

# State-of-the-art analysis

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# Summary

1. INTRODUCTION.....	1
2. METHODOLOGY.....	1
2.1 Analysis on MoS services.....	2
2.1.1 Maritime routes between Italy and Croatia.....	2
2.1.2 Italian cabotage.....	5
References.....	9
Annexes A.....	10

# 1. INTRODUCTION

Most Countries rely on a roadway system to carry cargo, even though road freight transport is among the most expensive and environmentally polluting, resource-consuming transport modes. Intermodal transport, that for the flows between Italy and Croatia means mainly the combination between road and sea transport, will reduce externalities and possibly transport costs because ship transport offers higher fuel economy and lower emission of harmful pollutants<sup>1</sup>, moreover, it is supported by national, regional and European policy such as MoS.

The Motorways of the Sea (MoS) Programme was introduced by the European Commission's White Paper on transport policy in 2001<sup>2</sup>, and have therefore become one of the priorities of the "Trans European Transport Network" (TEN-T) Programme (2007-2013). The concept of MoS was further developed and presented as a priority project, and are oriented to Ro-Ro and Ro-Pax so-called Short Sea Shipping (SSS) services<sup>3</sup>, that should be integrated with road transport allowing the optimization of the supply chain.

# 2. METHODOLOGY

This chapter highlights the quantitative analysis on the Motorways of Sea services data offered between the Italian and Croatian ports and on the Italian cabotage for the Interreg V-A Italy – Croatia area. In particular, the research is focused on mapping the services available and the schedules for the Ro-Ro and Ro-Pax services for whole 2018. The analysis took into consideration also the cabotage between Italian ports because this can be considered a segment of an intermodal route between Italy and Croatia.

Given the fragmentation and limited presence of the data relating on the maritime freight transport, and especially for the Italian cabotage, definitions of the existing Ro-Ro and Ro-Pax routes reference was chosen by the combination of sources: for the MoS services were considered the companies' websites; for the distance between sea ports were considered the reported data from the website of the Ministry of Infrastructure and Transport<sup>4</sup> and an online calculation tool<sup>5</sup>; whereas, for travel time and for departures per week, the averages get from the annual schedules available on companies' websites were taken into consideration.

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<sup>1</sup> <http://www.wctrs-society.com/wp/wp-content/abstracts/lisbon/selected/01979.pdf>

<sup>2</sup> [https://ec.europa.eu/transport/sites/transport/files/themes/strategies/doc/2001\\_white\\_paper/lb\\_com\\_2001\\_0370\\_en.pdf](https://ec.europa.eu/transport/sites/transport/files/themes/strategies/doc/2001_white_paper/lb_com_2001_0370_en.pdf)

<sup>3</sup> <https://eur-lex.europa.eu/legal-content/CS/ALL/?uri=OJ%3AL%3A2004%3A167%3ATOC>

<sup>4</sup> [http://www.mit.gov.it/mit/mop\\_all.php?p\\_id=23445](http://www.mit.gov.it/mit/mop_all.php?p_id=23445)

