

Intensified competition between High Speed Rail and Airlines

29 February, 2016

4th Florence Intermodal Forum

“How does digitalization affect transport and the competition between transport mode?”

Ichiro Takahashi

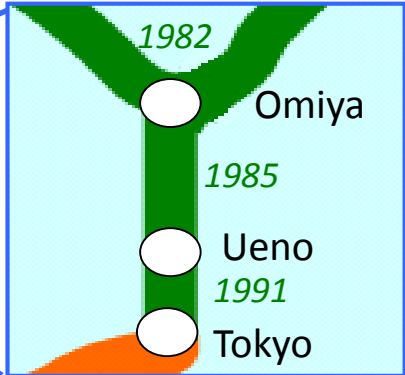
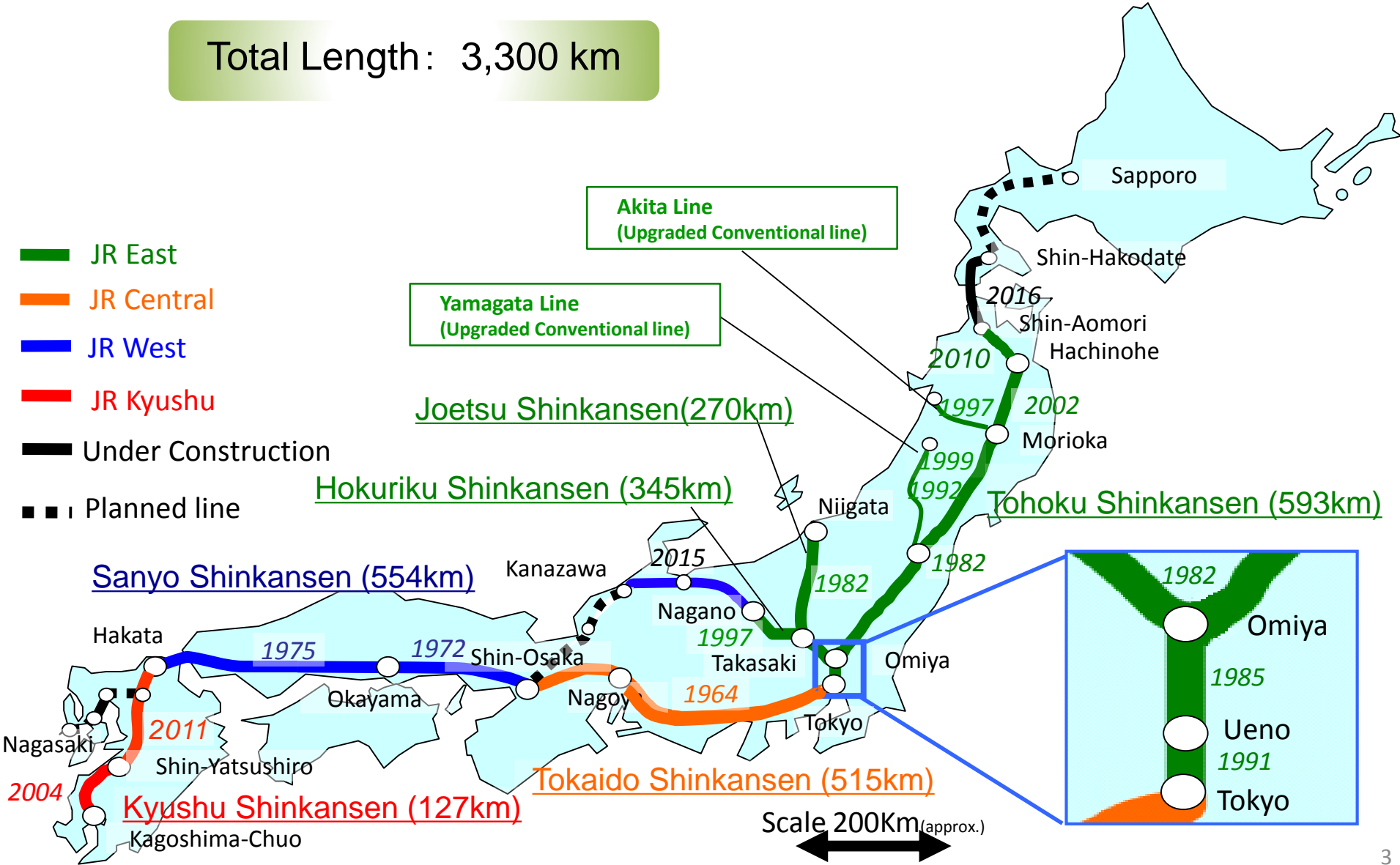
Executive Director
Brussels Branch
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- 1 Shinkansen Network
- 2 Airports in Japan
- 3 Effects on the airlines by Shinkansen
- 4 Relation between market share & time/distance
- 5 Digitalization for customer satisfaction
- 6 Shares by transport modes
- 7 The way forward

1 Shinkansen Network

Total Length: 3,300 km

- █ JR East
- █ JR Central
- █ JR West
- █ JR Kyushu
- █ Under Construction
- █ █ Planned line



