

# JR East: International and Domestic Perspectives

## Peer Group Comparisons

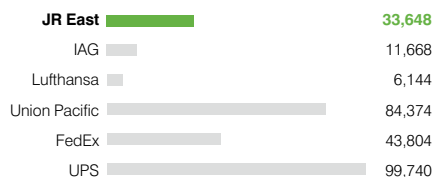
In this section, several key performance indicators illustrate how JR East compares with selected well-known companies.

In scale and profitability, JR East is not to be outdone by any of the world's renowned transportation companies. It is a benchmark among public utilities in Japan—including the power and telecommunications companies—of an overwhelming scale and earnings performance above all of the other domestic airline and private railway operators.

### INTERNATIONAL

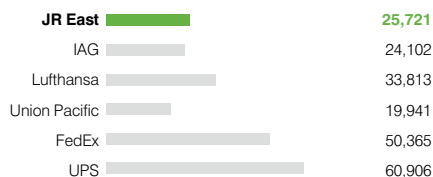
#### Total Stock Market Value\*1

Millions of U.S. Dollars



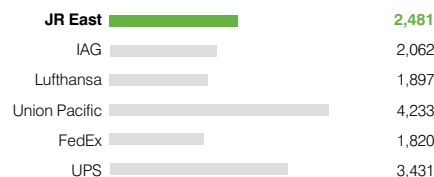
#### Operating Revenues

Millions of U.S. Dollars



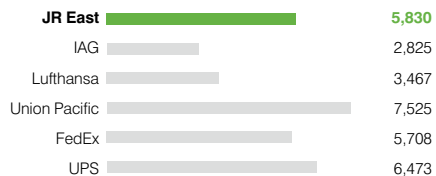
#### Profit Attributable to Owners of Parent

Millions of U.S. Dollars



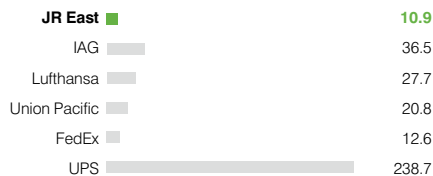
#### Cash Flows from Operating Activities

Millions of U.S. Dollars



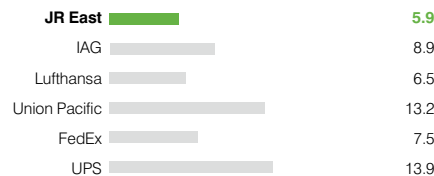
#### Return on Average Equity (ROE)\*2

%



#### Ratio of Operating Income to Average Assets (ROA)\*3

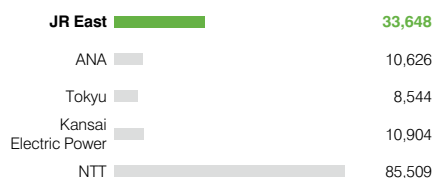
%



### DOMESTIC

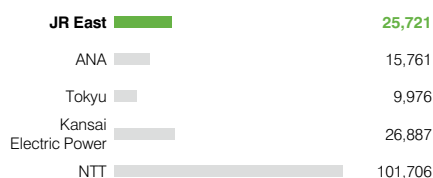
#### Total Stock Market Value\*1

Millions of U.S. Dollars



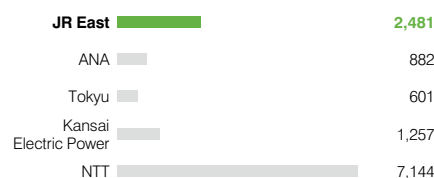
#### Operating Revenues

Millions of U.S. Dollars



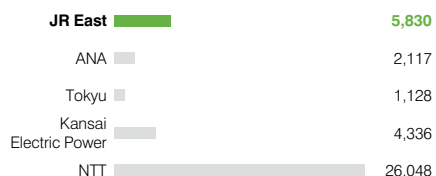
#### Profit Attributable to Owners of Parent

Millions of U.S. Dollars



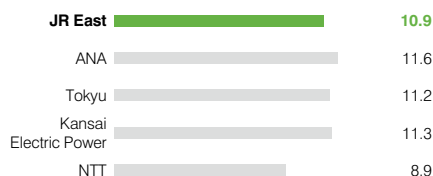
#### Cash Flows from Operating Activities

Millions of U.S. Dollars



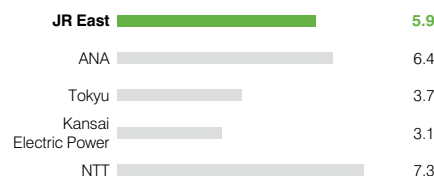
#### Return on Average Equity (ROE)\*2

%



#### Ratio of Operating Income to Average Assets (ROA)\*3

%



\*1 Data in these graphs has been computed from each company's share price and shares outstanding at the end of the previous fiscal year.