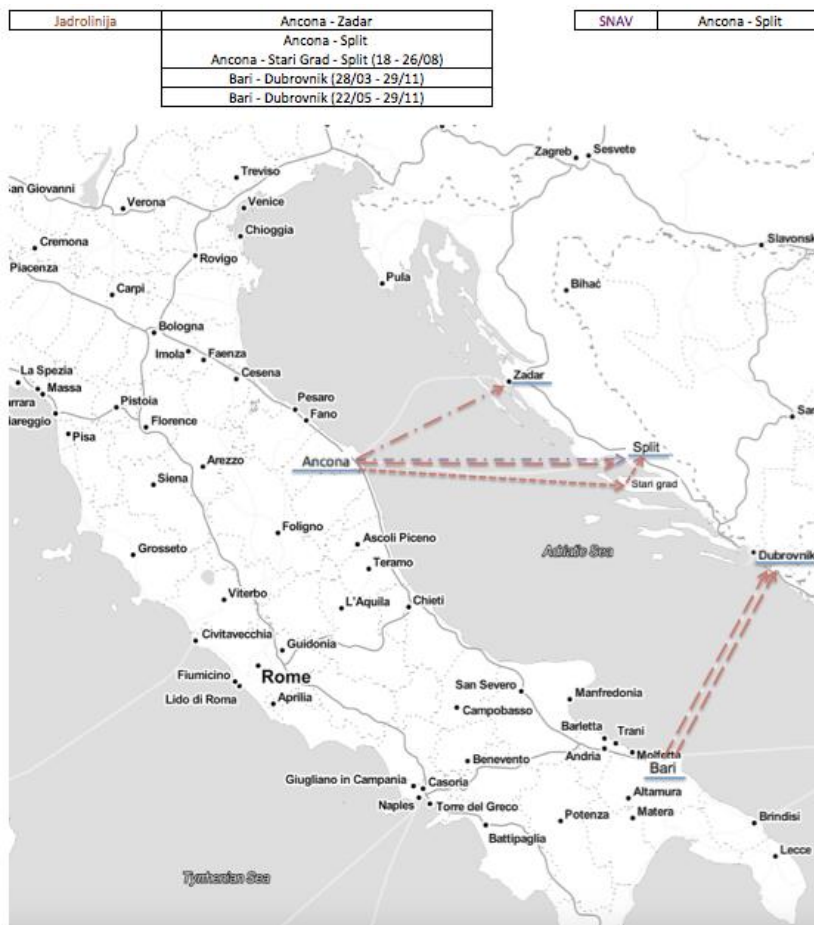
<sup>5</sup> <https://sea-distances.org>

## 2.1 Analysis on MoS services

### 2.1.1 Maritime routes between Italy and Croatia

The analysis shows that there are only Ro-Pax routes offered between Italian and Croatian ports. There are 5 routes managed by the Jadrolinija<sup>6</sup> and SNAV<sup>7</sup> (Figure 1).

Figure 1 – Maritime routes between Italy and Croatia.



Source: Elevante elaboration on MoS operators' websites data.

Ro-Pax most frequent route is Ancona – Split (328 km – annex A, table 7) managed with one line for the whole year by the Jadrolinija, and with one line from April to September by the SNAV.

<sup>6</sup> <https://www.jadrolinija.hr/en/sailing-schedule/international-lines-2018>

<sup>7</sup> [https://www.snav.it/wp-content/uploads/2016/05/DEPLIANT\\_ORARI\\_SNAV-1.pdf?x87851](https://www.snav.it/wp-content/uploads/2016/05/DEPLIANT_ORARI_SNAV-1.pdf?x87851)

Ancona port connects the highest number of destination (2 lines to Split and 1 line to Zara) and has the highest number of departures, equal to 15 in the high season (annex A - Table 2, 3 and 4).

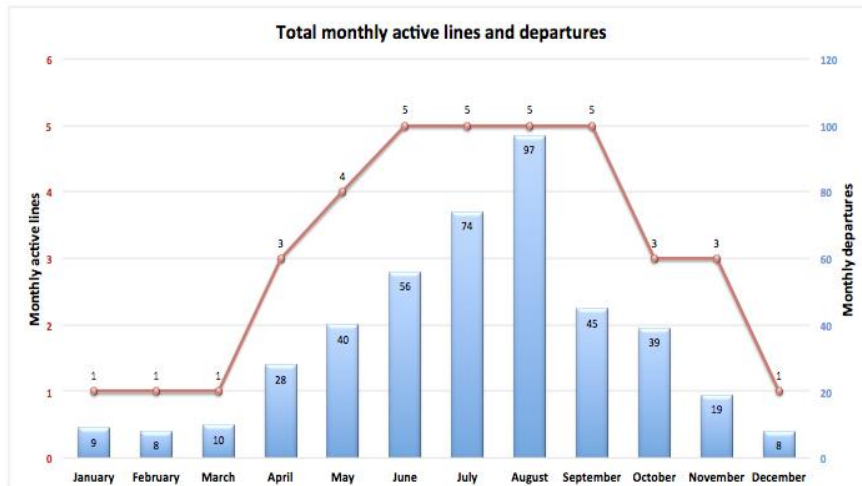
After data processing, we can see that there is a quite evident seasonality during the year:

