Human Resource Development for Eco-Drive with Messages: Based on Data Analysis

ASUA Inc. Japan
Will autonomous cars make human training unnecessary?

Even if it's automated, people will still be responsible for it.
1. Developing roles of human

2. Enhancing with technology

3. Generalizing
1. Developing roles of human
Our failure experience

Companies that used our products improved fuel efficiency by an average of 15% or more.

Magical ceramic, which was supposed to improve fuel efficiency.

(In fact, the effect was only within the margin of error!)
Communication had changed their driving

The true effect is a behavioral change; eco-driving.

The sources of behavioral changes were communication between...

- Drivers and us
- Drivers and their Managers
- Driver to driver
Eco-driving reduced fuel efficiency and traffic accidents

Our article of eco-driving as corporate level

【Result of the behavioral change】

Fuel Efficiency 8.7% Improved
Traffic Accidents 51% Reduced

(Company average. Excerpt from paper data)

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Wilcoxon rank-sum test (significant difference test for data that do not show a normal distribution)
2. Enhancing with technology
Converting data into humanistic messages

Conversion flow

1. Collect  (Driving data)  

2. Analyze

3. Transform  (Messages & other)
The message system can assist transportation managers.

### Obligation to assign an operation manager

One manager must manage 25 people (maximum).

Daily **safety and energy conservation training** is also required.
The message system can assist transportation managers

Conversion flow

1. Collect (Driving data)  
2. Analyze  
3. Transform (Messages & other)

The area worth developing roles of human, while generalizing

How to look at the data  
How to improve it  
How to tell the facts we know  
Think and express for others

This could be useful even in countries that don't have a management system or training structure.
3. Generalizing
What is “TDBC”??

- **Solving Problems in the Transportation Industry through Open Innovation**

  Transportation companies with variety of issues and companies with variety of technologies/services collaborate to solve industry problems/realize Digital Transformation.

  We will contribute to the industry and society by transformation of the transportation industry into a safe, secure, and ecological social infrastructure.

- **Features of TDBC**
  - Members (as of the end of October): 150 companies from freight (trucks and dump trucks), passenger (taxis and buses), ICT, vehicle, and in-vehicle equipment manufacturers, health care, consulting, etc.
  
  - Organize and share issues common to all businesses, hypothesize solutions, conduct demonstrative experiments, evaluate and improve, and realize them in working groups for each theme.
Actual Achievements

BAYLINE EXPRESS Inc.

Points

1) **Real-time** driving data collection
2) Training tailored to **the characteristics of each driver**
3) **Maximum** utilization of data
1. Developing roles of human

2. Enhancing with technology

3. Generalizing
動機を動かせ。明日を動かせ。