\*2 Average equity is the average of equity at the end of the previous and applicable fiscal years.

\*3 Average assets is the average of assets at the end of the previous and applicable fiscal years.

- In January 2011, British Airways and IBERIA underwent management integration to become IAG (International Airlines Group).  
 - Year ended March 31, 2017 (Year ended December 31, 2016, for IAG, Lufthansa, Union Pacific, and UPS and year ended May 31, 2016, for FedEx).

- ANA: ANA HOLDINGS INC.; Tokyu: Tokyu Corporation; NTT: Nippon Telegraph and Telephone Corporation

- Data in this section is based on consolidated figures from each company's annual report or financial press releases.

- The exchange rate used is the rate on March 31, 2017 (U.S.\$1=¥112, £1=\$1.25, and €1=\$1.07).

- Share prices at the close of the respective previous fiscal years and computed using the above exchange rates are \$86.55 for JR East, \$5.50 for IAG, \$13.10 for Lufthansa, \$103.68 for Union Pacific, \$164.97 for FedEx, \$114.64 for UPS, \$3.03 for ANA, \$7.04 for Tokyu, \$12.21 for Kansai Electric Power, and \$42.43 for NTT.

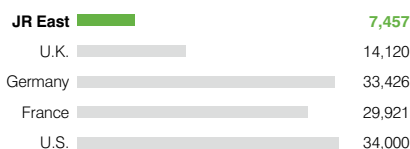
## International Railway Comparisons

Japan relies on railways for around 30% of its transportation needs, a ratio much higher than in most other countries. This high reliance on railways due to the size of the economy and geographic characteristics affords railway companies an extremely large source of demand, especially in urban areas. In addition to being Japan's top railway company, JR East is one of the largest railway companies in the world.

### TRANSPORTATION MARKET

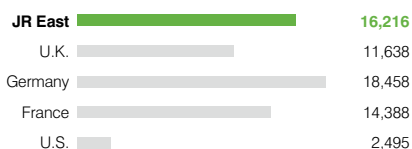
#### Railway Line Networks

Kilometers



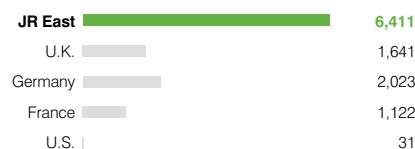
#### Revenues from Railway Operations

Millions of U.S. Dollars

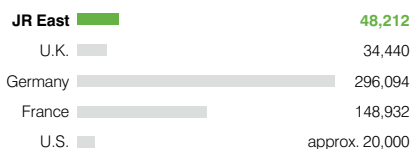


#### Number of Passengers

Millions

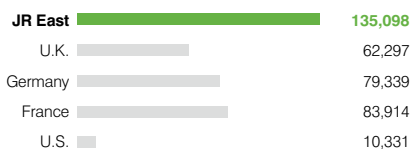


#### Number of Employees



#### Passenger Kilometers

Millions



- Figures are as of March 2017 for JR East, March 2015 for the U.K., December 2014 for France and Germany, and September 2016 for the U.S.

- U.K.: Association of Train Operating Companies (Railway tracks are owned by Network Rail Ltd.); Germany: Deutsche Bahn AG; France: Société Nationale des Chemins de fer Français (SNCF) (Railway tracks are owned by Réseau Ferré de France (RFF)); and U.S.: National Railroad Passenger Corporation (Amtrak).

- Revenues from railway operations do not include freight and other service revenues.

- Figures for JR East do not include Tokyo Monorail.

- The exchange rate used is U.S.\$1=¥112 as of March 2017 for JR East and €1=U.S.\$1.08 as of March 2015 for the others.

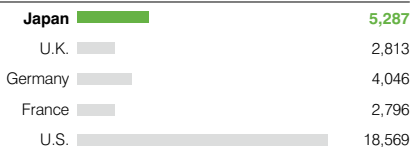
Source: International Railway Statistics 2015 and Amtrak National Facts.