- Low season - includes months from December to March and there is 1 active line from port of Ancona to port of Split that has an average of 2 departures per week (Figure 2), equal to 8% of the total departures, as shown on the above Table 1. This maritime route is managed by the Jadrolinija, and it's the only active maritime routes for the whole year;

- Transition time – includes months from April to June and from September to November. For the first months, starts to operate SNAV with Ancona – Split routes, whereas, Jadrolinija starts to offer all their 4 routes. Routes increase from 1 to 5 and average of weekly departures per month increase from 6 to 12, leading to increase from 28 to 56 the total monthly departures. From September to November, decrease routes, from 5 to 3, and average of weekly departures per month from 10 to 4, leading to decrease from 45 to 19 the total monthly departures (Figure 2);

- High season – includes July and August, period in which increase the average of weekly departures per month from 16 to 20, reaching 23 departures and keeping them for 2 weeks. On this period 97 departures are reached. It represents 39% of the total annual departures (see Table 1 above).

Figure 2 – Total monthly active lines and departures of the Ro-Pax routes from Italy to Croatia - 2018.



Source: Elevante elaboration on MoS operators' websites data.

The analyses described above show that there were a variability in the number of routes and weekly departures, while the travel time remains constant. Route Ancona – Split, managed by the Jadrolinija and SNAV, take approximately 10 hours for the both companies. Ancona – Zara and Bari – Dubrovnik take approximately 9 and 10 hours for the trip (annex A – Table 10).

Table 1 - Synthesis of the Ro-Pax services between Italy and Croatia.

Month	Weekly departures						Monthly departures	% departures of a total	Weighted average of a weekly departures	Seasonality
	1	2	3	4	5	6				
January	2	2	2	2	1		9	2%	2	Low season
February	1	2	2	2	1		8	2%	2	Low season
March	1	2	2	2	3		10	2%	2	Low season
April	0	5	5	7	9	2	28	6%	6	Transition time
May	6	8	9	11	6		40	9%	8	Transition time
June	5	13	13	13	12		56	13%	12	Transition time
July	0	15	16	17	20	6	74	17%	16	High season
August	17	23	23	21	13		97	22%	20	High season
September	1	11	10	11	12		45	10%	10	Transition time
October	12	10	8	7	2		39	9%	9	Transition time
November	2	4	4	4	5		19	4%	4	Transition time
December	0	2	2	2	2	0	8	2%	2	Low season
<b>Total annual departures</b>							<b>433</b>	<b>100%</b>		

Source: Elevante elaboration on MoS operators' website data.



## 2.1.2 Italian cabotage

This analysis has been carried out on Motorways of the Sea routes on cabotage. There are 8 routes (annex A- Table 13) managed by the Grimaldi group, that is Grimaldi lines<sup>8</sup> and Minoan lines<sup>9</sup>.

The Ro-Ro lines are 6, they are active for whole year connecting 5 ports. Departures have low variability, with no high or low season, indeed, every month reaches approximately from 12 to 17 departures per week (annex A - Table 2).

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<sup>8</sup> <http://cargo.grimaldi-lines.com/it/orari-e-itinerari/linee-adriatico>

<sup>9</sup> <http://www.minoan.it/images/pdf/Minoan-Lines-Grimaldi-Lines-catalogo-traghetti-italia-grecia-2018.pdf>

Figure 3 - Italian cabotage – 2018.

**Grimaldi Lines**

Ro - Ro	Ravenna - Brindisi Brindisi - Ravenna
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Ro - Ro	Venice - Bari Bari - Venice
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**Minoan Lines**