2 Airports in Japan

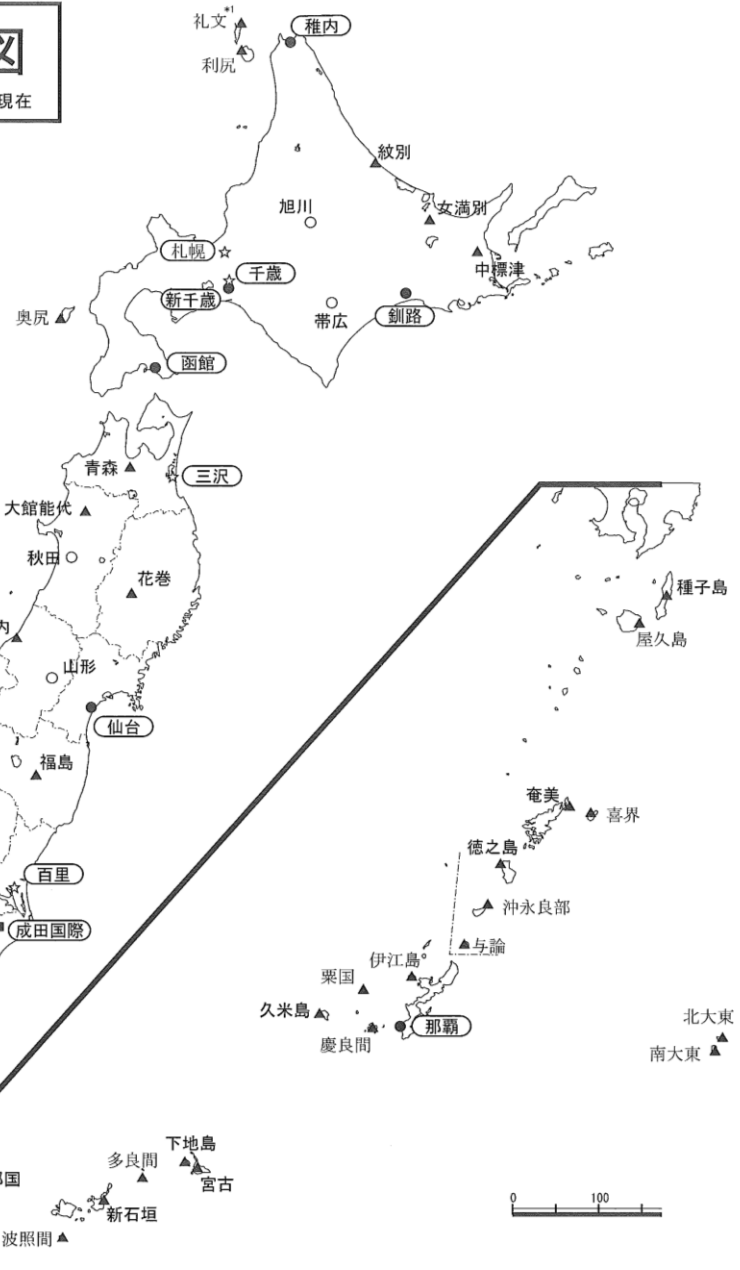
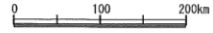
種別	供用	滑走路長 2,000 m 以上	
		供用	未供用
A 拠点空港	28	28	0
① 会社管理空港 ■	4	4	0
② 国管理空港 ●	19	19	0
③ 特定地方管理空港 ○	5	5	0
B 地方管理空港 ▲	54	30	0
C その他の空港 ★	7	1	0
D 共用空港 ☆	8	7	0
合計	97	66	0

A 「拠点空港」とは、次の①～③に掲げる空港をいう。（空港法（昭和31年法律第80号。以下「法」という。）第4条第1項）
 ①「会社管理空港」とは、会社が設置し、及び管理する空港をいう。
 ②「国管理空港」とは、国が設置し、及び管理する空港をいう。
 ③「特定地方管理空港」とは、国が設置し、地方公共団体が管理する空港をいう。
 B 「地方管理空港」とは、地方公共団体が設置し、及び管理する空港をいう。（法第5条第1項）
 C 「その他の空港」とは、空港（法第2条）のうち、「拠点空港」、「地方管理空港」及び「公共用ヘリポート」を除く空港をいう。
 D 「共用空港」とは、自衛隊等が設置し、及び管理する飛行場をいう。（法附則第2条第1項）

(注)
 *1 礼文空港は、平成21年4月9日から平成33年3月31日まで供用を休止。
 ・公共用ヘリポートは除く。
 ・図中の○印は供用中の会社管理空港、国管理空港及び共用空港を示す。
 ・空港名がゴシック体となっている空港は、滑走路長が2,000m以上であることを示す。

空港分布図

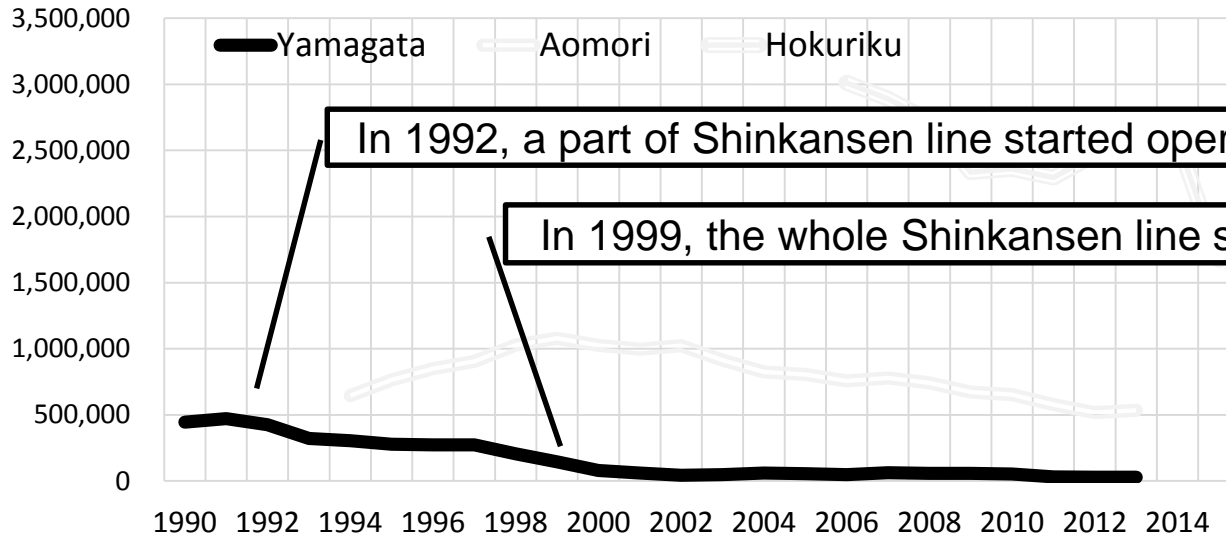
平成27年4月1日現在



There are 97 airports in Japan.