### FUNDAMENTALS

#### Gross Domestic Product

Billions of U.S. Dollars

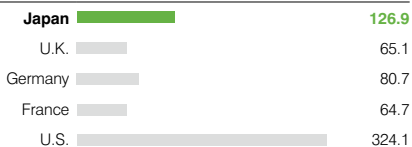
2016



#### Population

Millions

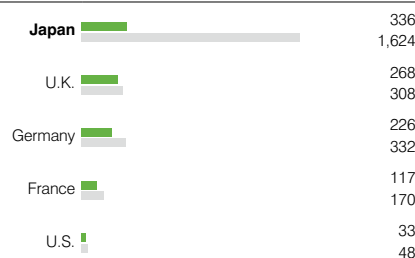
2016



#### Population Density

Per Square Kilometer

2016



- JR East calculated these figures by using the following data and definition of each country's habitable land area.

Population

Japan: Current Population Estimates, Ministry of Internal Affairs and Communications Statistics Bureau

Other countries: United Nations data

Habitable land area

Japan: Land White Paper, Ministry of Land, Infrastructure, Transport and Tourism. Total area minus forests and woodland, barren land, area under inland water bodies, and other

Other countries: Global Forest Resources Assessment 2016, FAO

■ Population per square kilometer of total national land area  
■ Population per square kilometer of habitable land area

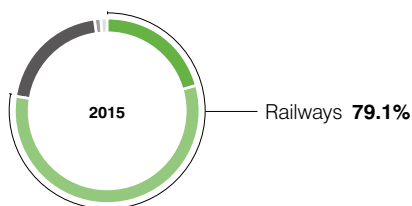
JR East: International and Domestic Perspectives

Railway Operations in Japan

In Japan, demand for railway transportation is significant due to geographical characteristics and the scale of railway networks. Reliance on railways is particularly high in cities.

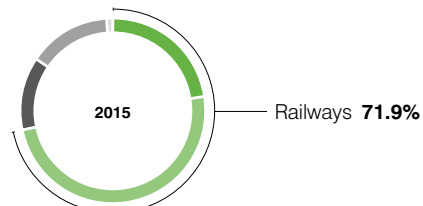
SHARE OF DOMESTIC TRANSPORTATION

Number of Passengers



| Years ended March 31 |                 | 2015     | 2015  |
|----------------------|-----------------|----------|-------|
|                      |                 | Millions | %     |
| Railways             | JR East         | 6,219    | 20.8  |
|                      | Other railways  | 17,381   | 58.3  |
|                      | Motor vehicles* | 6,057    | 20.3  |
|                      | Airlines        | 95       | 0.3   |
|                      | Ships           | 86       | 0.3   |
|                      | Total           | 29,838   | 100.0 |

Passenger Kilometers



| Years ended March 31 |                 | 2015     | 2015  |
|----------------------|-----------------|----------|-------|
|                      |                 | Millions | %     |
| Railways             | JR East         | 130,069  | 22.6  |
|                      | Other railways  | 283,901  | 49.3  |
|                      | Motor vehicles* | 72,579   | 12.6  |
|                      | Airlines        | 86,763   | 15.0  |
|                      | Ships           | 2,923    | 0.5   |
|                      | Total           | 576,235  | 100.0 |

As of March 31, 2015

\* "Motor vehicles" only includes commercial vehicles. It does not include private passenger cars and light cars.

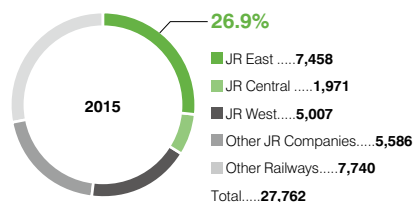
- Figures for Tokyo Monorail are not included in JR East.

Source: Summary of Transport Statistics, Ministry of Land, Infrastructure, Transport and Tourism