Ro - Pax	Venice - Ancona Ancona - Venice
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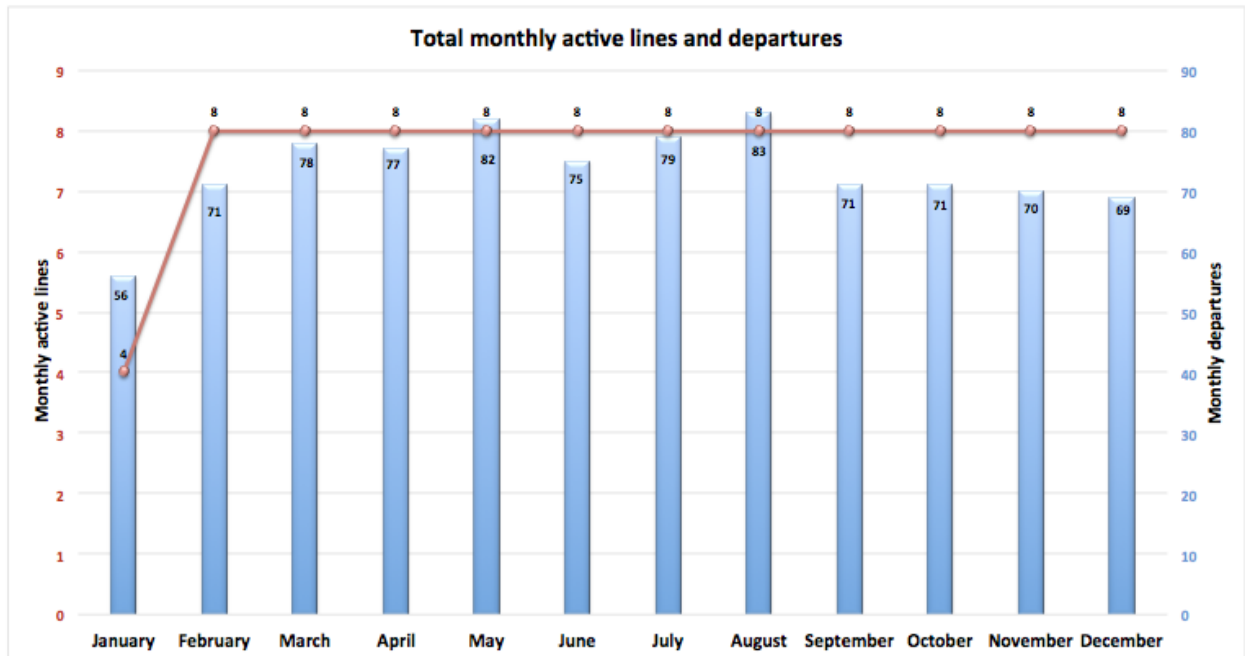
Ro - Ro	Venice - Ancona Ancona - Venice
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Source: Elevante elaboration on MoS companies' websites data.

The Ro-Pax routes are active from February to December and connect 2 ports. Departures are 4 a week, and on these routes is no variability on departures from high to low season (appendix A – Table 2).

Figure 4 - Total monthly active lines and departures on Italian cabotage - 2018.



Source: Elevante elaboration on MoS operators’ website data.

The collected data show that the majority of MoS routes are Ro-Ro with 6 destinations versus 2 destinations by the Ro-Pax (see Table 13).

There are no high or low season, and weekly departures are constantly for whole 2018, excluded January. The schedule show variability about travel time: Ro-Pax routes have constant travel time e.g. Venice – Ancona has 9:00 hours for both departures; Ro-Ro routes have variable travel time, e.g. route Bari – Venice has 598 km, and takes 22 hours on Wednesday and 32:00 hours on Friday (appendix A – Table 14).

Table 2 – Synthesis of departures on the Italian cabotage 2018.

Month	Weekly departures						Monthly departures	% departures of a total	Weighted average of a departures per month
January	12	12	12	12	8		56	6%	12
February	8	18	18	18	9		71	8%	15
March	9	18	18	18	15		78	9%	16
April	3	18	18	18	18	2	77	9%	15
May	16	18	18	18	12		82	9%	17
June	6	18	18	18	15		75	9%	15
July	3	18	18	18	18	4	79	9%	15
August	14	18	18	18	15		83	9%	17
September	3	18	18	16	16		71	8%	14
October	16	16	16	16	7		71	8%	15
November	9	16	16	16	13		70	8%	14
December	3	16	16	16	16	2	69	8%	13
<b>Total annual departures</b>							<b>882</b>	<b>100%</b>	

Source: Elevante elaboration on MoS companies' websites data.

The analysis of 2018 data has shown that the maritime transport between Italian and Croatian ports are only Ro-Pax, instead among the Italian ports which is more based on Ro-Ro services and less on Ro-Pax routes.

The Ro-Pax services between Italian and Croatian ports changes depending on the season. From low to high season change the number of routes and departures frequency, without changes on travel times.

