What is claimed is:

1. A railroad car condition monitoring/analyzing device configured to be connected to a data detection device that measures car data and evaluation data with a sensor mounted on a car, and an input device and an output device that input and output data, the railroad car condition monitoring/analyzing device comprising:

a car factor estimation unit configured to estimate car factor evaluation data from the car data and the evaluation data;

an infrastructure factor extraction unit configured to extract infrastructure factor evaluation data from the car data, the evaluation data, and the car factor evaluation data;

an infrastructure factor estimation unit configured to estimate individual infrastructure factor evaluation data from the infrastructure factor evaluation data;

an infrastructure factor DB construction unit configured to store the individual infrastructure factor evaluation data in an infrastructure factor database;

an infrastructure factor analysis unit configured to monitor the individual infrastructure factor evaluation data stored in the infrastructure factor database so as to analyze infrastructure factors; and

a car analysis unit configured to analyze a car condition

in consideration of analysis information on the infrastructure factors, wherein

the infrastructure factor analysis unit is configured to analyze the individual infrastructure factor evaluation data stored in the infrastructure factor database to determine new infrastructure factors, deteriorated infrastructure factors, and removed infrastructure factors, thereby outputting information on the new infrastructure factors including locations and scales to the output device, and receiving an investigation result of the new infrastructure factors including presence/absence, types, names, and actual measurement data from the input device so as to register the investigation result in the infrastructure factor database; outputting information on the deteriorated infrastructure factors including deterioration states and maintenance diagnosis to the output device, and receiving an investigation result of the deteriorated infrastructure factors from the input device so as to register the investigation result in the infrastructure factor database; and outputting information on the removed infrastructure factors including infrastructure environment and maintenance to the output device, and receiving an investigation result of the removed infrastructure factors from the input device so as to register the investigation result in the infrastructure factor database.

2. The railroad car condition monitoring/analyzing device according to Claim 1, wherein

the infrastructure factor extraction unit is configured to expand the infrastructure factor evaluation data obtained by determining a difference between the evaluation data and the car factor evaluation data into infrastructure factor evaluation data with respect to positions on a track, and perform averaging processing in categories considering scales of infrastructure factors.

3. The railroad car condition monitoring/analyzing device according to Claim 1, wherein

the infrastructure factor estimation unit is configured to acquire the individual infrastructure factor evaluation data separated by a threshold value input from the input device, calculate feature quantities including a representative position, a size, a maximum value, and an average value of the individual infrastructure factor evaluation data, and add the feature quantities as elements of the individual infrastructure factor evaluation data.

4. The railroad car condition monitoring/analyzing device according to Claim 1, wherein

the infrastructure factor DB construction unit is configured to compare the individual infrastructure factor

evaluation data acquired by the infrastructure factor estimation unit with individual infrastructure factor evaluation data stored in the infrastructure factor database, so as to add new infrastructure factor evaluation data that does not exist in the infrastructure factor database to the infrastructure factor database, add infrastructure factor evaluation data of infrastructure factors the same as infrastructure factors existing in the infrastructure factor database as the infrastructure factor evaluation data existing in the infrastructure factor database, and set removed infrastructure factor evaluation data that exists in the infrastructure factor database but is not acquired by the infrastructure factor estimation unit to zero.

5. The railroad car condition monitoring/analyzing device according to Claim 1, wherein

the car analysis unit is configured to calculate infrastructure factor analysis evaluation data based on past infrastructure factor evaluation data stored in the infrastructure factor database, analyze a car condition based on analysis data measured by the data detection device and the infrastructure factor analysis evaluation data in consideration of an influence of a car factor only, and calculate a degree of influence of the infrastructure factors on the analysis data based on the analysis data and the

infrastructure factor analysis evaluation data, so as to adjust an operation management for each traveling position including a speed and an acceleration and operating conditions of car instruments including air conditioning and ventilation.

6. A railroad car condition monitoring/analyzing system comprising:

the railroad car condition monitoring/analyzing device according to any one of Claims 1 to 5;

the data detection device;

the input device; and

the output device.

7. A railroad car equipped with the railroad car condition monitoring/analyzing system according to Claim 6.

8. A railroad car condition monitoring/analyzing method using the railroad car condition monitoring/analyzing device according to Claim 1, comprising:

a car factor estimation step of estimating the car factor evaluation data from the car data and the evaluation data;

an infrastructure factor extraction step of extracting the infrastructure factor evaluation data from the car data, the evaluation data, and the car factor evaluation data;

an infrastructure factor estimation step of estimating the

individual infrastructure factor evaluation data from the infrastructure factor evaluation data;

an infrastructure factor DB construction step of storing the individual infrastructure factor evaluation data in the infrastructure factor database;

an infrastructure factor analysis step of monitoring the individual infrastructure factor evaluation data stored in the infrastructure factor database so as to analyze infrastructure factors; and

a car analysis step of analyzing a car condition in consideration of analysis information on the infrastructure factors.