

# Current status of coastal shipping in Japan

SEMINAR FOR PROMOTING RIVER TRANSPORT IN MYANMAR

7<sup>th</sup> March 2014

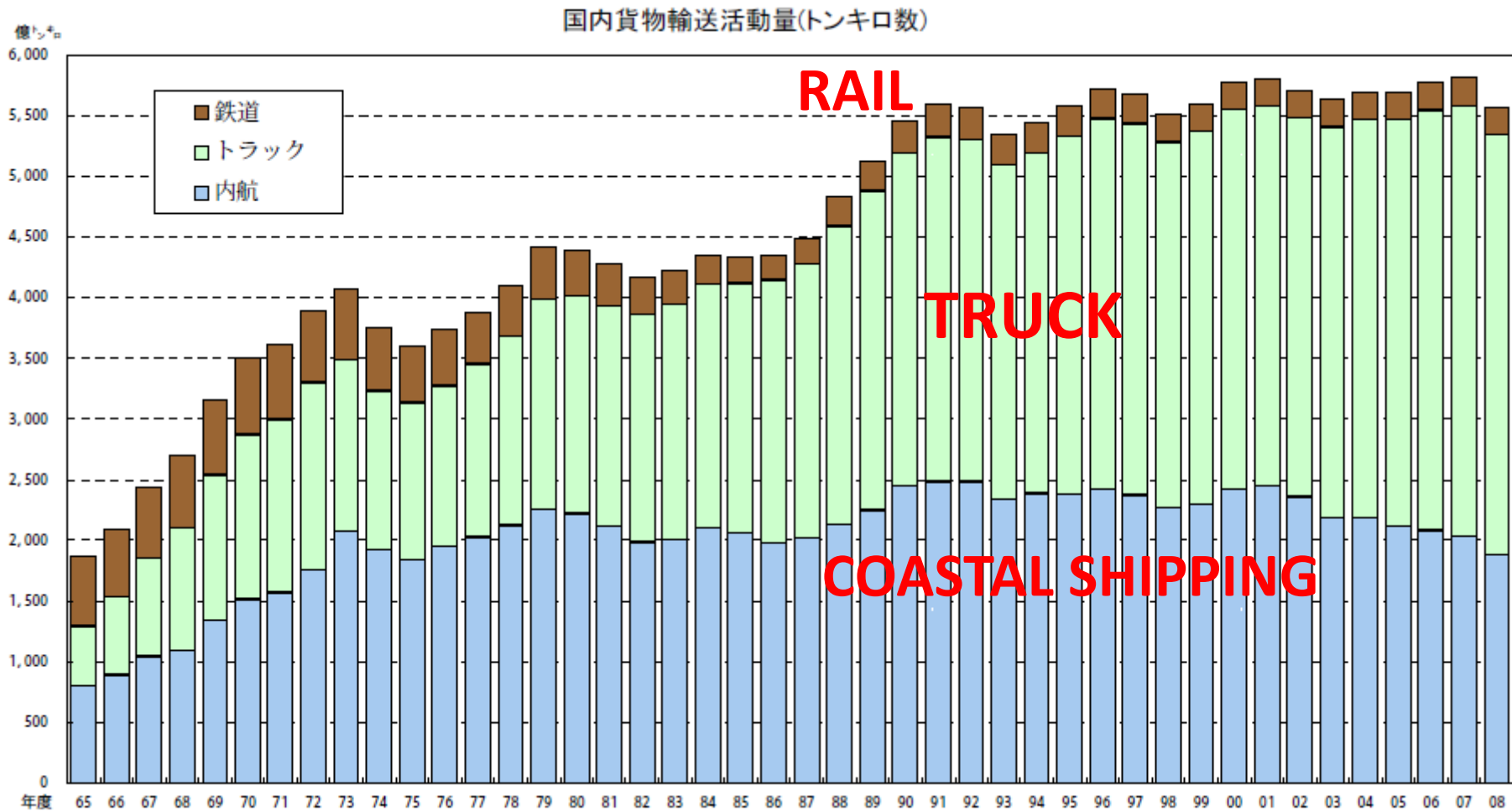
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College of Economics, Nihon University

# Agenda

- \* In this presentation, we briefly see the current status of costal shipping in Japan.
- \* Then, we focus on two points:
  - \* **“Modal shift”**
    - \* Advanced connectivity of coastal shipping with land transportation
    - \* Coastal shipping as an environmentally preferable mode
  - \* **“Joint ownership ship building scheme”**
    - \* Cost sharing scheme between domestic shipping companies and JRTT(Japan Railway Construction, Transport and Technology Agency)