Italian cabotage have both Ro-Ro and Ro-Pax routes. Ro-Ro has a constant number of routes and departures frequency during the year, but there can be noticed changes in the travel times, increasing towards the last 3-4 days of the week. The Ro-Pax routes, have less departures per week, but the travel times remain constant.

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## Annexes A

Table 3 – Jadrolinija’s Italy – Croatia routes schedule 1/2 - 2018

Company	Routes IT - CRO	Vessel type	Sailing schedule								
Jadrolinija	Line 53			Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	
	Ancona - Split	Ro-Pax	01/01 - 31/03								
	Ancona - Stari Grad - Split (18 - 26/08)		01/04 - 02/08		19:45				19:45		
			03/08 - 17/08		19:45		19:45		19:45		
			18/08 - 26/08	Departures	19:45		19:45		19:45	23:59	
			27/08 - 26/10		19:45		19:45		19:45		11:00
			28/10 - 31/12		19:45		19:45		19:45		
					19:45				19:45		
	Line 51			Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	
	Ancona - Zadar	Ro-Pax	04/06 - 03/07		22:00				22:00		
			04/07 - 12/07		22:00		22:00		22:00		
			13/07 - 26/07		22:00		22:00	22:00	22:00		
			27/07 - 21/08	Departures	22:00	22:00	22:00	22:00	16:00	12:30	
			22/08 - 28/08		22:00		22:00	22:00	22:00		
			29/08 - 06/09		22:00		22:00		22:00		
			07/09 - 25/09		22:00				22:00		

Source: Elevante elaboration on the Jadrolinija’s website data

Table 4 – Jadrolinija’s Italy – Croatia routes schedule 2/2 - 2018

Line 54				Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Bari - Dubrovnik	Ro-Pax	28/03 - 21/05	Departures		21:00		21:00			
		22/05 - 05/07					21:00		21:00	22:00
		06/07 - 24/07					21:00		22:00	22:00
		25/07 - 12/08						22:00	22:00	22:00
		13/08 - 14/08								
		15/08 - 31/08			22:00			12:00	12:00	12:00
		01/09 - 06/10						21:00		22:00
		08/10 - 27/10						21:00		21:00
		28/10 - 29/11						21:00		
Line 55				Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Bari - Dubrovnik	Ro-Pax	22/05 - 05/07	Departures		21:00					
		06/07 - 24/07			21:00			22:00		
		25/07 - 12/08			21:00		22:00			
		13/08 - 14/08			22:00					
		15/08 - 31/08			12:00		12:00			
		01/09 - 06/10			21:00					
		08/10 - 27/10			21:00					
		28/10 - 29/11			21:00					

Source: Elevante elaboration on the Jadrolinija’s website data

Table 5 – SNAV’s Italy – Croatia routes schedule - 2018

				Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	
SNAV	Ancona - Split	Ro-Pax	18/04 - 18/05	Departures	20:00		20:00	20:00	22:00 *		
* only for Saturday 28th april											
			19/05 - 21/07	Departures	20:00		20:00	20:00	22:00		
			22/07 - 18/08		20:00	22:00	22:00	22:00	22:00		11:00
			19/08 - 31/08		11:00	11:00	11:00	11:00			11:00
			01/09 - 14/09		20:00		20:00		20:00		11:00
			15/09 - 05/10		20:00		20:00		20:00	22:00	

Source: Elevante elaboration on the SNAV’s website data



Table 6 – Synthesis of the Ro-Pax routes between Italy and Croatia - 2018

Routes	Operator	Weekly frequency												
		January	February	March	April	May	June	July	August	September	October	November	December	
Ancona - Split	Jadrolinija	2	2	2	3	3	3	3	4	3	3	2	2	
Ancona - Split	SNAV	0	0	0	3	3	3	3	6	4	0	0	0	
Ancona - Zadar	Jadrolinija	0	0	0	0	0	2	3	5	3	0	0	0	
Bari - Dubrovnik	Jadrolinija	0	0	0	2	3	3	3	4	3	2	1	0	
Bari - Dubrovnik	Jadrolinija	0	0	0	0	1	1	2	2	1	1	1	0	
		Low frequency					Moderate frequency				High frequency			
<b>Approximately weekly departures - Ro-Pax</b>		2	2	2	8	10	12	14	21	14	6	4	2	
<b>Monthly active lines</b>		1	1	1	3	4	5	5	5	5	3	3	1	