3 Effects on the airlines by Shinkansen

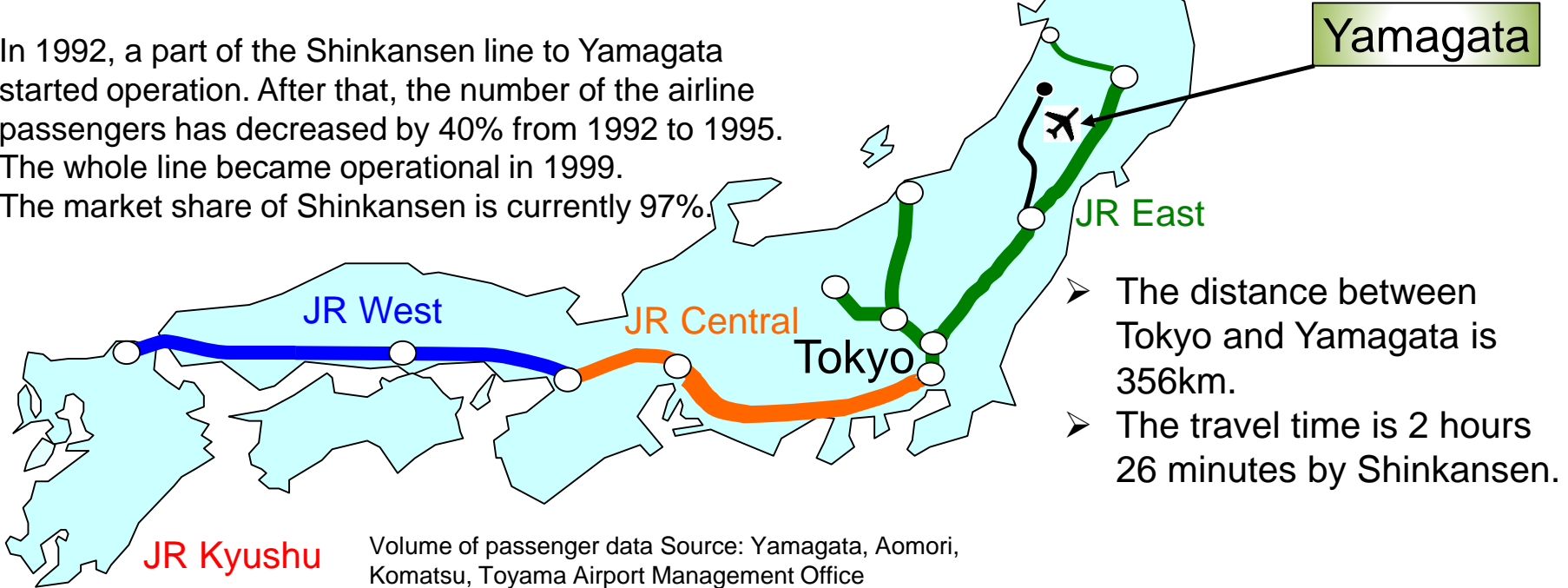
Tokyo - Regional Airport (Volume of passengers / Year) ✈



In 1992, a part of Shinkansen line started operation

In 1999, the whole Shinkansen line started operation

- In 1992, a part of the Shinkansen line to Yamagata started operation. After that, the number of the airline passengers has decreased by 40% from 1992 to 1995.
- The whole line became operational in 1999.
- The market share of Shinkansen is currently 97%.