SHARE OF DOMESTIC RAILWAYS

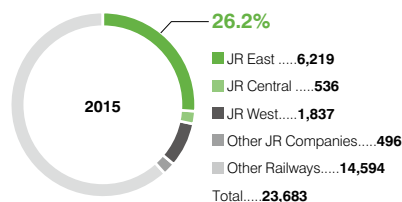
Passenger Line Network

Kilometers



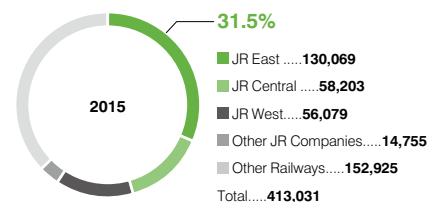
Number of Passengers

Millions



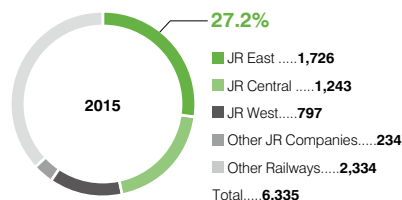
Passenger Kilometers

Millions



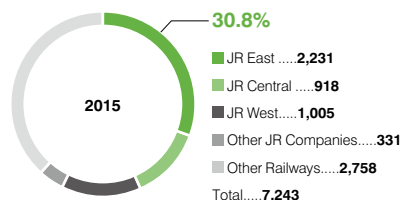
Revenues from Passenger Tickets

Billions of Yen



Rolling Stock Kilometers

Millions



As of March 31, 2015

- Figures for Passenger Line Network do not include freight traffic.

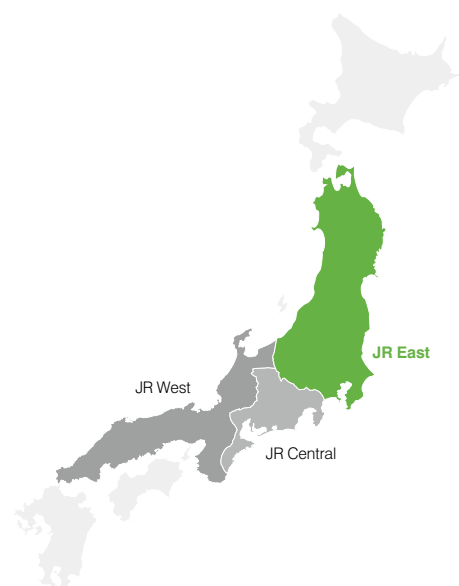
- Figures for Rolling Stock Kilometers do not include locomotives and freight cars.

- Figures for Tokyo Monorail are included in other railways.

Source: Statistics of Railways 2014, Ministry of Land, Infrastructure, Transport and Tourism

## Financial Overview of JR Passenger Railway Companies

JR East accounts for about 50% of the total operating revenues of the three largest JR passenger railway companies. JR East's immense and stable operating base contributes to large and consistent earnings and cash flows.



### Operating Revenues

Billions of Yen

| 2017       |         |
|------------|---------|
| JR East    | 2,880.8 |
| JR Central | 1,757.0 |
| JR West    | 1,441.4 |
| 2016       |         |
| JR East    | 2,867.2 |
| JR Central | 1,738.4 |
| JR West    | 1,451.3 |

| Years ended March 31 | Millions of Yen |           |
|----------------------|-----------------|-----------|
|                      | 2016            | 2017      |
| JR East              | 2,867,200       | 2,880,802 |
| JR Central           | 1,738,409       | 1,756,980 |
| JR West              | 1,451,300       | 1,441,411 |

### Profit Attributable to Owners of Parent

Billions of Yen

| 2017       |       |
|------------|-------|
| JR East    | 277.9 |
| JR Central | 392.9 |
| JR West    | 91.3  |
| 2016       |       |
| JR East    | 245.3 |
| JR Central | 337.4 |
| JR West    | 85.9  |

| Years ended March 31 | Millions of Yen |         |
|----------------------|-----------------|---------|
|                      | 2016            | 2017    |
| JR East              | 245,310         | 277,925 |
| JR Central           | 337,440         | 392,913 |
| JR West              | 85,868          | 91,288  |

### Free Cash Flows

Billions of Yen

| 2017       |          |
|------------|----------|
| JR East    | 95.4     |
| JR Central | -1,329.0 |
| JR West    | -61.7    |
| 2016       |          |
| JR East    | 173.5    |
| JR Central | 431.2    |
| JR West    | 26.7     |

| Years ended March 31 | Millions of Yen |             |
|----------------------|-----------------|-------------|
|                      | 2016            | 2017        |
| JR East              | 173,534         | 95,368      |
| JR Central           | 431,190         | (1,328,982) |
| JR West              | 26,661          | (61,664)    |

### Return on Average Equity (ROE)

%

| 2017       |      |
|------------|------|
| JR East    | 10.9 |
| JR Central | 15.7 |
| JR West    | 10.0 |
| 2016       |      |
| JR East    | 10.4 |
| JR Central | 15.6 |
| JR West    | 10.2 |

| Years ended March 31 | %    |      |
|----------------------|------|------|
|                      | 2016 | 2017 |
| JR East              | 10.4 | 10.9 |
| JR Central           | 15.6 | 15.7 |
| JR West              | 10.2 | 10.0 |

