

Series E235 Rolling Stock New EMU commuter train in Tokyo area



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Rolling Stock Technology Center, Transport and Rolling Stock DEPT,
East Japan Railway Company

Keisuke Mizutani

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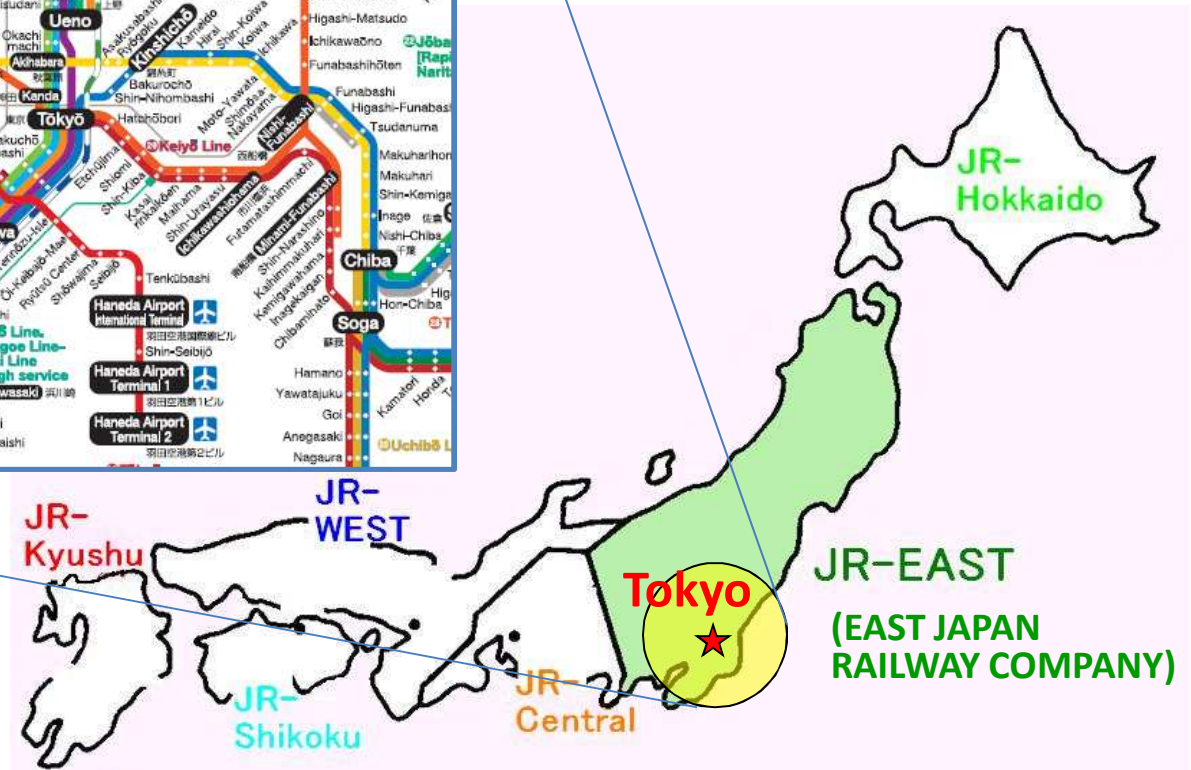
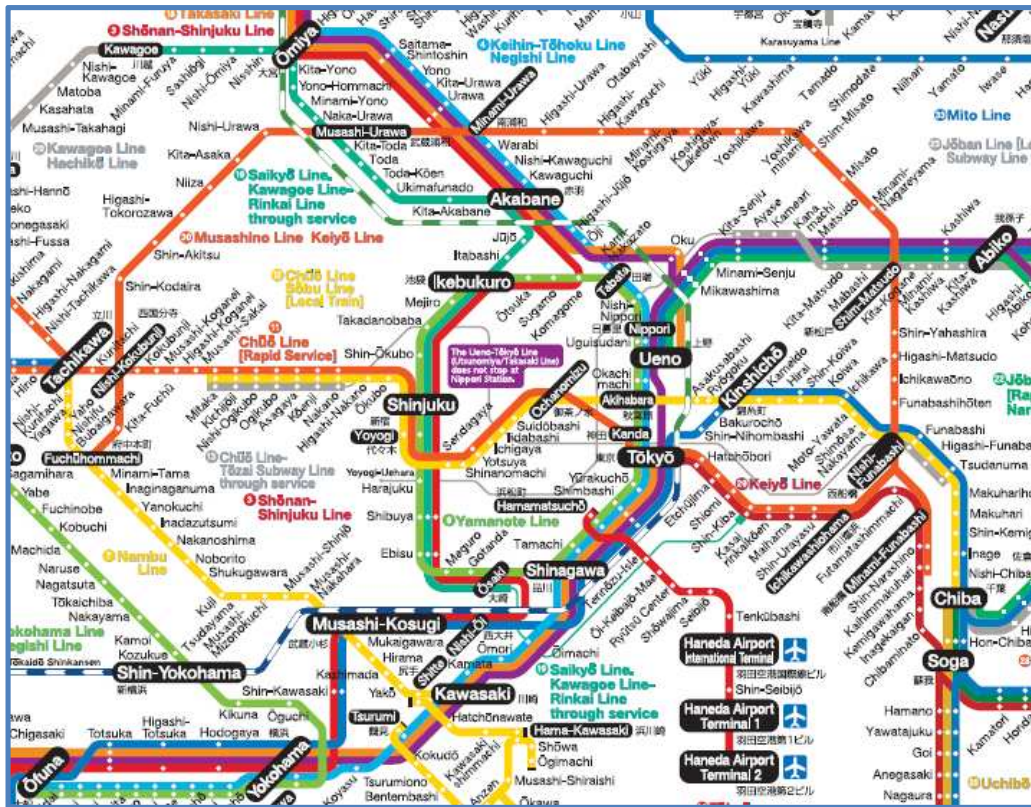
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Background

Introduction of JR-EAST

Series E235

Tokyo Metropolitan Area



Rolling Stock at JR East

Series E235



Shinkansen line

Electric cars: 1,335

Conventional line

Electric cars: 10,705

Diesel cars: 527

Passenger cars: 125

Locomotives: 94

Freight cars: 324

Total : 13,130



Rolling Stock for Commuter Trains Series E235

Each line is identified by its own color.