Yamagata

JR East

JR West

JR Central

Tokyo

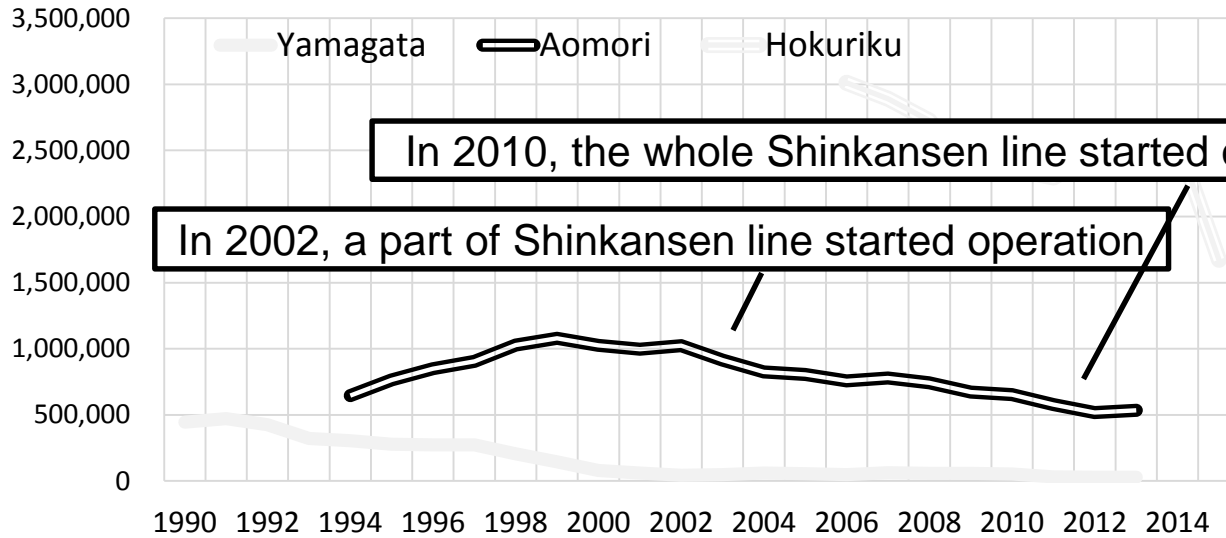
JR Kyushu

- The distance between Tokyo and Yamagata is 356km.
- The travel time is 2 hours 26 minutes by Shinkansen.

Volume of passenger data Source: Yamagata, Aomori, Komatsu, Toyama Airport Management Office

3 Effects on the airlines by Shinkansen

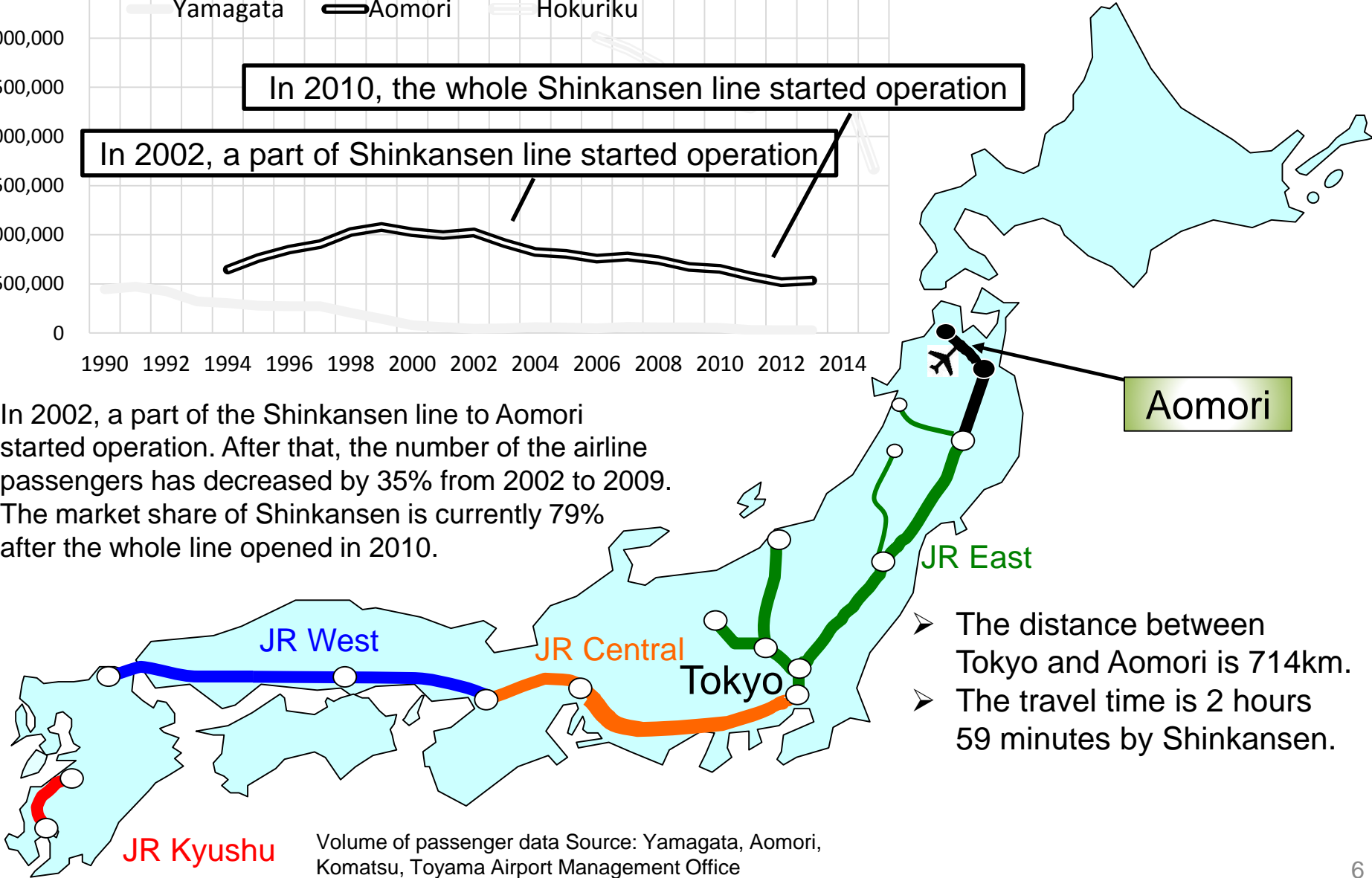
Tokyo - Regional Airport (Volume of passengers / Year) ✈️



In 2010, the whole Shinkansen line started operation

In 2002, a part of Shinkansen line started operation

- In 2002, a part of the Shinkansen line to Aomori started operation. After that, the number of the airline passengers has decreased by 35% from 2002 to 2009.
- The market share of Shinkansen is currently 79% after the whole line opened in 2010.