# Figure 1: Domestic Cargo movement (ton- kilometers)

Source: Naiko-Journal, 2011



# Table 1 :Major Cargo Movement by Coastal Ships in 2011

Source: Japan Federations of Costal Shipping Associations, 2013

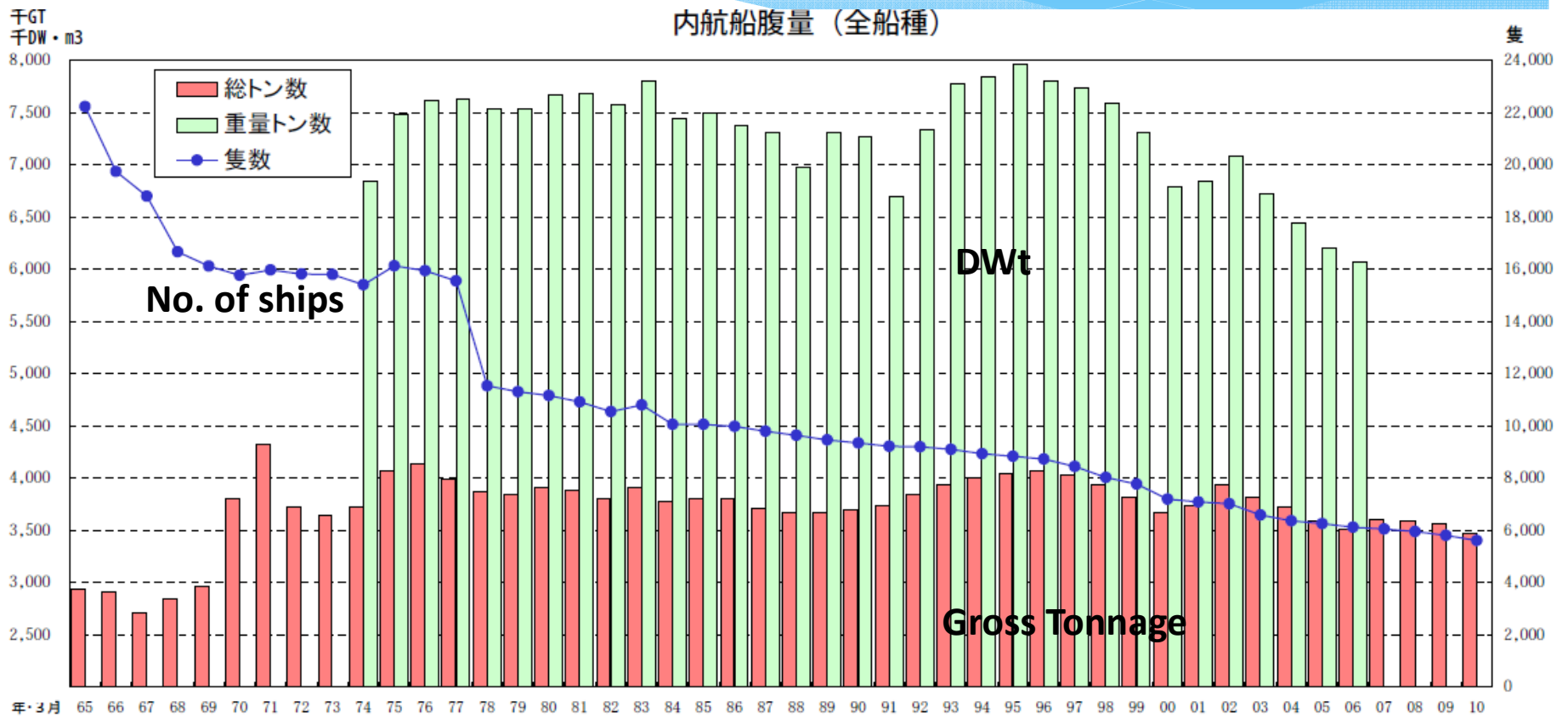
主要品目別内航輸送量（平成23年度） Major Cargo Movement by Coastal Ships In 2011

品目 Cargo	区分 Division	輸送距離 Movement		輸送量 Quantity	
		千トンキロ 1,000 ton-kilometers	%	千トン 1,000 ton	%
石灰石等 Limestone, Others		35,899,117	20.5	68,776	19.1
石油製品 Petroleum Products		40,168,143	23.0	90,725	25.1
鉄鋼等 Iron And Steel, Others		21,708,080	12.4	43,151	12.0
セメント Cement		17,531,764	10.0	33,760	9.4
砂利・砂・石材 Gravel, Sand, Stones		4,924,523	2.8	18,877	5.2
化学製品・肥料・その他 Chemical Products		9,478,402	5.4	21,245	5.9
石炭 Coal		2,880,097	1.6	12,486	3.5
その他産業原材料 Other Industrial Raw Material		742,863	0.4	3,687	1.0
製造工業品 Manufactured Industry Goods		19,095,400	10.9	25,110	7.0
特種品 Special Goods		9,340,524	5.3	19,236	5.3
自動車等 Vehicle, Others		7,977,138	4.6	10,948	3.0
農林水産品 Agriculture,Forestry And Fisheries Goods		2,209,541	1.3	5,269	1.5
その他製品等 Other Product etc.		2,980,334	1.7	7,714	2.1
合計 Total		174,899,926	100.0 <sup>3</sup>	360,984	100.0

