contract with port operator
Article 13	Port infrastructure charges	No	
Article 14	Training of staff	No	

Article 15	Consultation of port users and other stakeholders	No	
Article 16	Handling of complaints	Yes	Within quality management system ISO 9001 and ISO 14001

2.3 SWOT - analysis of Port Management Models

2.3.1 SWOT analysis of port management model 1 - public ports

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Good position of port on the Danube • Navigability during the whole year • Accessibility - good connectivity with main road corridors and railway connection • State interest – investment and management guarantee • Port management – one body port authority • Port area – mostly state owned • Public port accessibility for all users under same conditions • Continuity of port services guaranteed • Long term experience of service providers • Favorable geographical location on European transport corridor VII 	<ul style="list-style-type: none"> • Lack of port capacities • Lack of the vertical quay • Lack of strategic mid-term development plans • No stable market and traffic for port operators - insecurity • Limited space of the port area which is also in the process of decreasing • Various owners of the land within the port area • Costs of buying off the land • Lack of financial means for buying off the land • Long periods of realization • Expropriation procedures (when the owner refuses to sell his land) • Part of the port area – land together with infrastructure privately owned • The entrance to the port is not adjusted – it is difficult to manage the port traffic
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Expanding the port area (on the west) 	<ul style="list-style-type: none"> • Insecurity due to long privatization processes of the main port operator

<ul style="list-style-type: none"> • Establishing the port area as 100% state owned and managed • Finding new financial investments opportunities (public-private partnership, EU funds) • Building new capacities in accordance with market demands • Legal rules flexibility improvement in order to enable better market adjustments for port operators • Designating the railway (subject of the future railway modernization project) for industrial purposes and returning this part into port area • Regulation of the port bank • Preparation of quality strategic and concession plans for port • Marketing activities improvement 	<ul style="list-style-type: none"> • No mid and long term development plans • Bad development plans • Connected to previous no possibility for applying for EU funds • Not fulfilling obligation of concession agreements by the operators in the sense of cargo amounts and investment plans • Old equipment of port operators and obsolescence of technologies • Long procedure for port area expanding
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2.3.2 SWOT analysis of port management model 2 – private ports

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Port is managed by the private operators – not such strict rules apply – development and management is more flexible • Costs for concession are lower for the operator – only fixed amount is payed to port authority • In private ports concession could be given for the longer periods – maximum 50 years – which is good for long time investments • Fast investment and development decisions; 	<ul style="list-style-type: none"> • Port operator has to solve property rights (to use the land) by himself which is an additional cost for him • There is no investment from the state foreseen – all investments should be made by operator • Big costs of port investments

OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • There is possibility to get a concession upon application of an economic operator (without public tender) if planed or existing economic activity at a certain location and the subject of concession being applied for comprise and indivisible technological or functional unit and concession is used solely for the performance of that economic activity 	<ul style="list-style-type: none"> • Long term investments that will not be cost-effective • Insecurity due to public ports which are supported by the State by financial means and EU funding possibilities which could represent a competition to private ports

2.4 Potential success factors

2.4.1 Success factor 1 – fast, efficient and reliable service

Description of the success factor

Port services (loading/unloading of the cargo vessels) is done very fast and efficient and in accordance with all regulations. Shipping companies are satisfied with level and the quality of the service. They do not have to lose their valuable time in Vukovar Port, they are sure that the service shall be done as fast as possible.

Measurement method – length of the time necessary for port operations (transshipment) to be done

2.4.2 Success factor 2 – qualifications and experience of the personnel

Description of the success factor

All the personnel are well qualified for their jobs. They attend all the necessary courses and educations to keep up to date. This is necessary to work with the machinery in the port and to ensure that all security, technical, legal and environmental demands are on the highest level.

Port Authority has ISO 9001 and 14001 certificates and through it controls port operators and their activities for them to be at highest security and environment protection level.

Measurement method – number of incidents in port, number of nonconformities

2.4.3 Success factor 3 – effective communication and cooperation between port actors

Description of the success factor

Once again success factor that relates to the human factor. All the relevant authorities for port operations that is Port Authority, Ministry of the Sea, Transport and Infrastructure, Harbor Masters Office, Agency for Inland Waterways, Border Police, Customs, Agents cooperate very well. They communicate on daily basis and solve problems fast and efficiently. Meetings are held when necessary. As stakeholders some of the port actors are involved in projects together with port Authority (as Associated Partners).

Measurement method – number of complaints, quality questionnaire results every year about length and quality of the problems solving

2.4.4 Success factor 4 – access to financial sources for investment funding

Description of the success factor

The possibility to use financial resources from the state budget for construction and maintenance of port facilities, and the possibility of using financial resources through European Union funds represent success factor that ensures building, maintenance and modernization of port infrastructure. From the other side upgrade of port infrastructure will ensure the port's existence and the ability to respond to all market demands.

Through concession contracts, port operators are obliged to build and maintain the port superstructure.

Measurement method - number of new infrastructure facilities or undergoing projects, realization of concession contracts, State and European funds for the construction and maintenance of port infrastructure

2.4.5 Success factor 5 – advantageous geographical position and accessibility of the port during the whole year

The fact that Vukovar port is accessible during the whole year at first might seem not so unusual but having in mind the fact that all other inland ports, that are also defined as of State importance, are mostly closed due to water levels. That is the fact with ports on Sava River (Slavonski Brod and Sisak) and in Osijek on Drava River.