Source: Elevante elaboration on the MoS operators' websites data

Table 7 – Synthesis of the comparison for 2018 data: N° of routes and average departure per week

	N° routes	Average departures per week
<b>IT - CRO routes</b>		
Ro - Pax routes, low season	1	2
Ro - Pax routes, high season	5	20

Source: Elevante elaboration on the MoS operators' websites data



Table 8 – Average travel times and distance between Italian and Croatian ports

Routes	Operator	Average travel times (h)	Distance between ports (km)
Ancona - Split	Jadrolinija	10	328
Ancona - Split	SNAV	10	328
Ancona - Zadar	Jadrolinija	9	169
Bari - Dubrovnik	Jadrolinija	10	203
Bari - Dubrovnik	Jadrolinija	10	203

Source: Elevante elaboration on the MoS operators' websites data

Table 9 – Italy – Croatia Ro-Pax services' schedule – 2018

Month	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W
January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
n' routes	1				1				1			1				1			1				1			1				1	
February	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W			
n' routes	1				1				1			1				1			1				1			1					
March	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
n' routes	1				1				1			1				1			1				1			1			1	1	1
April	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	
n' routes	1	1	1	1	1				1	1	1	1	1			1	1	2	1	2			2	1	2	1	2	1	2	1	2
May	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T
n' routes	1	2	1	2			2	1	2	1	2			2	1	2	1	2	1	2			2	1	2	1	2	1	2	1	2
June	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
n' routes	2	2	1	2	2	2	1	2	3	1	2	2	2	1	3	3			2	2	2	1	2	3	1	2	2	2	1	2	3
July	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T
n' routes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
August	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F
n' routes	4	3	4	3	3	3	3	4	3	4	3	3	4	3	3	3	4	2	4	4	3	2	3	4	2	3	3	3	2	2	3
September	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	
n' routes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
October	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W
n' routes	2	2	2	2	2			2	2	2	1	1	2			1	2	1	1	1	2			1	2	1	1	1			2
November	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	
n' routes	1	1			2			1	1				2			1	1			2			1	1			2			2	1
December	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M
n' routes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Frequency departure scale Lower ■ ■ ■ ■ Greater

Source: Elevante elaboration on the MoS operators' websites data

Table 10 – Grimaldi Lines' schedule for Italian cabotage- 2018

Company	Routes IT - IT	Type	Sailing schedule								
			Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday		
GRIMALDI LINES	Ravenna - Brindisi	Ro - Ro	01/01 - 31/12	Departure		19:30	22:00				12:00
	Brindisi - Ravenna	Ro - Ro	01/01 - 31/12	Departure	12:00		15:00		18:30		
	Venice - Bari	Ro - Ro	01/01 - 31/12	Departure	19:00			12:00			12:00
	Bari - Venice	Ro - Ro	01/01 - 31/12	Departure			10:00		08:00		10:00
MINOAN LINES	CRUISE EUROPA - CRUISE OLYMPIA				Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Venice - Ancona	Ro - Pax	29/01 - 31/12	Departure			04:30	04:30			
	Ancona - Venice	Ro - Pax	29/01 - 14/07	Departure		15:30	15:30				
			15/07 - 16/09	Departure		17:00	16:30				
	EUROFERRY OLYMPIA				Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Venice - Ancona	Ro - Ro	03/02 - 31/12	Departure			12:00					
Ancona - Venice	Ro - Ro	03/02 - 31/12	Departure					22:00			