(注) 国土交通省「内航船舶輸送統計年報」（平成23年度）より抜粋。

# Figure 2: Total Tonnage of Coastal shipping in Japan

Source: Naiko Journal 2011



# Table 2: Ship size and number of ships

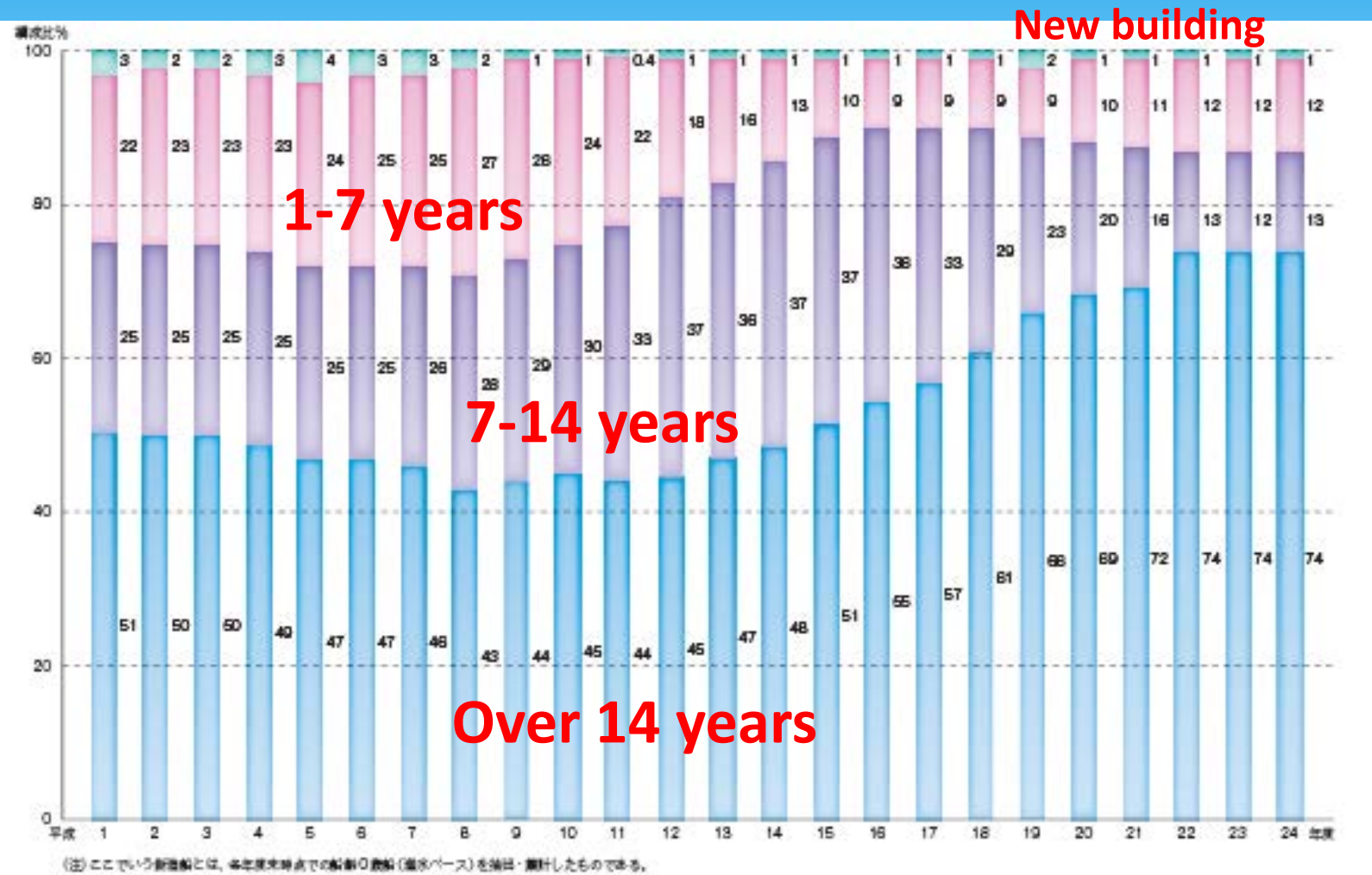
Source: Japan Federations of Coastal Shipping Associations, 2013