Yamanote Line

34.5km

51 train sets (561 cars)



Soubu Line

60.2km

59 train sets (590 cars)



Keihin-touhoku Line

81.2km

83 train sets (830 cars)



40-50 years ago



What is the “Yamanote-Line”?

Series E235

Yamanote-line is situated in central Tokyo and one of the most important passenger rail service in Japan. Number of passenger is more than 3 million per day.



Shinjuku

Yamanote-line	Data
Length	34.5 km
Number of stations	29 stations
Electrification	1,500 V DC overhead catenary
Train interval time	2 min 20 sec
Passenger number	3 million /day
Rolling stock	11 cars × 51 sets

Akihabara (Akiba)

Tokyo central station



History of the Yamanote line

Series E235

- The predecessor of Yamanote Line was opened in 1885



- The loop completed in 1925



**Series 103
(Steel)**



1970~1988



**Series 205
(Stainless)**



1985~2005



Series E231 (Stainless)



2002~

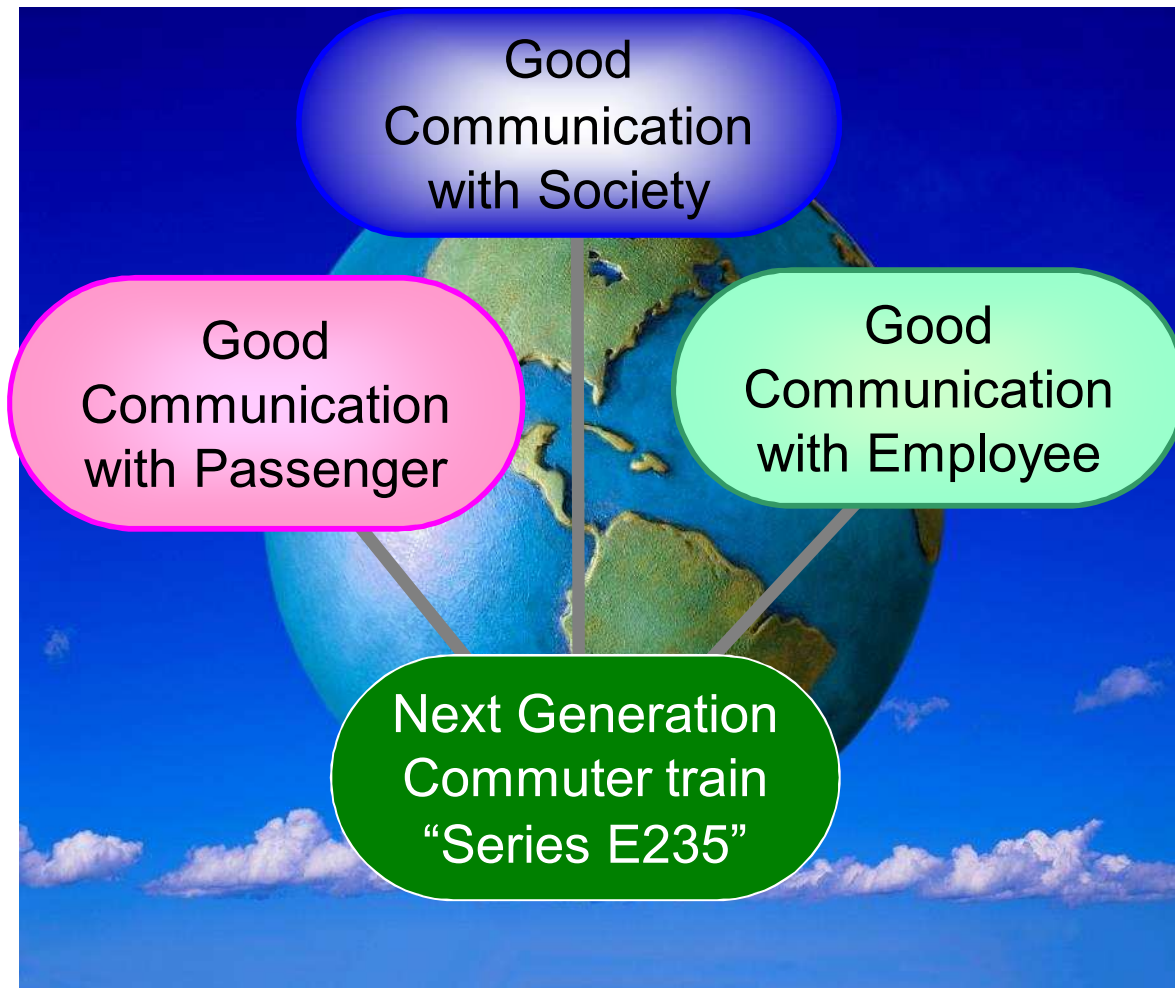


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Concept image for Series E235

■ Concept image for “Series E235” Series E235

Good Communication with “The Human”
~ “Passengers”, “Employee”, and “Society” ~



■ New Generation Commuter Train Series E235

Series E235 for Yamanote Line



■ What is the “E235”?