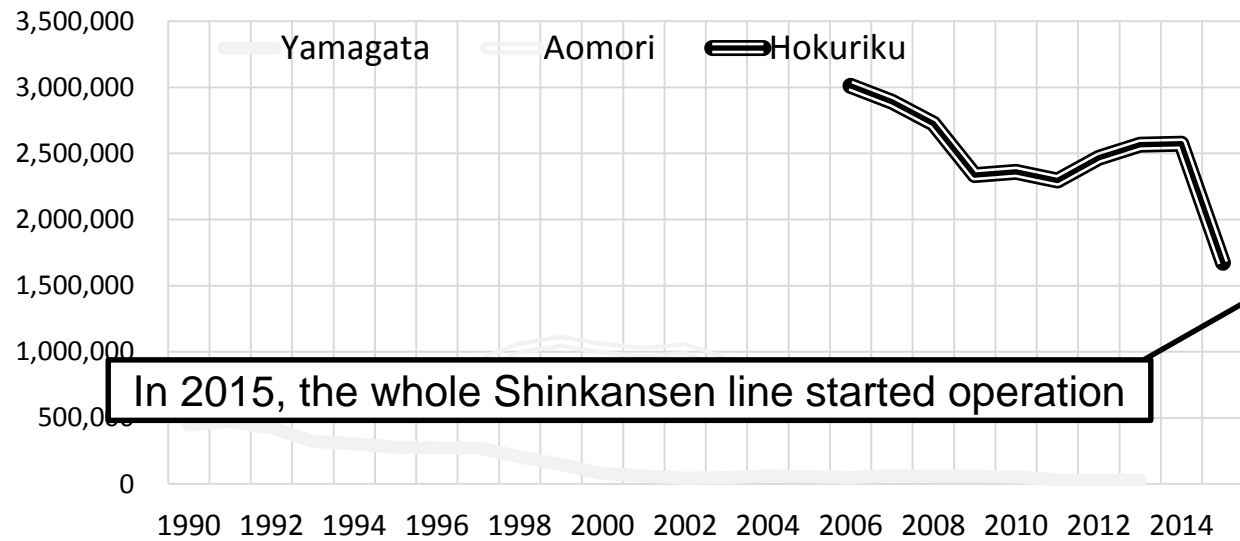


- The distance between Tokyo and Aomori is 714km.
- The travel time is 2 hours 59 minutes by Shinkansen.

Volume of passenger data Source: Yamagata, Aomori, Komatsu, Toyama Airport Management Office