船型 Ship Size	平成 15 年 3 月 31 日 2003.3.31				平成 25 年 3 月 31 日 2013.3.31											
	隻数 (構成比%) No. of Ships		総トン数 (構成比%) G/T		油槽船 (比) Oil Tanker				貨物船 (比) Cargo Ship				合計 Total			
	隻数 (構成比%) No. of Ships	総トン数 (構成比%) G/T	隻数 (構成比%) No. of Ships	総トン数 (構成比%) G/T	隻数 (構成比%) No. of Ships	総トン数 (構成比%) G/T	隻数 (構成比%) No. of Ships	総トン数 (構成比%) G/T	隻数 (構成比%) No. of Ships	総トン数 (構成比%) G/T	隻数 (構成比%) No. of Ships	総トン数 (構成比%) G/T				
~ 19G/T	1,418	30.2	20,025	1.6	108	8.4	1,823	0.2	1310	32.7	18,281	0.8	1,418	26.7	20,104	0.6
20G/T ~ 99G/T	574		40,330		136	10.5	10,499	0.9	228	5.7	15,073	0.6	364	6.9	25,572	0.7
100G/T ~ 199G/T	1,486	22.5	259,554	6.8	257	19.9	44,814	3.9	670	16.7	116,974	4.8	927	17.5	161,788	4.5
200G/T ~ 299G/T	296	4.5	76,944	2.0	44	3.4	11,608	1.0	231	5.8	58,874	2.4	275	5.2	70,482	2.0
300G/T ~ 399G/T	264	4.0	93,030	2.4	54	4.2	19,063	1.7	141	3.5	49,316	2.0	195	3.7	68,379	1.9
400G/T ~ 499G/T	1,257	19.1	608,710	15.8	246	19.0	120,691	10.5	797	19.9	389,120	16.1	1,043	19.7	509,811	14.3
500G/T ~ 699G/T	355	5.4	236,358	6.2	66	5.1	44,632	3.9	139	3.5	87,804	3.6	205	3.9	132,436	3.7
700G/T ~ 999G/T	280	4.2	236,412	6.2	197	15.2	164,378	14.4	165	4.1	131,042	5.4	362	6.8	295,420	8.3
1,000G/T ~ 1,999G/T	228	3.4	339,144	8.8	40	3.1	62,141	5.4	103	2.6	148,701	6.1	143	2.7	210,842	5.9
2,000G/T ~ 2,999G/T	145	2.2	392,701	10.2	39	3.0	109,458	9.6	33	0.8	83,331	3.4	72	1.4	192,789	5.4
3,000G/T ~ 4,499G/T	160	2.4	586,191	15.3	94	7.3	342,784	29.9	63	1.6	235,452	9.7	157	3.0	578,236	16.2
4,500G/T ~ 6,499G/T	73	1.1	378,404	9.9	7	0.5	34,578	3.0	51	1.3	263,495	10.9	58	1.1	298,073	8.4
6,500G/T~	59	0.9	572,791	14.9	5	0.4	178,298	15.6	78	1.9	824,117	34.0	83	1.6	1,002,415	28.1
合計 Total	6,593	100.0	3,840,594	100.0	1,293	100.0	1,144,767	100.0	4,009	100.0	2,421,580	100.0	5,302	100.0	3,568,347	100.0
うち 100G/T 以上	4,601	69.8	3,780,239	98.4	1,049	81.1	1,132,445	98.9	2,471	61.6	2,368,226	98.6	3,520	66.4	3,520,671	98.7
平均 G/T Av. Tonnage	583				885				604				673			

(注)①内河航行船及び漁業用船を含み、重油の二次輸送船・原油の二次輸送船及び沖縄復帰にかかわる石油製品用船舶可航を含まない。  
 ②20歳以上の船舶の隻数を含む。  
 ③ここでは油槽船に油槽船、特殊タンク船の隻数の合計を、貨物船にセメント専用船、自動車専用船、土・砂利・石材専用船、その他貨物船の隻数の合計を計上している。

# Figure 3: Percentages of ship ages

Source: Japan Federations of Coastal Shipping Associations, 2013



# No. of Costal Shipping Entities

Source: Japan Federations of Costal Shipping Associations, 2013

- \* No. of Ship-operators:
  - \* 652 Registered Entities
  - \* 899 Approval Entities on Application
  - \* 1,551 in Total
- \* No. of Ship-owners:
  - \* 1,513 Registered Entities
  - \* 183 Approval Entities on Application
  - \* 1,696 in Total

as of 31<sup>st</sup> March 2013

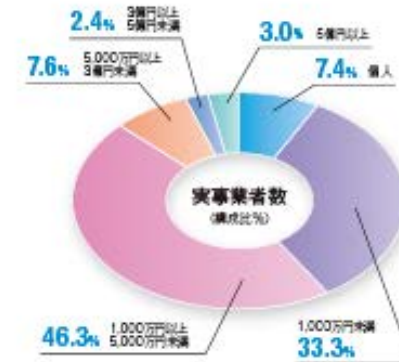


# Table 3: Features of Shipping entities

Source: Japan  
Federations of  
Costal Shipping  
Associations,  
2013

資本金別登録事業者数 No. of Coastal Shipping Entities by Capital

区分 Division	運送業 Ship-operator		貨運業 Ship-owner		合計 (実事業者数) Total	
	事業者数 Entities	構成比 (%)	事業者数 Entities	構成比 (%)	事業者数 Entities	構成比 (%)
個人 Individual	17	2.6	143	9.5	160	7.4
1,000万円未満 Less than 10 million yen	120	18.4	602	39.8	722	33.3
1,000万円以上5,000万円未満 10~50 million yen	333	51.1	670	44.3	1,003	46.3
5,000万円以上3億円未満 50~300 million yen	109	16.7	55	3.6	164	7.6
3億円以上5億円未満 300~500 million yen	25	3.8	26	1.7	51	2.4
5億円以上 500 million yen and more	48	7.4	17	1.1	65	3.0
合計 Total	652	100.0	1,513	100.0	2,165	100.0