### Ratio of Operating Income to Average Assets (ROA)

%

| 2017       |      |
|------------|------|
| JR East    | 5.9  |
| JR Central | 10.1 |
| JR West    | 6.0  |
| 2016       |      |
| JR East    | 6.3  |
| JR Central | 11.0 |
| JR West    | 6.4  |

| Years ended March 31 | %    |      |
|----------------------|------|------|
|                      | 2016 | 2017 |
| JR East              | 6.3  | 5.9  |
| JR Central           | 11.0 | 10.1 |
| JR West              | 6.4  | 6.0  |

### Equity Ratio

%

| 2017       |      |
|------------|------|
| JR East    | 33.5 |
| JR Central | 38.2 |
| JR West    | 31.3 |
| 2016       |      |
| JR East    | 31.4 |
| JR Central | 44.0 |
| JR West    | 30.9 |

| Years ended March 31 | %    |      |
|----------------------|------|------|
|                      | 2016 | 2017 |
| JR East              | 31.4 | 33.5 |
| JR Central           | 44.0 | 38.2 |
| JR West              | 30.9 | 31.3 |

- Data in this section has been calculated by JR East based on figures in JR Central's and JR West's financial press releases.

JR East: International and Domestic Perspectives

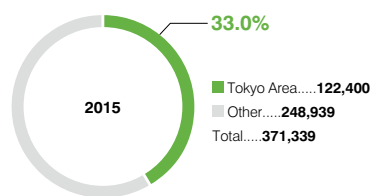
Railway Operations in Tokyo

The Tokyo metropolitan area accounts for roughly 30% of the population and economic base in Japan and has a population density far higher than any other region in the country. JR East alone provides nearly half of the huge volume of railway transportation in the Tokyo metropolitan area, where railways account for roughly 50% of all transportation.

FUNDAMENTALS

Net Domestic Product

Billions of Yen

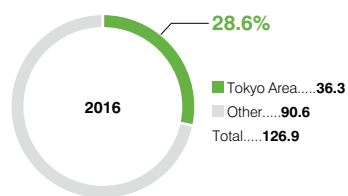


Year ended March 31, 2015

Source: Annual Report on Prefectural Economies, Cabinet Office

Population

Millions



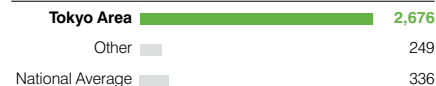
As of October 1, 2016

Source: Current Population Estimates and Census, Ministry of Internal Affairs and Communications

Population Density

Per Square Kilometer

2016



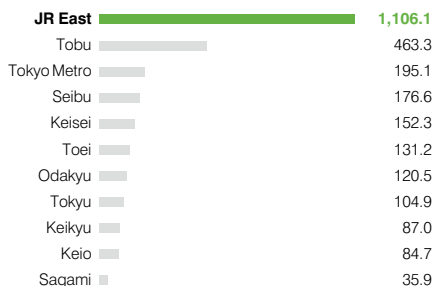
As of October 1, 2016

- JR East calculated these figures by using data from the following sources: Current Population Estimates and Census, Ministry of Internal Affairs and Communications, and statistics from the Geographical Survey Institute.

- The statistics on this page are based on governmental boundaries and do not strictly correspond with JR East's operating area segments.