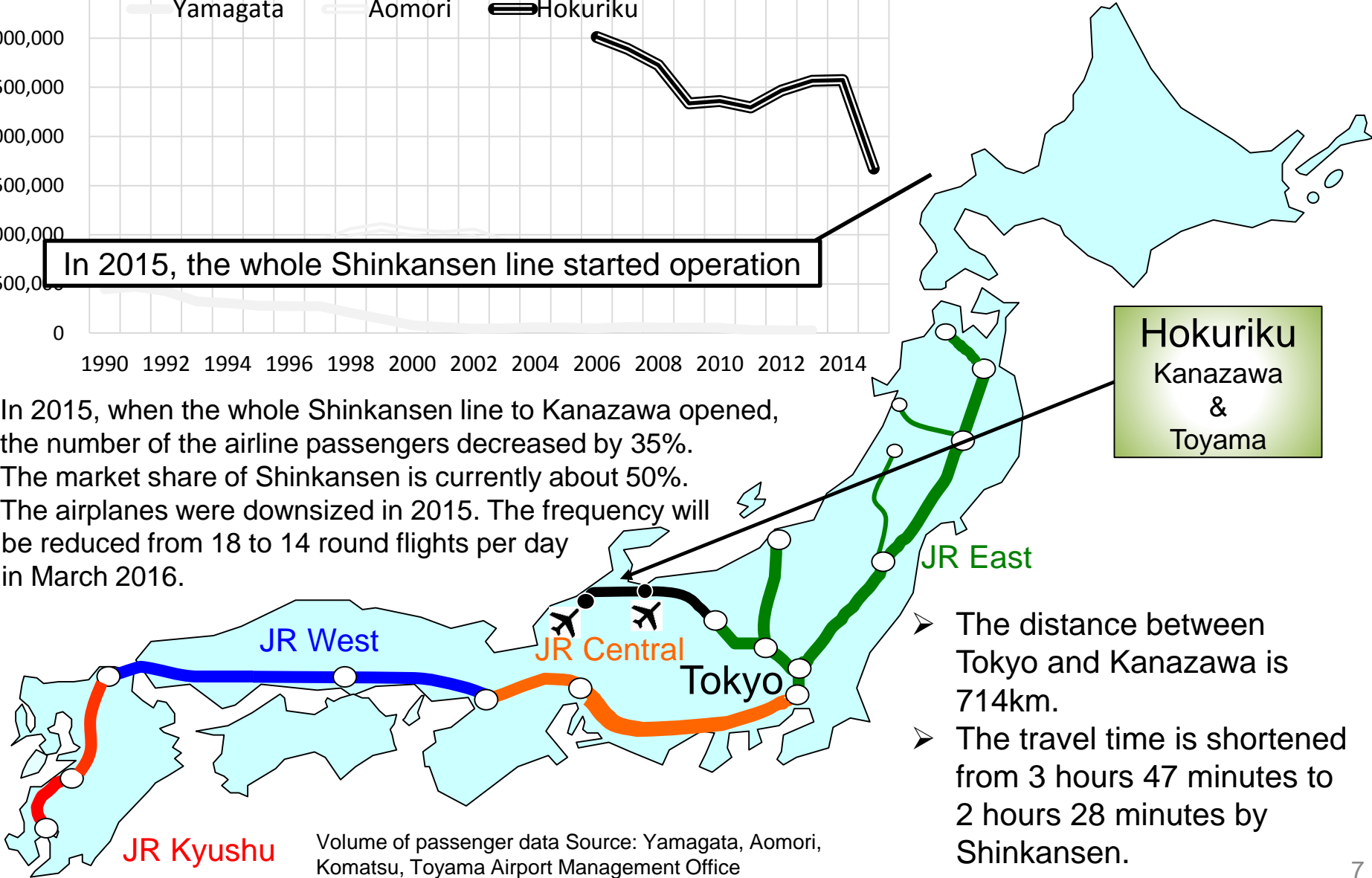
3 Effects on the airlines by Shinkansen

Tokyo - Regional Airport (Volume of passengers / Year) ✈



In 2015, the whole Shinkansen line started operation

- In 2015, when the whole Shinkansen line to Kanazawa opened, the number of the airline passengers decreased by 35%.
- The market share of Shinkansen is currently about 50%.
- The airplanes were downsized in 2015. The frequency will be reduced from 18 to 14 round flights per day in March 2016.



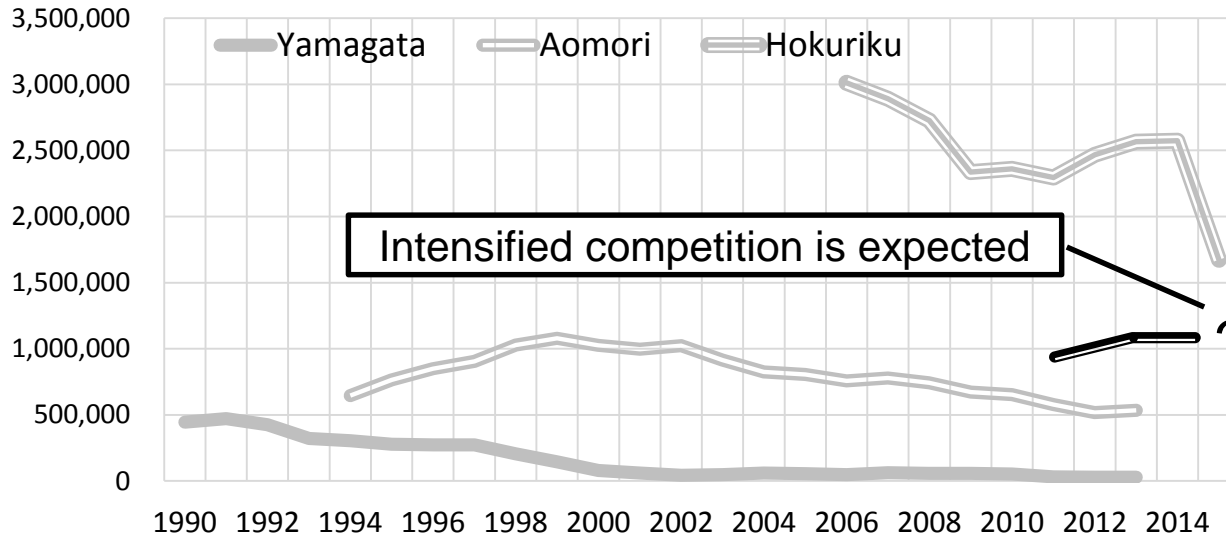
Hokuriku
Kanazawa
&
Toyama

- The distance between Tokyo and Kanazawa is 714km.
- The travel time is shortened from 3 hours 47 minutes to 2 hours 28 minutes by Shinkansen.

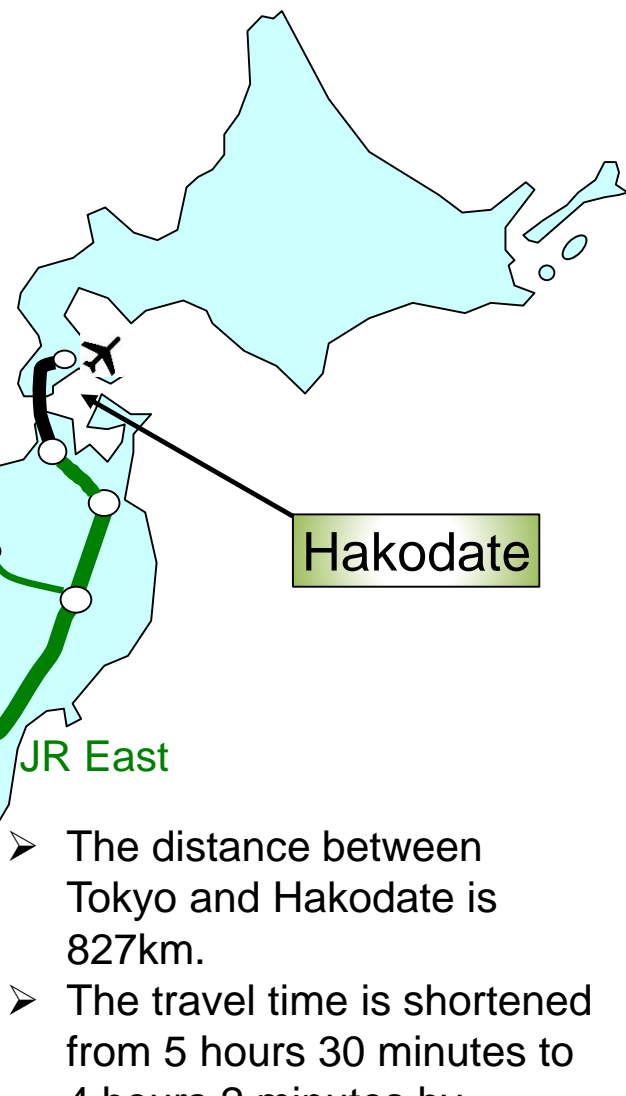
Volume of passenger data Source: Yamagata, Aomori, Komatsu, Toyama Airport Management Office