運航隻数別にみた運送事業者数 No. of Coastal Ship-operators by Operating Ships

運航隻数 No. of Ships	事業者数 No. of Entities	構成比 (%)
1隻	247	37.9
2隻	113	17.3
3隻	55	8.4
4隻	44	6.7
5隻以上	193	29.6
合計 Total	652	100.0



運航船腹量別にみた運送事業者数 No. of Coastal Ship-operators by Operating Tonnage

運航船腹量 No. of Entities	事業者数 No. of Entities	構成比 (%)
~ 199G/T	68	10.4
200G/T ~ 999G/T	279	42.8
1,000G/T ~ 1,999G/T	96	15.0
2,000G/T ~ 4,999G/T	91	14.0
5,000G/T ~ 9,999G/T	55	8.4
10,000G/T ~	61	9.4
合計 Total	652	100.0

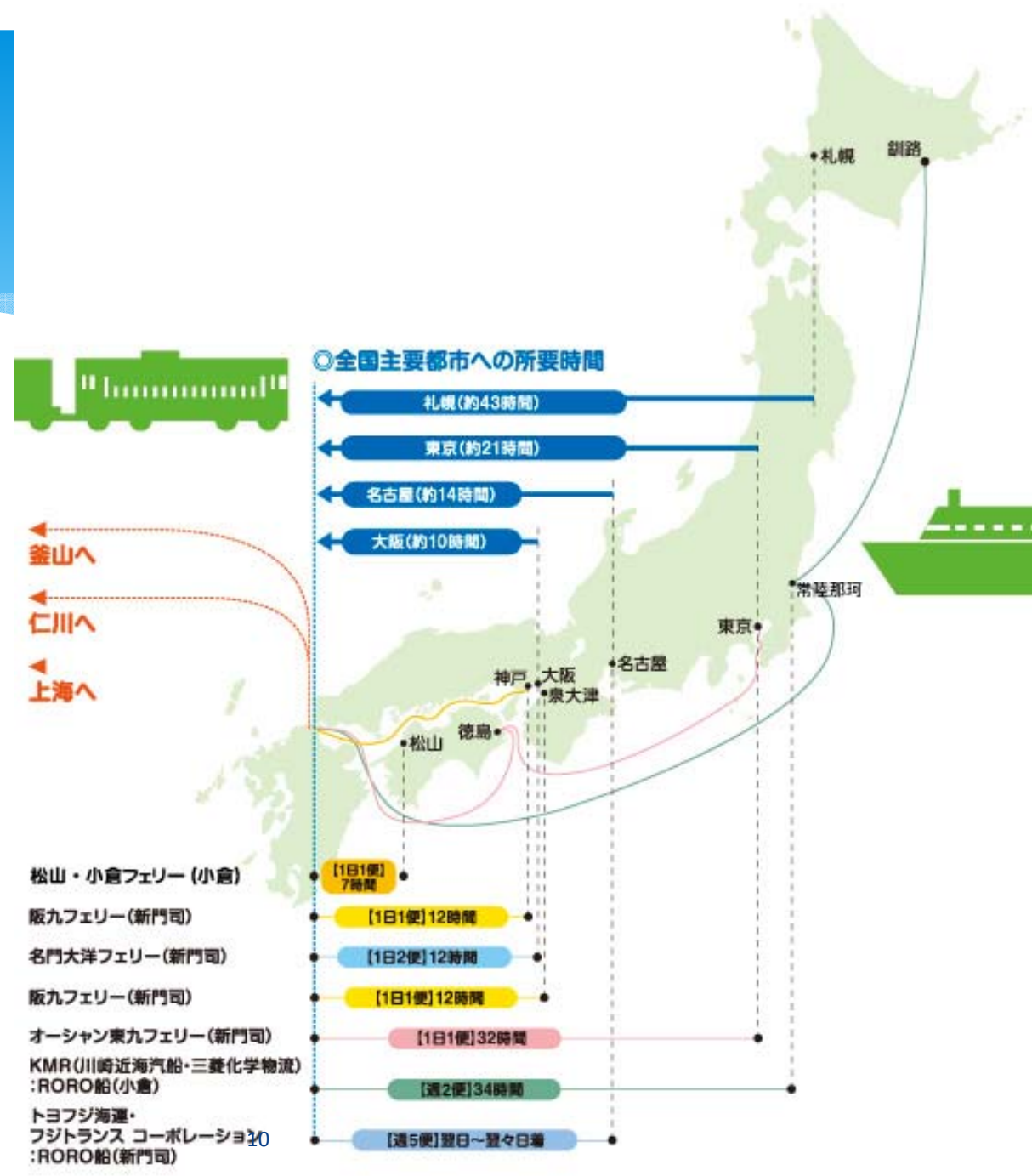


# Connectivity of coastal shipping with land transportation

- \* In Japan, the ratio of usage of land transport (truck) is high (See Figure 1).
- \* Regarding long distance transportation (e.g. over 500 kilometers), coastal shipping has advantages.
  - \* **Especially, from the point of environmental impacts, coastal shipping is preferable mode.**
- \* Then, advanced connectivity of coastal shipping with land transportation is required
  - \* **“Modal shift”**