“Series E235” is the new generation commuter train
“Series E235” is developed as the main fleet with latest technology by JR East

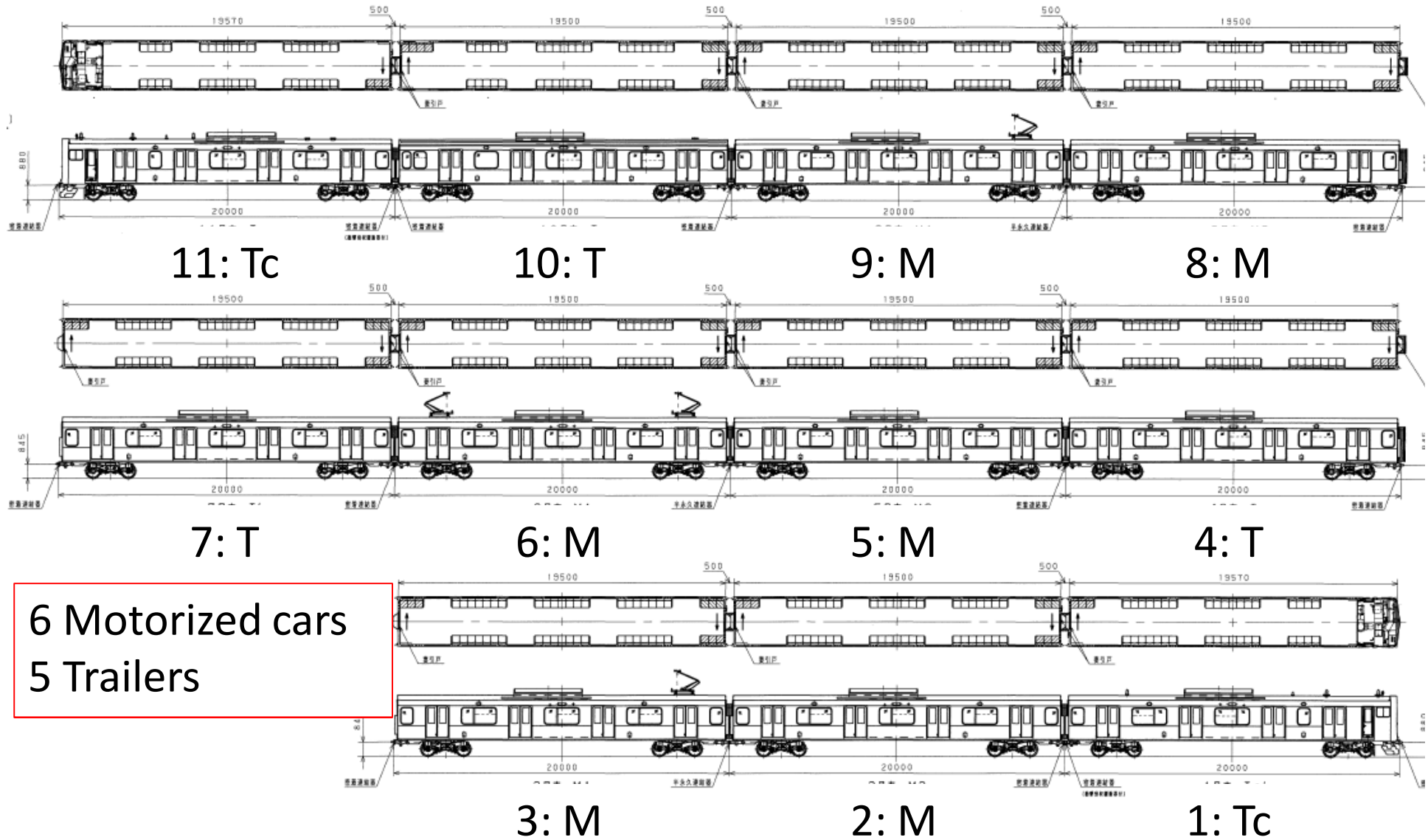


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Trainset Formation

Trainset Formation

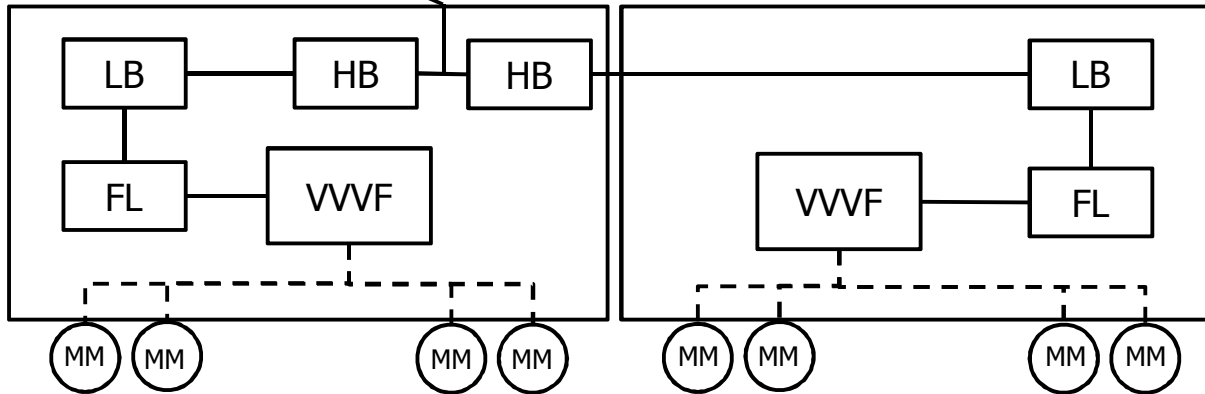