3 Effects on the airlines by Shinkansen

Tokyo - Regional Airport (Volume of passengers / Year) ✈️



Intensified competition is expected



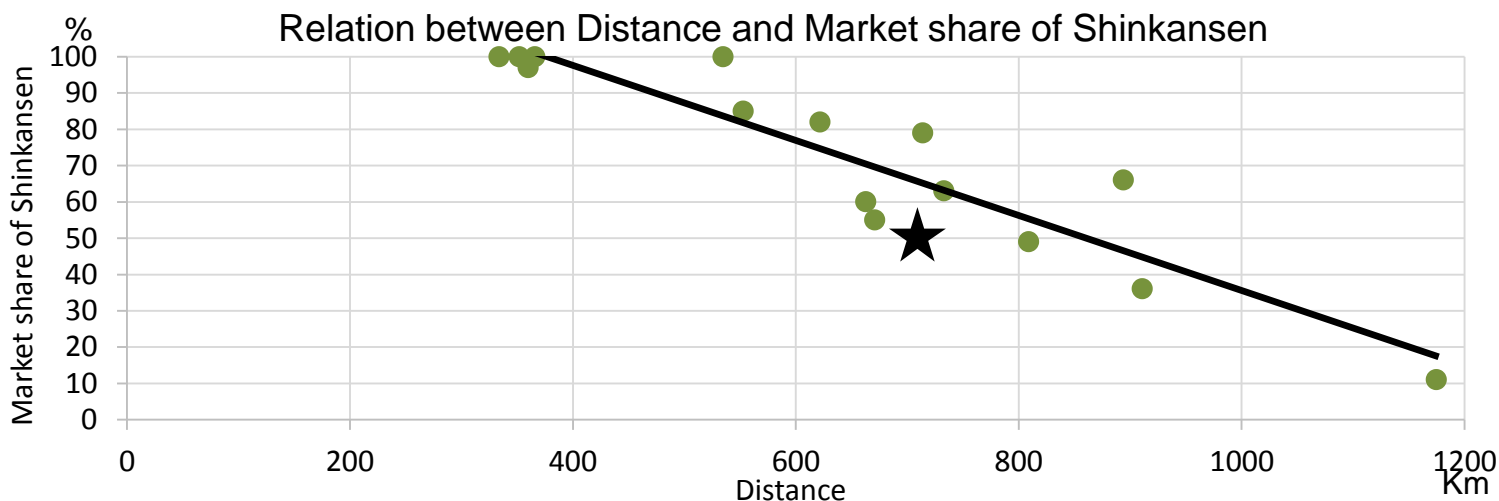
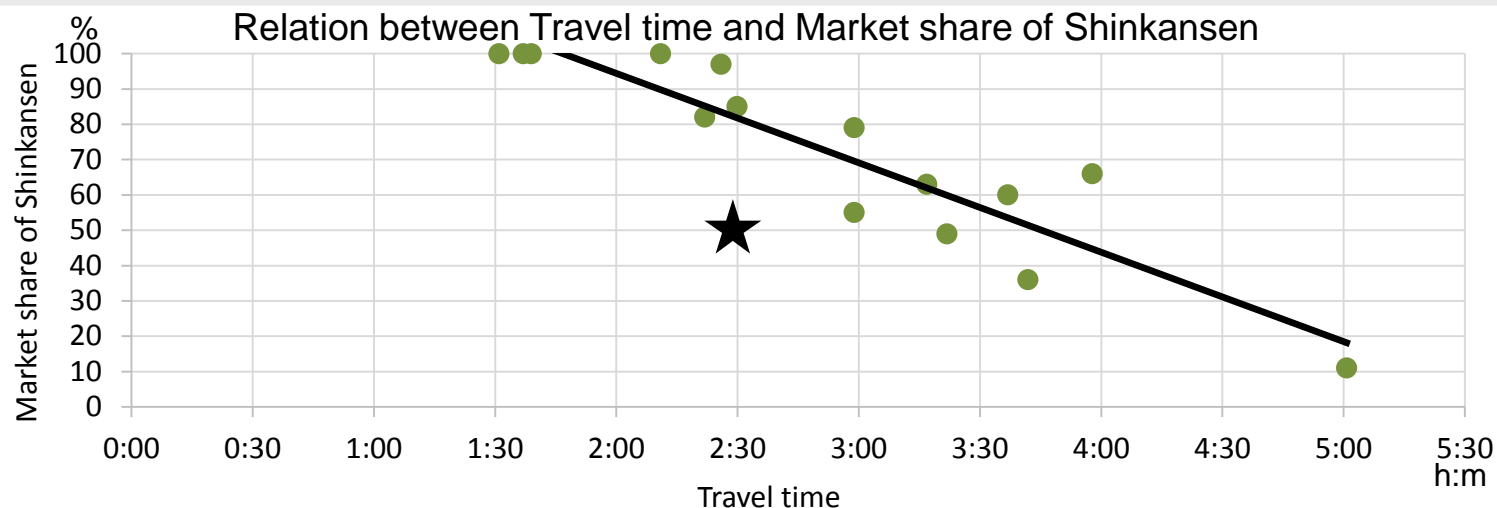
Hakodate

- The whole Shinkansen line to Hakodate will open in March 2016.
- There will be no change in the airline services because the airlines expect almost the same demand as before for airline services.

- The distance between Tokyo and Hakodate is 827km.
- The travel time is shortened from 5 hours 30 minutes to 4 hours 2 minutes by Shinkansen.