# Figure 4: Example of shipping route

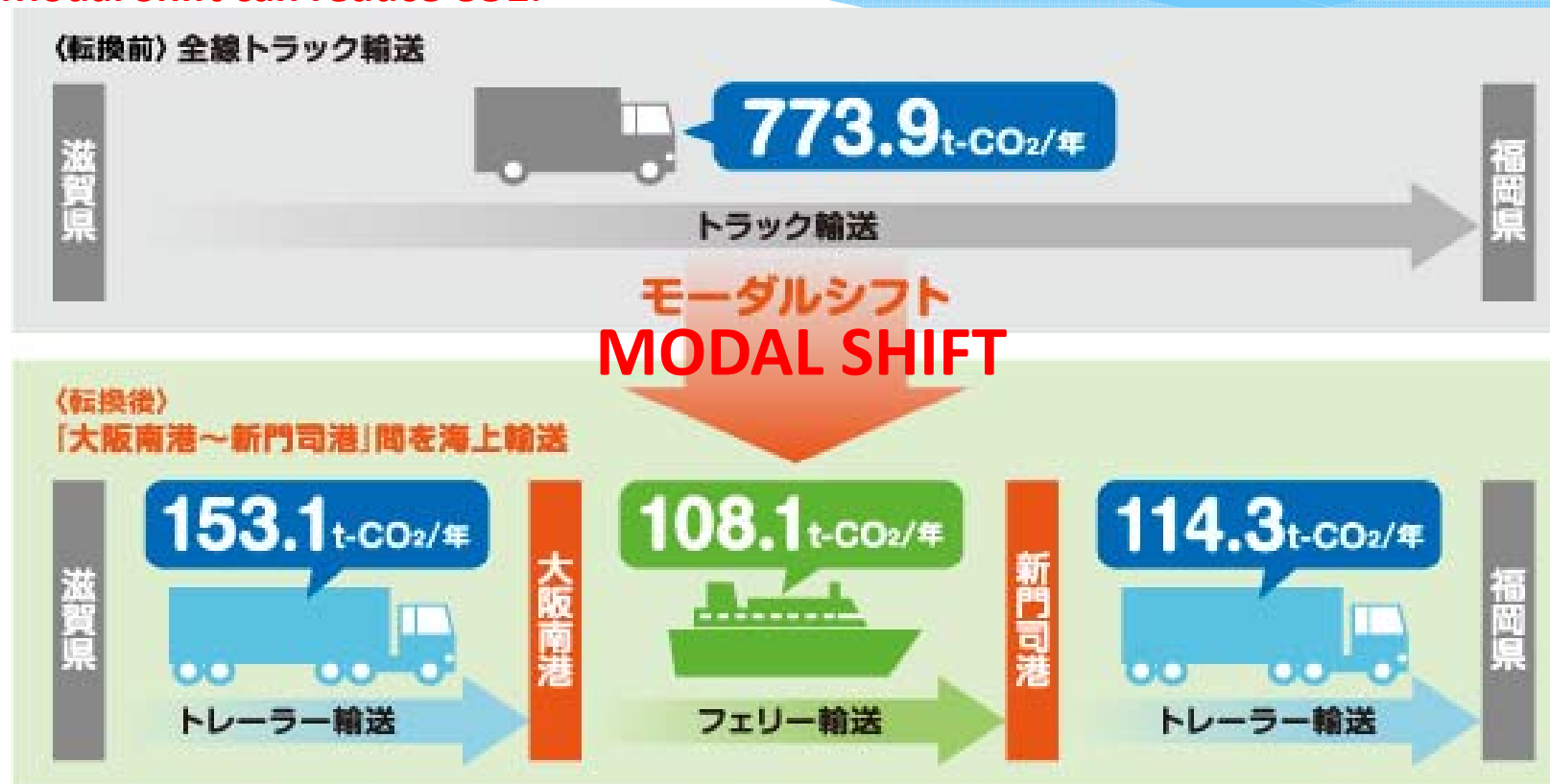
Source: Port of  
Kitakyusyu



# Figure 5: Example of Environmental Effects of Intermodal

Source: Port of Kitakyusyu

**Modal Shift can reduce CO2.**



※平成20年グリーン物流パートナーシップ普及事業の推進決定事業

# RoRo Terminal

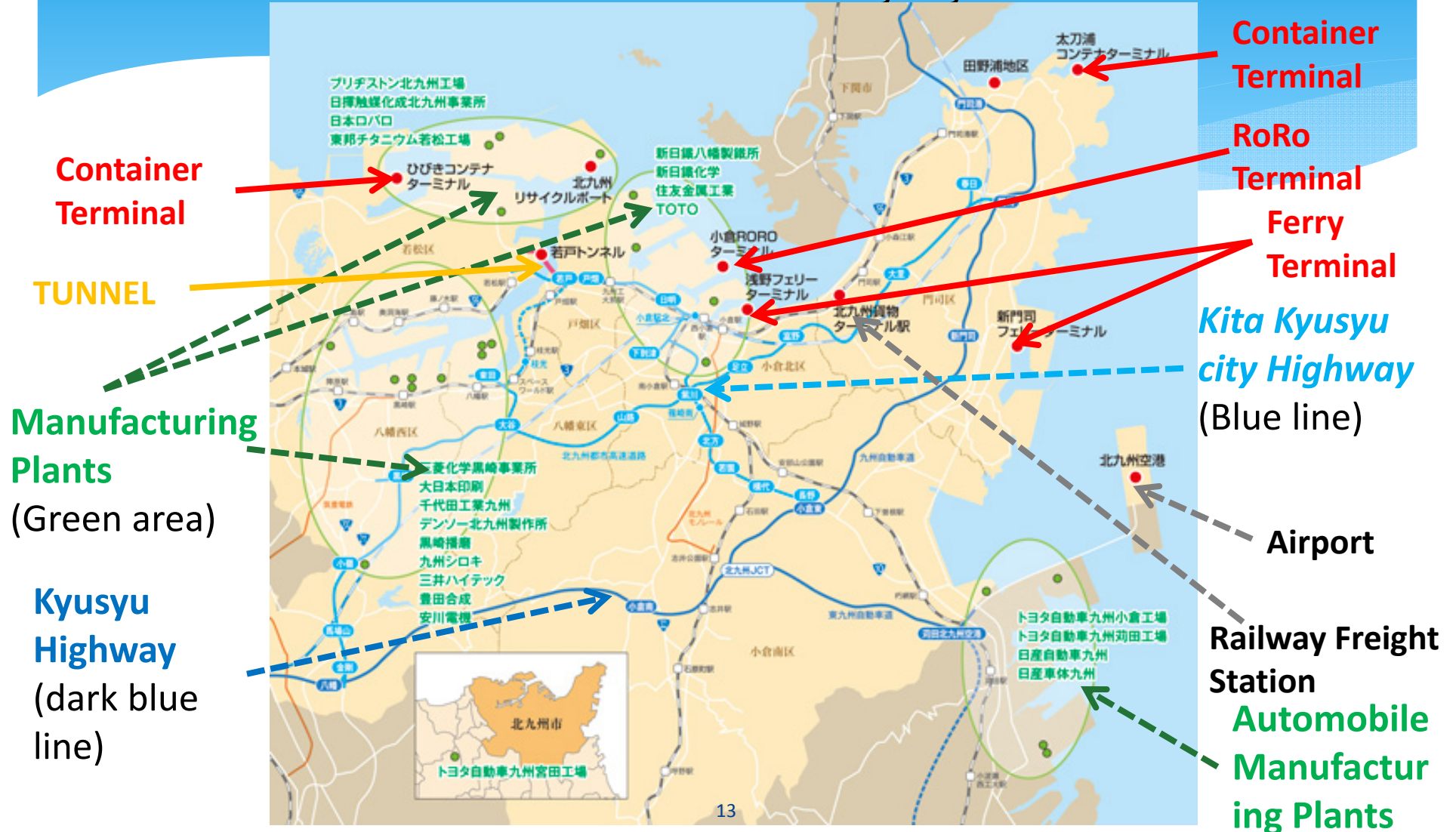
Source: Port of Kitakyusyu





# Connectivity of Ports with Roads

Source: Port of Kitakyusyu

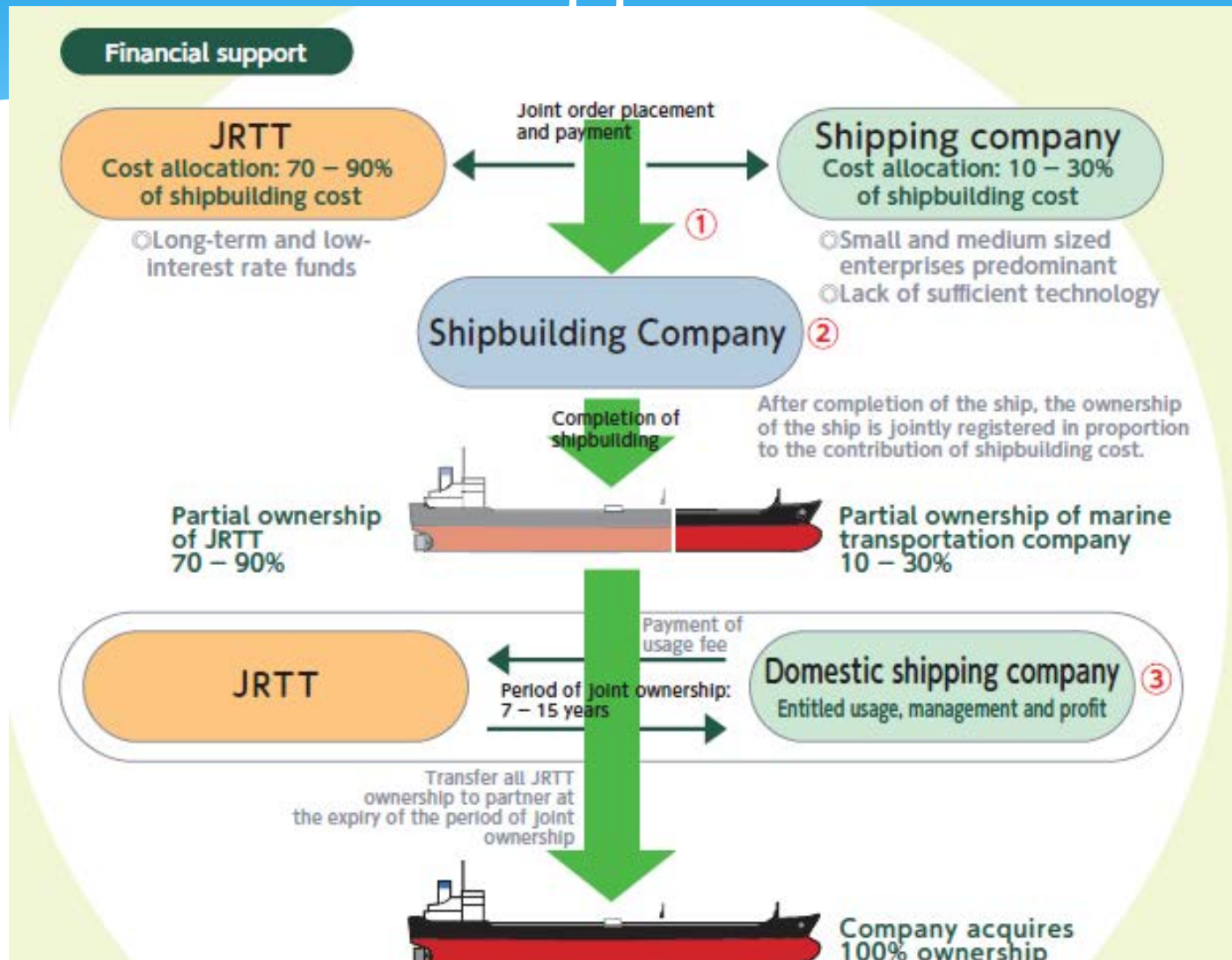


# Joint ownership ship building scheme

- \* Under the joint ownership shipbuilding scheme, JRTT and a domestic shipping company (partner) share the cost of shipbuilding and jointly place orders with a shipbuilding company for the construction of a ship.
- \* When the ship is completed, JRTT and its partner jointly own the ship proportionate to the contribution of building cost, and the partner utilizes and manages the operation of the vessel.
- \* Under this scheme, a domestic shipping company is not required to provide any security for the cost being shared by JRTT, which enables companies with low fundraising capacity to easily build a ship.