Series E235



Main circuit system

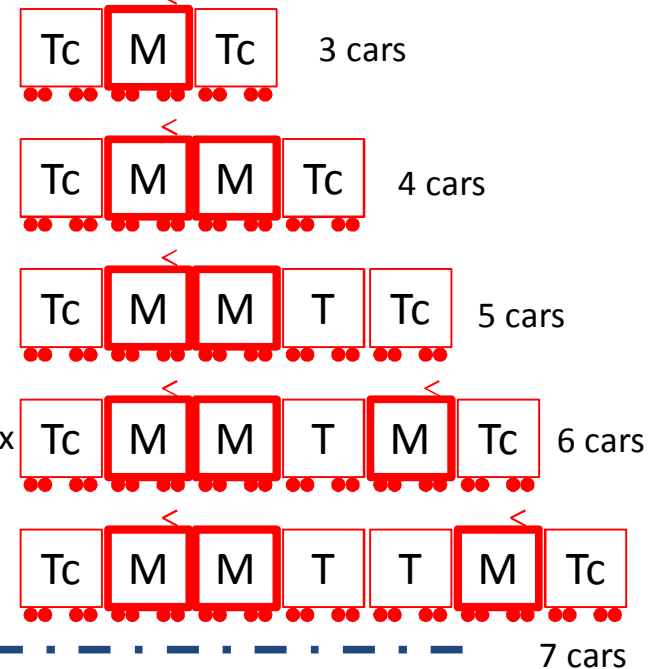
Series E235

Series E235系



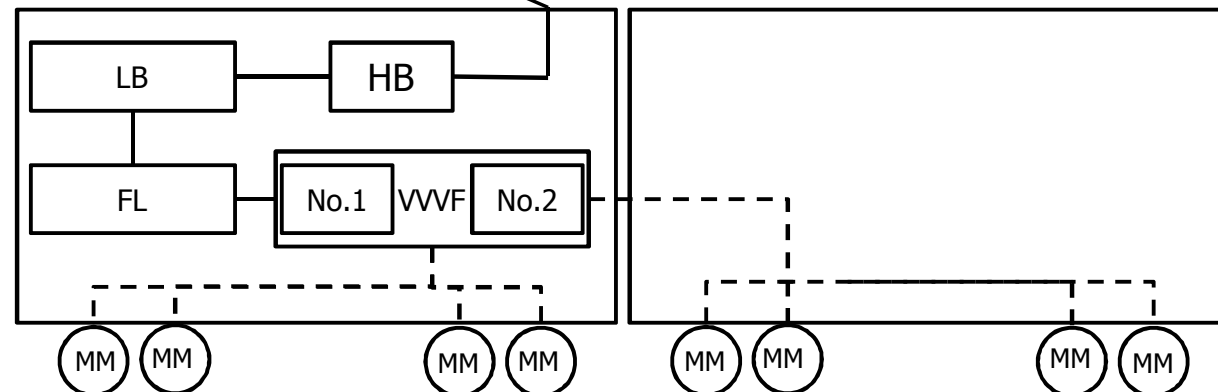
※VVVF and LB are in a integrated box

(e.g.) Trainsets variation



Independent motor car system enables optimal structural configuration for other line.