Source: Elevante elaboration on the MoS operators' websites data

Table 11 – Synthesis of the Ro-Ro and Ro-Pax Italian cabotage - 2018

Routes	Operator	Vessel type	Weekly frequency												
			January	February	March	April	May	June	July	August	September	October	November	December	
Venice - Ancona	Minoan Lines	Ro-Pax		2	2	2	2	2	2	2	2	2	2	2	2
Ancona - Venice	Minoan Lines	Ro-Pax		2	2	2	2	2	2	2	2	2	2	2	2
Venice - Ancona	Minoan Lines	Ro-Ro		1	1	1	1	1	1	1	1	1	1	1	1
Ancona - Venice	Minoan Lines	Ro-Ro		1	1	1	1	1	1	1	1	1	1	1	1
Ravenna - Brindisi	Grimaldi Lines	Ro-Ro	3	3	3	3	3	3	3	3	3	3	3	3	3
Brindisi - Ravenna	Grimaldi Lines	Ro-Ro	3	3	3	3	3	3	3	3	3	3	3	3	3
Venice - Bari	Grimaldi Lines	Ro-Ro	3	3	3	3	3	3	3	3	3	3	3	3	3
Bari - Venice	Grimaldi Lines	Ro-Ro	3	3	3	3	3	3	3	3	3	3	3	3	3
				Low frequency				Moderate frequency				High frequency			
<b>Approximately weekly departures - Ro-Ro</b>			12	14	14	14	14	14	14	14	14	14	14	14	14
<b>Approximately weekly departures - Ro-Pax</b>			0	4	4	4	4	4	4	4	4	4	4	4	4
<b>Total approximately weekly departures</b>			12	18	18	18	18	18	18	18	18	18	18	18	18
<b>Monthly active lines</b>			4	8	8	8	8	8	8	8	8	8	8	8	8

Source: Elevante elaboration on the MoS operators' websites data

Table 12 – Italian cabotage services’ schedule – 2018

Month	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W
January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
n° routes	2	1	2	2	2	0	3	2	1	2	2	2	0	3	2	1	2	2	2	0	3	2	1	2	2	2	0	3	2	2	4
February	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28			
n° routes	3	2	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5			
March	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
n° routes	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3	0	
April	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
n° routes	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	
May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
n° routes	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3
June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
n° routes	3	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	
July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
n° routes	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2
August	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
n° routes	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	2	5	3	3
September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
n° routes	0	3	2	2	5	3	3	0	3	2	2	5	3	3	0	3	2	1	4	3	3	0	3	2	1	4	3	3	0	3	
October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
n° routes	2	1	4	3	3	0	3	2	1	4	3	3	0	3	2	1	4	3	3	0	3	2	1	4	3	3	0	3	2	1	4
November	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
n° routes	3	3	0	3	2	1	4	3	3	0	3	2	1	4	3	3	0	3	2	1	4	3	3	0	3	2	1	4	3	3	
December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
n° routes	0	3	2	1	4	3	3	0	3	2	1	4	3	3	0	3	2	1	4	3	3	0	3	2	1	4	3	3	0	3	2

Source: Elevante elaboration on the MoS operators’ websites data



Table 13 – Synthesis of the comparison for 2018 data: N° of routes and weekly departure per month

	N° routes	Weekly departures per month
<b>Italian cabotage routes</b>		
Ro-Ro	6	4
Ro-Pax	2	18

Source: Elevante elaboration on the MoS operators' websites data

Table 14 – Average travel times and distance between Italian ports

Routes	Operator	Vessel type	Day of departure and travel time							Average travel times (h)	Distance between ports (km)	
			Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday			Monday
Venice - Ancona	Minoan Lines	Ro-Pax			9:30:00	9:30:00					9:30:00	231
Ancona - Venice (29/01 - 14/07, 17/09 - 31/12)	Minoan Lines	Ro-Pax		10:00:00	10:00:00						10:00:00	231
Ancona - Venice (15/07 - 16/09)	Minoan Lines	Ro-Pax		8:30:00	9:00:00						8:45:00	231
Venice - Ancona	Minoan Lines	Ro-Ro			11:00:00						11:00:00	231
Ancona - Venice	Minoan Lines	Ro-Ro						11:00:00			11:00:00	231
Ravenna - Brindisi	Grimaldi Lines	Ro-Ro		21:15:00		21:00:00			24:00:00		22:05:00	627
Brindisi - Ravenna	Grimaldi Lines	Ro-Ro	21:00:00		22:00:00		23:30:00				22:10:00	627
Venice - Bari	Grimaldi Lines	Ro-Ro	20:00:00			21:00:00			19:30:00		20:10:00	598
Bari - Venice	Grimaldi Lines	Ro-Ro			20:00:00		31:00:00		22:00:00		24:20:00	598

Source: Elevante elaboration on the MoS operators' websites data