- \* In addition, since the ship is jointly owned by JRTT, the shipping company is able to receive diversified technical support from JRTT.
- \* This scheme contributes to the maintenance and development of the domestic shipping

Source: JRTT

# Financial Support: source JRTT





# Technical Support: Source JRTT

## Technical Support

At each stage of the planning, design and building of a ship, JRTT provides technical support by engineers having specialized knowledge and an abundance of know-how and data acquired through the experiences of having jointly built over 3,800 vessels. After completing the ship, JRTT also provides technical support for safety and efficient operation of the ship.



- \* From the technical point, JRTT supports domestic shipping company as follows:
  1. Advice for ship design review,
  2. Construction supervision during shipbuilding
  3. Support for ship management during the period of joint ownership

# Results of: Joint ownership ship building scheme

Source: Japan Federations of Costal Shipping Associations, 2013

最近5年間の内航船舶共有建造実績 Results of Ship Construction for Recent Five Years

船種 Ship Type		平成20年度 F.Y.2008	平成21年度 F.Y.2009	平成22年度 F.Y.2010	平成23年度 F.Y.2011	平成24年度 F.Y.2012
貨物船 Cargo Ship	隻数 No. of Ships	6	6	13	7	4
	総トン数 G/T	7,416	2,979	6,454	8,060	1,995
油槽船 Oil Tanker	隻数 No. of Ships	14	13	6	14	16
	総トン数 G/T	23,048	23,391	10,660	18,629	32,313
その他 Others	隻数 No. of Ships	6	7	9	4	4
	総トン数 G/T	17,438	22,533	27,934	2,364	17,419
合計 Total	隻数 No. of Ships	26	26	30	25	24
	総トン数 G/T	47,902	48,903	45,068	29,053	51,727

(注)①隻数は原則として竣工ベース、但し、平成24年度については発注ベース。  
②その他の種は、自衛隊専用船、セメント専用船、特殊タンク船等を指す。

# Super Eco Ship

Source: National Maritime Research Institute



# Importance of Joint ownership ship building scheme

- \* As mentioned, most of domestic costal shipping companies are small or medium scale. Therefore, it tends to be difficult to borrow ship building funds from private banks.
- \* However, to increase the number of new shipbuilding would be required to replace older ships.
- \* This scheme has advantages to construct new ships:
  - \* collateral-free, option to select lower rate, long-term borrowings, tax break etc.
- \* Therefore, the role of this scheme has been playing an important role.



Thank you for your attention.