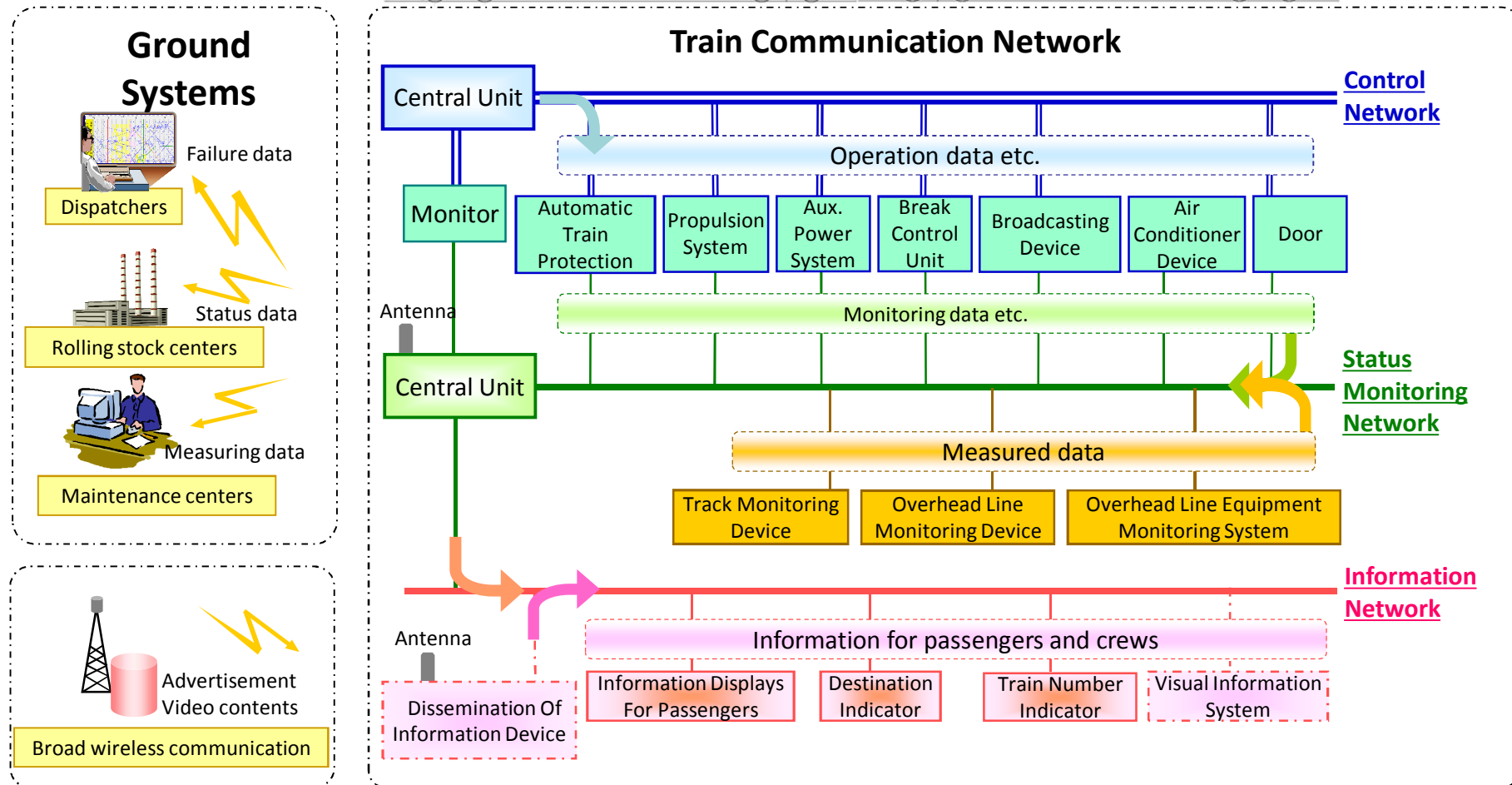
Configuration of a conventional car

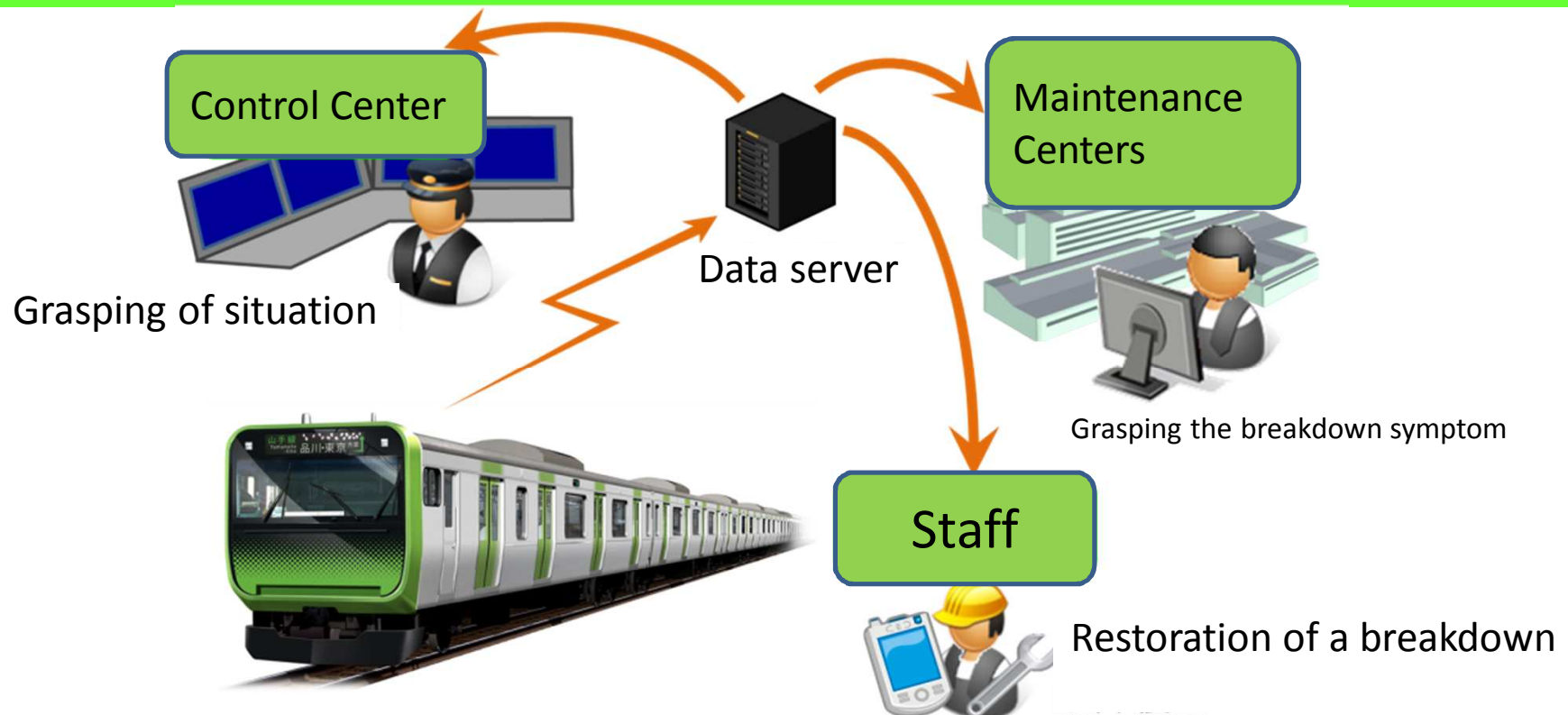


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INTEROS

INtegrated Train communication networks for Evolvable Railway Operation System



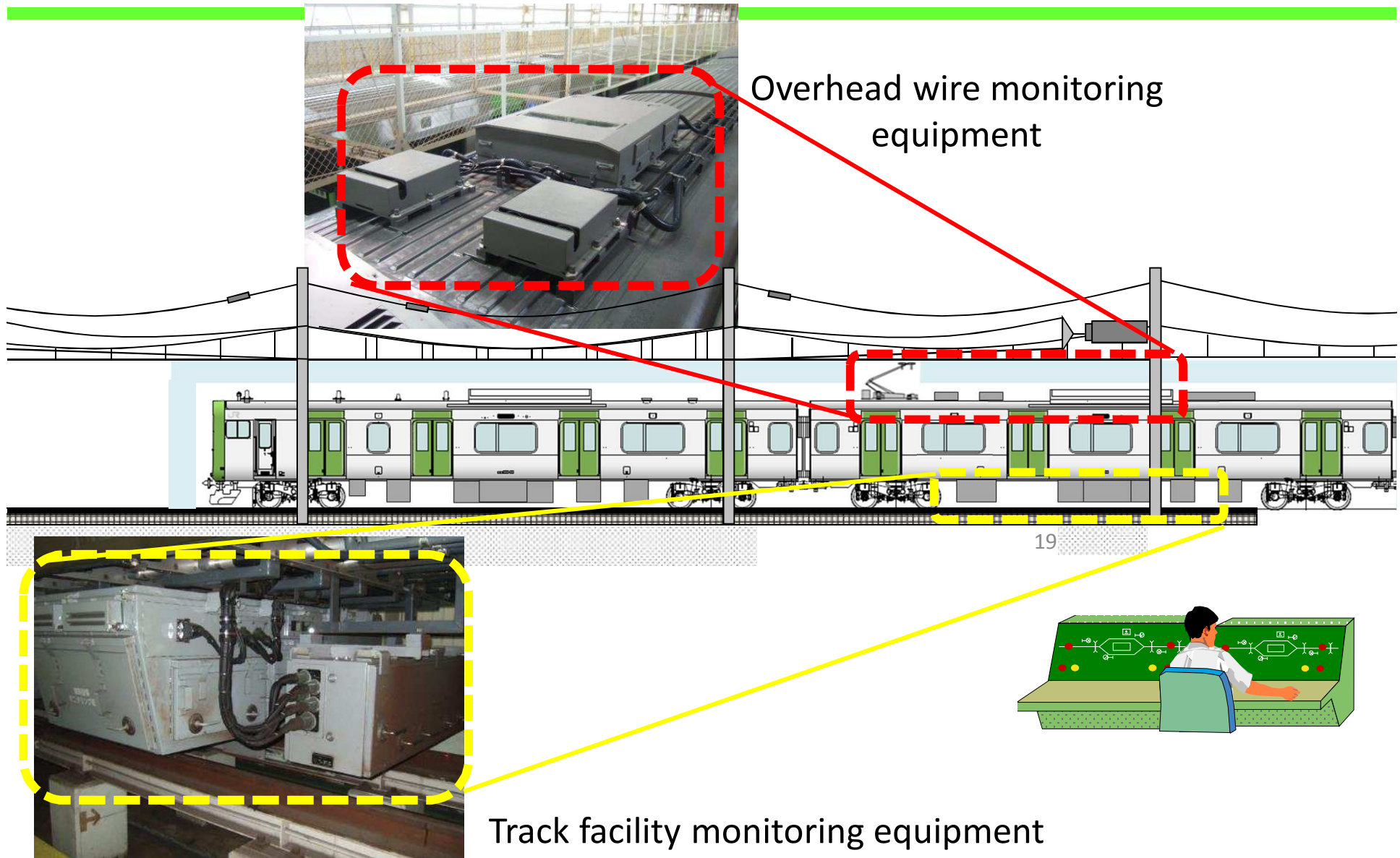


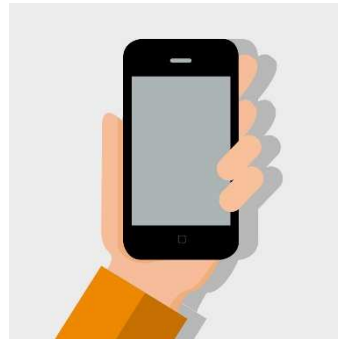
We enable the following things by the data analysis of apparatus which has been always sent from the train.

- Grasping the breakdown symptom
- Grasping the tendency to deterioration
- Grasping the timing to change it
- Speedup for corresponding to a breakdown

Monitoring Maintenance

Series E235





You are here!



Ceiling



Traveling point



Congestion level and room temperature



Platform map



Beacon equipment (for Train Net)

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Exterior and interior

Good Communication with “The Human”