Advantageous geographic position in great manner influences the development of the inland waterway port and is crucial for the accessibility of the port for different types of transport modes. Nevertheless, the possibility to access the port throughout the whole year guarantees the continuity of port services as well as ensuring the transport of goods in the transport chain without delays.

Measurement method – number of days port is accessible, cargo volumes

2.5 Applicability of the identified success factors for best practices on port management and operation model

2.5.1 Relevance

2.4.1

Success factor 1 – fast, efficient and reliable service

This success factor is of relevance for Port of Vukovar as well for all port operators, which are providing port services in the port area. Relevance is evident due to the fact that port operators have capacity to provide port services on the most efficient and the fastest way despite the need for modernization and reconstruction of port infrastructure and superstructure.

Success factor 2 - qualifications and experience of the personnel

Relevance for the Port of Vukovar in general as well as for the Port Authority and for port users. Port operators are continually investing in human resources through the education of working staff by acquiring the necessary certificates for handling different machines, which enables port services to be provided on the one spot, regardless of other stakeholders connected to the port system. In addition to the small number of staff, the Port Authority Vukovar also has educated staff from various areas of education ensuring maximum and rapid efficiency in the administrative performed processes.

Success factor 3 - good communication and cooperation between port actors

Relevance for the Port of Vukovar in general. This factor is relevant because the good communication between all stakeholders within the port system is of great importance for resolving problems and for everyday communication and information exchange. Joint meetings are held if necessary, competence issues are discussed etc. In addition, an example of good communication is the participation of representatives of port users in the work of the administrative governing council of the Port Authority Vukovar.

Success factor 4 - access to financial sources for investment funding

Since the port area of the port of Vukovar is a port of state importance managed by the Port Authority Vukovar as a public institution, because of that it is possible to use funds for investment in port facilities through the state budget and as also through the possibility of financing through European funds.

Success factor 5 - advantageous geographical position and accessibility of the port during the whole year

The port of Vukovar is the only Croatian port located on the Danube, and with its position it represents the gateway of Croatia to the European Rhine-Danube corridor as part of the TEN-T network. Due to the advantageous position on the Danube River the port provides sufficient depths for accessing of the vessels throughout the whole year, as well as ensuring the provision of port services throughout the whole year. Except of access by inland waterway, accessibility to the port is also ensured through the different types of land transport modes.

2.5.2 Applicability

Success factor 1 - fast, efficient and reliable service

Port of Vukovar has terminals for the transshipment of various cargo types as well as bulk cargo terminal, grains terminal, general cargo terminals, multipurpose cargo terminals, palletized cargo and two liquid cargo terminals. It also has a storage space for grains and liquid cargo and an open storage space as well as closed warehouse space for weather-sensitive goods. The existing capacity in the Port of Vukovar enables transshipment of various types of goods up to 2 million tons per year, which also exceeds the current amounts transhipped in Port.

Success factor 2 - qualifications and experience of the personnel

Port operators employ qualified personnel assigned to handle cranes, work machines, tug locomotive, and a tug boat and licensed inland navigation agents for dealing with agency works.

Efficient human resources policy is also important factor for the Port Authority Vukovar that is structured in three departments: Department for legal and general affairs, Department for commercial and marketing affairs and Department for technical issues. Adequate number of trained staff is represented in each department. The certificate of ISO 9001 and 14001 that Port Authority Vukovar owns in the last 15 years represents a constant implementation of the legislation, demands and standards.

Success factor 3 - good communication and cooperation between port actors

In addition to daily communication between all port participants, the Ordinance on the Order in the Vukovar Port provides the opportunity to organize joint meetings of all competent authorities for the purpose of organization and more efficient port administration processes. One of the port operator's representatives is actively involved in the work of the administrative council of Port Authority Vukovar with the right to vote about all decisions within the Port Authority field of competence.

Success factor 4 - access to financial sources for investment funding

The Government of the Republic of Croatia adopts relevant strategic documents as well as the Mid-term plan for the development of inland waterways and inland ports. Port Authority issues a proposal for a plan for the construction and maintenance of port facilities in public ports. Opportunities are opened for the financial resources using from the state funds as well as from the European funds.

Success factor 5 - advantageous geographical position and accessibility of the port during the whole year

Except the possibility for providing the port services to the vessels throughout the whole year Port of Vukovar has a good connection with the hinterland through the railway and the road network, thus ensuring connectivity to the railway corridor X and to the road corridor Vc. This fact is also ensuring usage of different types of transport with the purpose to connect ports hinterland.

2.5.3 Comparability

Yes, but it would demand a long and detailed analysis.

3 Best practices

Choosing between the best examples/practices in the Danube region for the Republic of Croatia is not possible because in Croatia only one cargo port is situated on the Danube – Port of Vukovar.

Comparing the Port of Vukovar to other inland ports in Croatia it is possible to present the Port of Vukovar as an example of good practice.

In this part of national report, it would make no sense to go into detailed analysis of example of best practices since the entire report is pointed Danube River cargo ports.

It should be noted here that all success factors are applicable for the Port of Vukovar but it should be emphasized that individual factors of success such as fast, efficient and reliable service and advantageous geographical position and accessibility of the port during the whole year can be achieved with the investment in the reconstruction and modernization of the port infrastructure and superstructure. In addition to the modernization of the port infrastructure, it is necessary to modernize and make ports more accessible through reconstruction of the railway and road network.

In the end to sum up - all success factors are interrelated and if one of the success factor will be not achievable aimed success would be questionable.