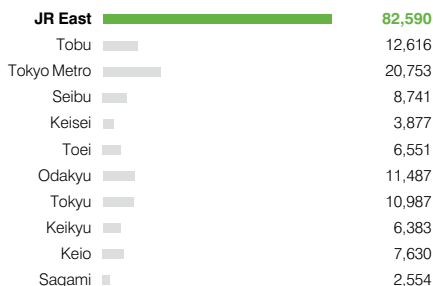
Passenger Line Networks

Kilometers



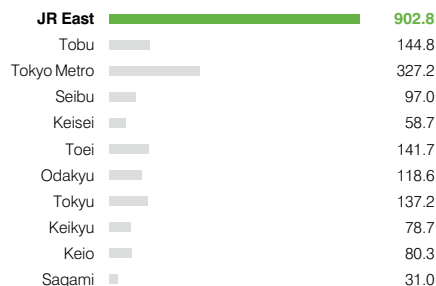
Passenger Kilometers

Millions



Revenues from Passenger Tickets

Billions of Yen



|                                      | Passenger Line Networks*1 |              | Passenger Kilometers*2 |              | Revenues from Passenger Tickets*2 |              |
|--------------------------------------|---------------------------|--------------|------------------------|--------------|-----------------------------------|--------------|
|                                      | km                        | %            | Millions               | %            | Billions of Yen                   | %            |
| <b>JR East</b>                       | <b>1,106.1</b>            | <b>41.6</b>  | <b>82,590</b>          | <b>47.4</b>  | <b>902.8</b>                      | <b>42.6</b>  |
| Tobu Railway                         | 463.3                     | 17.4         | 12,616                 | 7.2          | 144.8                             | 6.8          |
| Tokyo Metro                          | 195.1                     | 7.3          | 20,753                 | 11.9         | 327.2                             | 15.4         |
| Seibu Railway                        | 176.6                     | 6.7          | 8,741                  | 5.0          | 97.0                              | 4.6          |
| Keisei Electric Railway              | 152.3                     | 5.7          | 3,877                  | 2.2          | 58.7                              | 2.8          |
| Toei (Tokyo Metropolitan Government) | 131.2                     | 4.9          | 6,551                  | 3.8          | 141.7                             | 6.7          |
| Odakyu Electric Railway              | 120.5                     | 4.5          | 11,487                 | 6.6          | 118.6                             | 5.6          |
| Tokyu Corporation                    | 104.9                     | 4.0          | 10,987                 | 6.3          | 137.2                             | 6.5          |
| Keikyuu Corporation                  | 87.0                      | 3.3          | 6,383                  | 3.7          | 78.7                              | 3.7          |
| Keio Electric Railway                | 84.7                      | 3.2          | 7,630                  | 4.4          | 80.3                              | 3.8          |
| Sagami Railway                       | 35.9                      | 1.4          | 2,554                  | 1.5          | 31.0                              | 1.5          |
| <b>Total</b>                         | <b>2,657.6</b>            | <b>100.0</b> | <b>174,169</b>         | <b>100.0</b> | <b>2,117.9</b>                    | <b>100.0</b> |

\*1 As of March 31, 2016.

\*2 For the year ended March 31, 2016.

- Figures do not include freight lines.  
- Data used for JR East is that of the Tokyo Metropolitan Area Network and does not include Tokyo Monorail.

Sources:

- Toei (Tokyo Metropolitan Government): Figures are from the website of the Transportation Bureau of the Tokyo Metropolitan Government. Passenger kilometers are from Statistics of Railways 2016, Ministry of Land, Infrastructure, Transport and Tourism.

- Other: Website of the Association of Japanese Private Railways. Revenues from passenger tickets are based on figures from the financial press releases of each company.

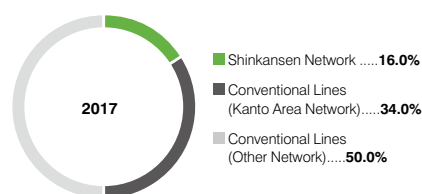
## Analysis of JR East's Railway Operations

The fact that two-thirds of its transportation revenues come from Tokyo and the Kanto region, where most of the population and economic base in Japan resides, shows the solidness of JR East's management platform.

As another strength, the Company is largely immune to economic fluctuations, as commuter passes account for over a fourth of transportation revenues overall, and 40% of those revenues are from the Kanto region.

### COMPOSITION BY OPERATING AREA

#### Passenger Line Network



|   | Passenger Line Network* |       |
|---|-------------------------|-------|
|   | km                      | %     |
| Shinkansen Network                      | 1,194.2                 | 16.0  |
| Conventional Lines (Kanto Area Network) | 2,535.9                 | 34.0  |
| Conventional Lines (Other Network)      | 3,727.2                 | 50.0  |
| Total                                   | 7,457.3                 | 100.0 |