Keyword The train which communicates with Customers and Society

「Window of information for connecting people to people ,people to society」



Large display front window



JR-EAST

Color only for doors



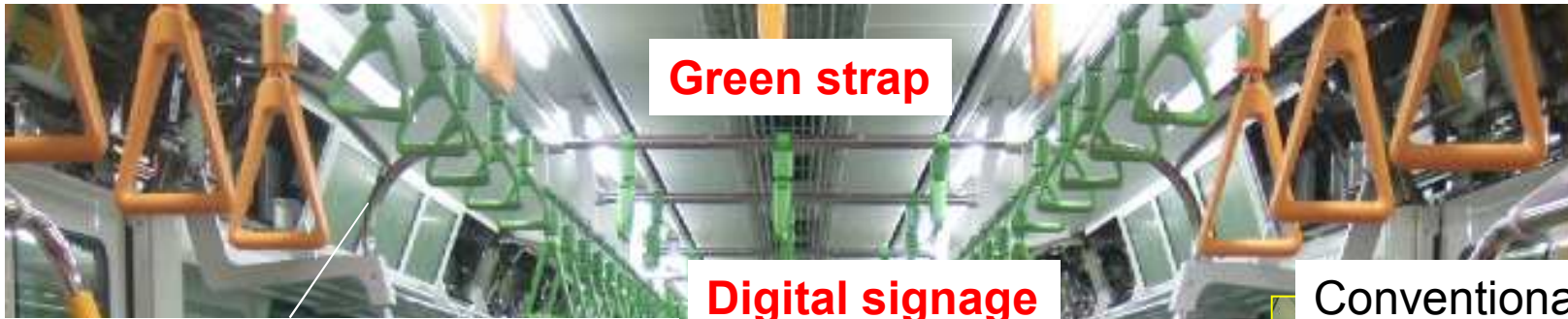
Originality



Exterior

Series E235



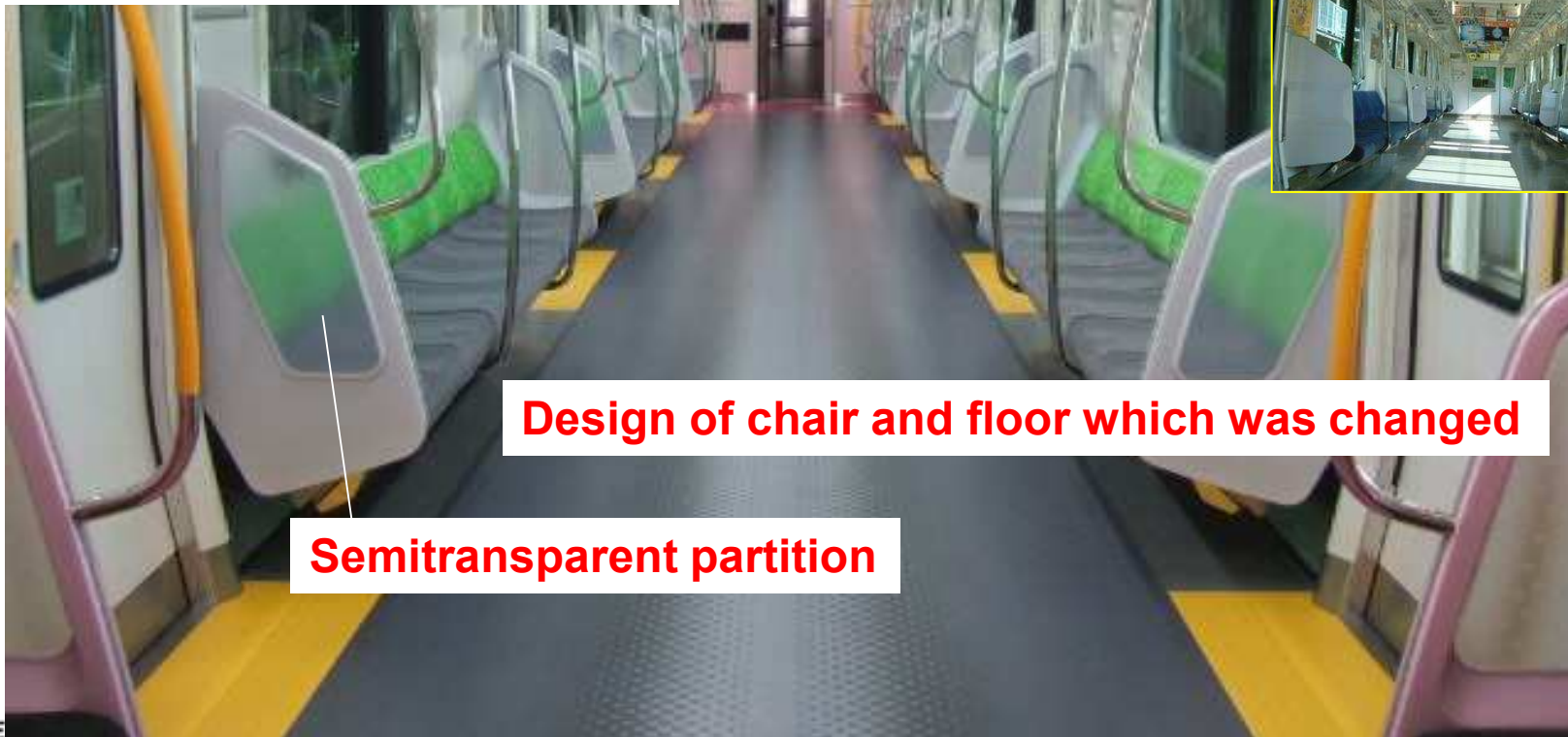


Green strap

Digital signage

**Strap rod bracket and hand hold
Which were connected**

Conventional car



Design of chair and floor which was changed

Semitransparent partition



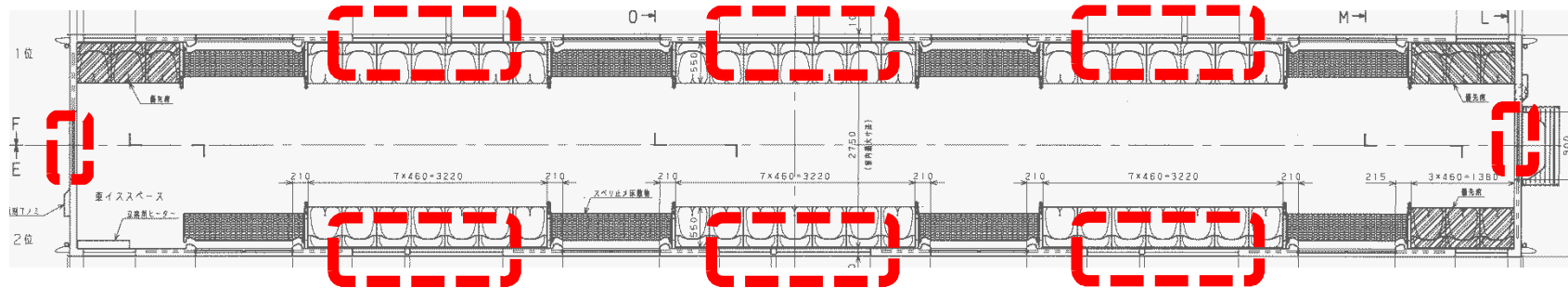
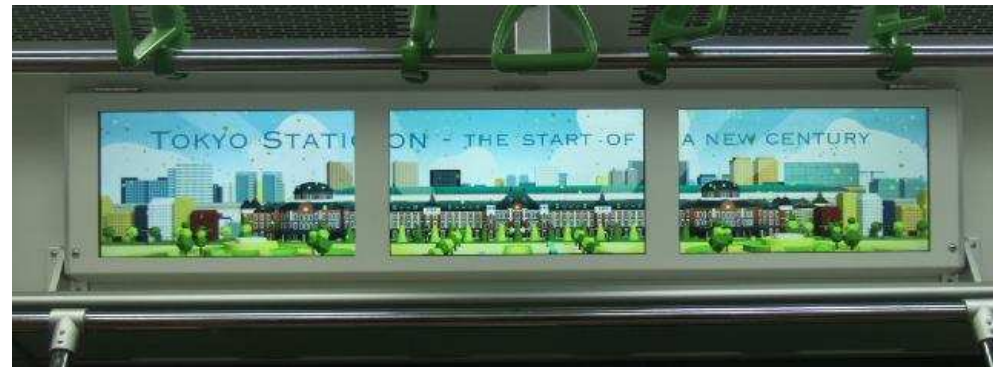
Uniformity by using the checkered pattern