Volume of passenger data Source: Yamagata, Aomori, Komatsu, Toyama, Hakodate Airport Management Office

4 Relation between market share & time/distance

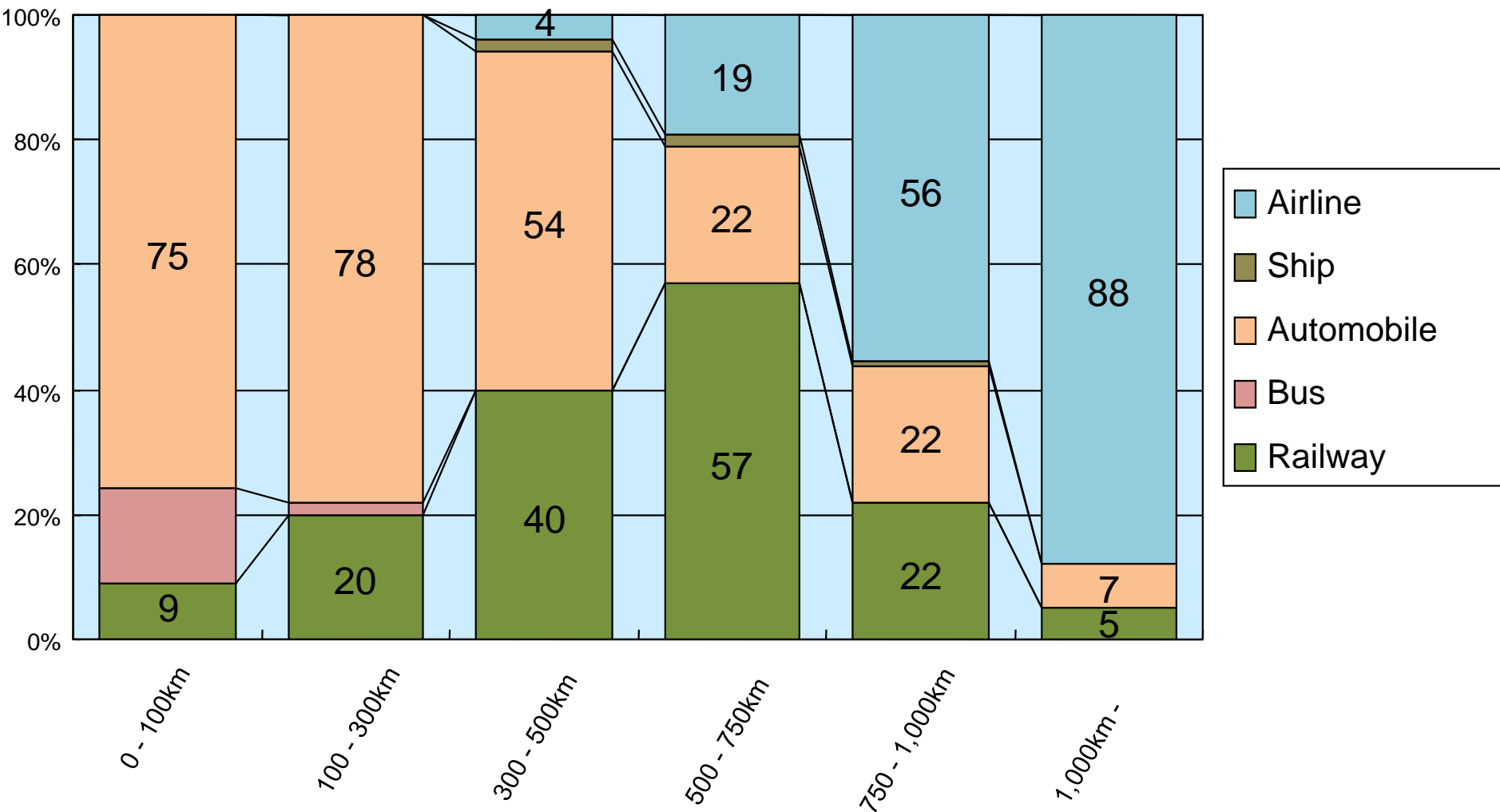


- The current market share trend is shown in the charts above. The market share of Shinkansen is shown vertically, while the travel time and distance are shown laterally.
- The market share is considered to have been affected mainly by the travel time and distance. No significant relation between the market share and other elements (frequency, access to airport and price) has been found.

5 Digitalization for customer satisfaction

	Domestic airline (Japan Airlines)	Shinkansen (East Japan Railway)
Self printing ticket	○	×
E-ticket	○	△ *Japanese feature cell phone with Near Field Communication provides a kind of this service
Time table information available on smartphone	○	○
Operation information available on smartphone	○	○
Wifi service	○ *Extra charge	△ *Only a few trainsets & Extra charge
Frequent shoppers program (mileage program)	○	×
Client identification marketing	○	×

6 Shares by transport modes



➤ Although significant quantitative change in the market shares has not been found yet, some qualitative turn might have been developing.

7 The way forward

A red-outlined circle connected to the text box by a thin red line.

Digitalization enables us not only to digitalize the information but also to convert it into new business added value.

A green-outlined circle connected to the text box by a thin green line.

Therefore, digitalization may make a big difference in customer satisfaction to affect the real market in passenger transport.

A purple-outlined circle connected to the text box by a thin purple line.

Effective utilization of the information had better be secured with an appropriate protection of sensitive information.

A teal-outlined circle connected to the text box by a thin teal line.

Entrepreneurial freedom is not only a prerequisite for digitalization but also the main benefit that digitalization will bring to the sector.

Thank you for your kind attention

Contact

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