#### Passenger Kilometers\*

|                    |                 | Millions |                | %     |
|--------------------|-----------------|----------|----------------|-------|
|                    |                 | 2016     | 2017           |       |
| Shinkansen Network | Commuter Passes | 1,740    | <b>1,754</b>   | 100.8 |
|                    | Other           | 21,108   | <b>21,422</b>  | 101.5 |
|                    | Total           | 22,848   | <b>23,176</b>  | 101.4 |
| Conventional Lines | Total           | 72,992   | <b>73,276</b>  | 100.4 |
|                    | Other           | 38,587   | <b>38,644</b>  | 100.1 |
|                    | Total           | 111,579  | <b>111,921</b> | 100.3 |
| Kanto Area Network | Commuter Passes | 69,908   | <b>70,202</b>  | 100.4 |
|                    | Other           | 35,966   | <b>36,113</b>  | 100.4 |
|                    | Total           | 105,875  | <b>106,315</b> | 100.4 |
| Other Network      | Commuter Passes | 3,083    | <b>3,074</b>   | 99.7  |
|                    | Other           | 2,621    | <b>2,530</b>   | 96.5  |
|                    | Total           | 5,704    | <b>5,605</b>   | 98.3  |
| Total              | Commuter Passes | 74,732   | <b>75,031</b>  | 100.4 |
|                    | Other           | 59,695   | <b>60,066</b>  | 100.6 |
|                    | Total           | 134,428  | <b>135,098</b> | 100.5 |

#### Revenues from Passenger Tickets\*

|                    |                 | Millions of Yen |                  | %     |
|--------------------|-----------------|-----------------|------------------|-------|
|                    |                 | 2016            | 2017             |       |
| Shinkansen Network | Commuter Passes | 23,616          | <b>23,878</b>    | 101.1 |
|                    | Other           | 554,596         | <b>560,507</b>   | 101.1 |
|                    | Total           | 578,213         | <b>584,385</b>   | 101.1 |
| Conventional Lines | Total           | 470,822         | <b>474,529</b>   | 100.8 |
|                    | Other           | 755,896         | <b>757,293</b>   | 100.2 |
|                    | Total           | 1,226,719       | <b>1,231,823</b> | 100.4 |
| Kanto Area Network | Commuter Passes | 452,336         | <b>456,052</b>   | 100.8 |
|                    | Other           | 703,850         | <b>707,001</b>   | 100.4 |
|                    | Total           | 1,156,186       | <b>1,163,053</b> | 100.6 |
| Other Network      | Commuter Passes | 18,486          | <b>18,477</b>    | 100.0 |
|                    | Other           | 52,046          | <b>50,292</b>    | 96.6  |
|                    | Total           | 70,533          | <b>68,769</b>    | 97.5  |
| Total              | Commuter Passes | 494,439         | <b>498,408</b>   | 100.8 |
|                    | Other           | 1,310,493       | <b>1,317,800</b> | 100.6 |
|                    | Total           | 1,804,932       | <b>1,816,209</b> | 100.6 |

\* Year ended March 31, 2017

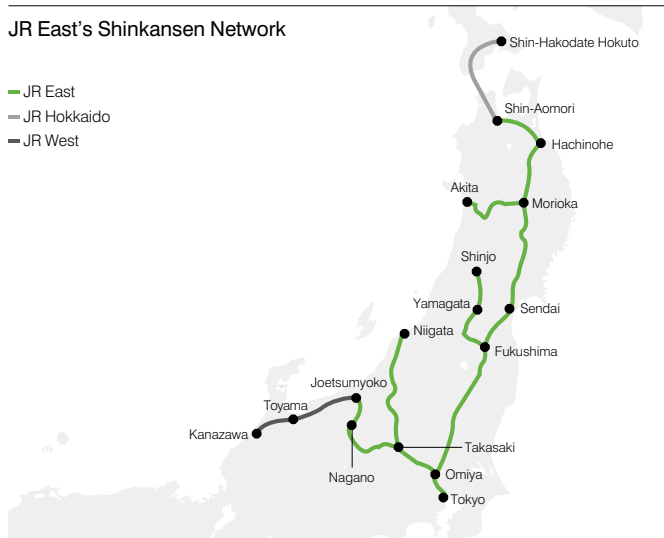
- Percentages represent revenues from passenger tickets attributable to commuter passes for each segment.
- Revenues from the conventional line segments of hybrid Shinkansen services are credited to Conventional Lines (Other Network).
- Passenger kilometers and revenues from the conventional line segments of hybrid Shinkansen services are credited to Conventional Lines (Other Network).
- Figures do not include Tokyo Monorail.
- The Kanto Area Network encompasses the area encompassed under the previous classification of the Tokyo Metropolitan Area Network (Tokyo Branch Office, Yokohama Branch Office, Hachioji Branch Office, and Omiya Branch Office) and the areas covered by Takasaki Branch Office, Mito Branch Office, and Chiba Branch Office.

JR East: International and Domestic Perspectives

Other Data

JR East owns many stations with high potential that are used by numerous customers. JR East is carrying out its life-style service business utilizing these stations to enhance customer convenience and comfort and to raise profitability.