Digital Signage

Series E235



It's possible to use like 1 screen which continued



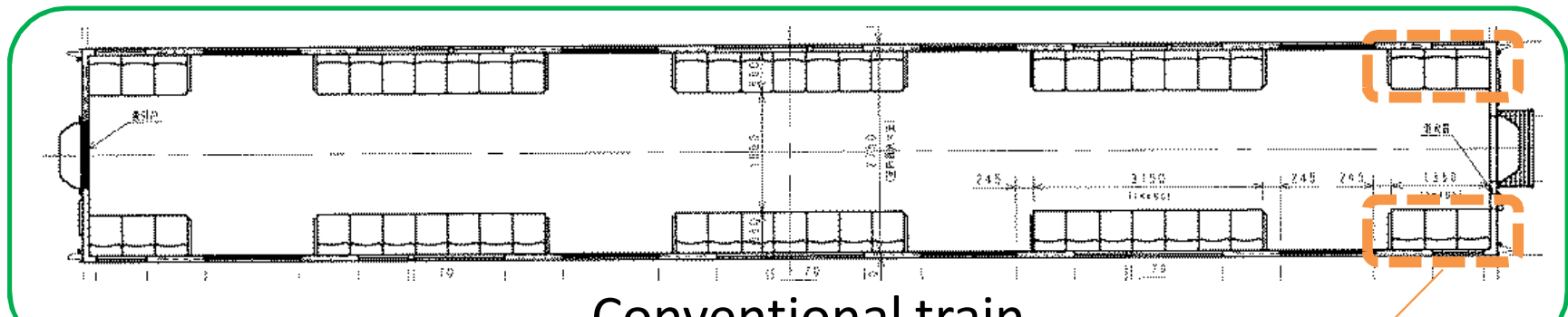
Plan view of the train

Additional 20 displays in the window upper part

Open area

Series E235

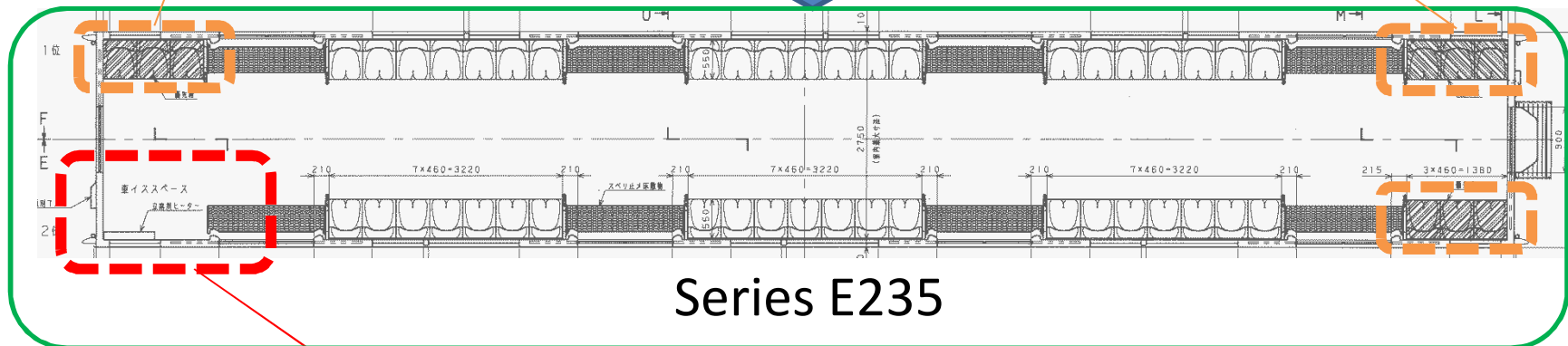
Open area for wheel chair and baby stroller to all train



Conventional train

Priority Seat

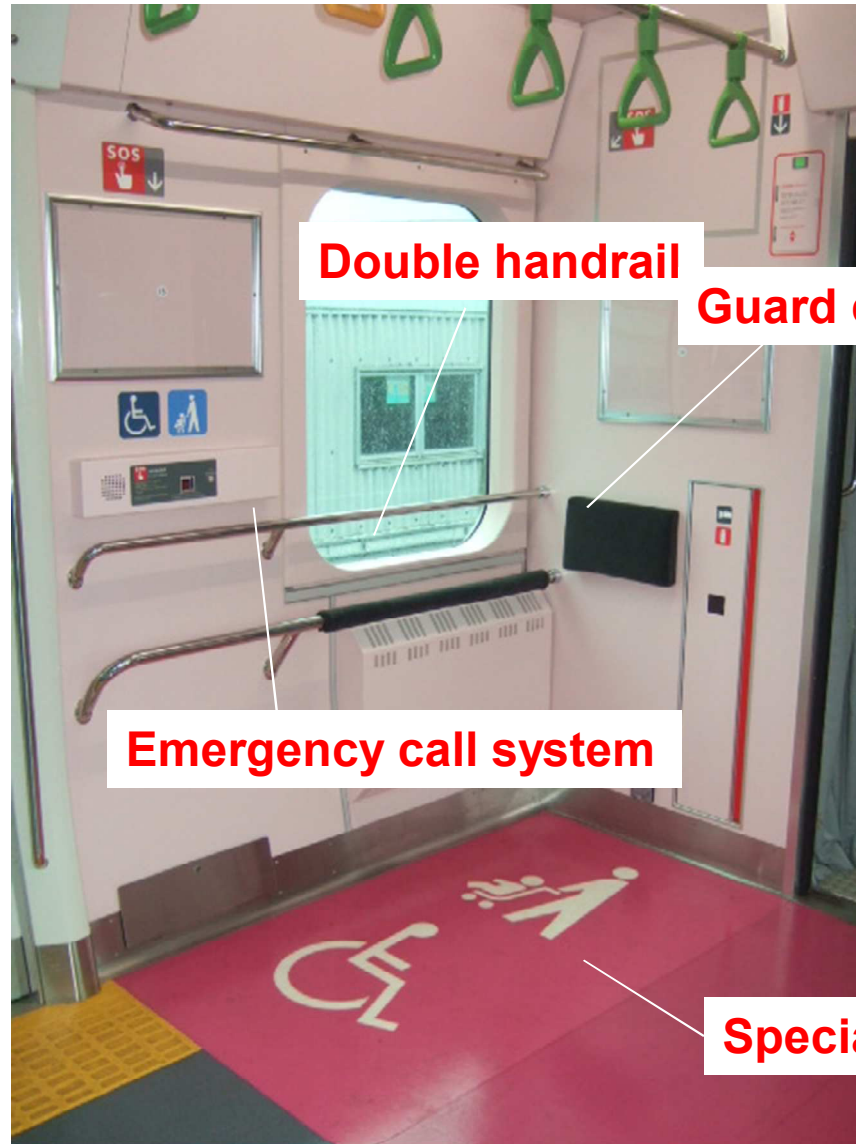
Priority Seat



Series E235

Open area (for wheelchair & baby stroller etc.)

❌ No seat area



Double handrail

Guard cushion

Emergency call system

Special floor color

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Future Effort

- Commercial operation starting, March 7th, 2016
- Starting to put in Production trains, around 2018
- End of putting in Production trains, around 2020
- Series E235 will be put in other railways, after 2020



2020 TOKYO