JR East's Shinkansen Network



Competition with Airlines

|          | Distance from Tokyo<br>km | Time Required | JR Share<br>% |
|----------|---------------------------|---------------|---------------|
| Aomori   | 713.7                     | 2:59          | 79            |
| Akita    | 662.6                     | 3:37          | 60            |
| Morioka  | 535.3                     | 2:10          | 100           |
| Sendai   | 351.8                     | 1:30          | 100           |
| Yamagata | 359.9                     | 2:26          | 97            |
| Niigata  | 333.9                     | 1:37          | 100           |
| Kanazawa | 450.5                     | 2:28          | 75            |

Note: Data shown here is as of March 31, 2017 (except JR share on Tokyo-Hakodate Line as of March 31, 2016). Information concerning required time is according to the JR Time Table, June 2017 issue. Market shares of trains and flights are calculated based on the number of flight departures and arrivals at Haneda Airport. Approximate time required for trains is indicated using the maximum speed of a regularly-operated train from Tokyo.

Number of Busy Stations

| 2017           | Stations  |
|----------------|-----------|
| <b>JR East</b> | <b>97</b> |
| JR Central     | 5         |
| JR West        | 14        |
| Tokyu          | 19        |

|                | More than 200,000 passengers per day | More than 100,000 passengers per day |
|----------------|--------------------------------------|--------------------------------------|
| <b>JR East</b> | <b>41</b>                            | <b>97</b>                            |
| JR Central     | 1                                    | 5                                    |
| JR West        | 5                                    | 14                                   |
| Tokyu          | 5                                    | 19                                   |

Notes:  
 - Tokyu = Tokyu Corporation  
 - Year ended March 31, 2016, for JR Central and JR West, year ended March 31, 2017, for JR East and Tokyu.  
 - Data is based on figures from JR Central, JR West, and Tokyu.  
 - The number of station users at stations of JR East, JR Central, and JR West represents twice the number of passengers embarking.

Comparison of Major Department Stores, Retail Sales, and Convenience Stores

Billions of Yen

| Operating Revenues | Billions of Yen |
|--------------------|-----------------|
| <b>JR East</b>     | <b>400.0</b>    |
| Takashimaya        | 797.3           |
| 7-Eleven Japan     | 4,515.6         |
| Tokyu              | 675.2           |
| JR West            | 233.9           |

Millions of Yen

|                |                |
|----------------|----------------|
| <b>JR East</b> | <b>399,678</b> |
| Takashimaya    | 797,253        |
| 7-Eleven Japan | 4,515,605      |
| Tokyu          | 675,180        |
| JR West        | 233,908        |

Notes:  
 - Takashimaya = Takashimaya Company, Limited;  
 7-Eleven Japan = Seven-Eleven Japan Co., Ltd.;  
 Tokyu = Tokyu Corporation  
 - Year ended March 31, 2017 (year ended February 28, 2017, for Takashimaya and 7-Eleven Japan)  
 - Data is based on figures from the financial press releases of each company.  
 - The following figures are used as operating revenues:  
 JR East: Station space utilization, segment revenues from outside customers; Takashimaya: Department store business, segment revenues from outside customers; 7-Eleven Japan: Total store sales (nonconsolidated); Tokyu: Retail operating revenues; and JR West: Sales of goods and food services business, segment revenues from third parties.

Comparison of Real Estate Leasing to Retailers and Other Tenants

Billions of Yen

| Operating Revenues | Billions of Yen |
|--------------------|-----------------|
| <b>JR East</b>     | <b>267.6</b>    |
| Mitsui             | 519.9           |
| Tokyu              | 131.9           |
| JR West            | 109.6           |

Millions of Yen

|                |                |
|----------------|----------------|
| <b>JR East</b> | <b>267,638</b> |
| Mitsui         | 519,938        |
| Tokyu          | 131,949        |
| JR West        | 109,590        |

Notes:  
 - Mitsui = Mitsui Fudosan Co., Ltd.  
 Tokyu = Tokyu Corporation  
 - Year ended March 31, 2017  
 - Data is based on figures from the financial press releases of each company.  
 - The following figures are used as operating revenues:  
 JR East: Shopping centers & office buildings, segment revenues from outside customers  
 Mitsui: Office buildings and commercial facilities revenues in leasing segment, outside customers  
 Tokyu: Real estate business, segment revenues from outside customers  
 JR West: Real estate business, segment revenues from third parties