JCM Projects In Asia

Eco-Driving by Utilizing a Digital Tachograph System

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Contents

1. Nippon Express Group Corporate Philosophy and ASEAN Transport Network

2. Project in Malaysia -Overview-

3. Project in Malaysia -Result-

4. Project Outcome and Future Prospects

5. CDM vs. JCM

Nippon Express Group Corporate Philosophy

Nippon Express Group Corporate Philosophy

Our Mission
Be a Driving Force for Social Development

Our Challenge
Create New Ideas and Value that Expand the Field of Logistics

Our Pride
Inspire Trust Every Step of the Way

Since our founding, the Nippon Express Group has employed our logistical strengths to connect people, businesses and regions throughout the world. In so doing, we have continuously supported social development.

While our mission never changes, we continuously advance to meet the world's changing needs.

Making no compromise in safety and maintaining a deep focus on environmental issues, we continuously strive to deliver innovative solutions at the next frontier of logistics.

We will forever take pride in our ability to inspire trust and answer the call of society.

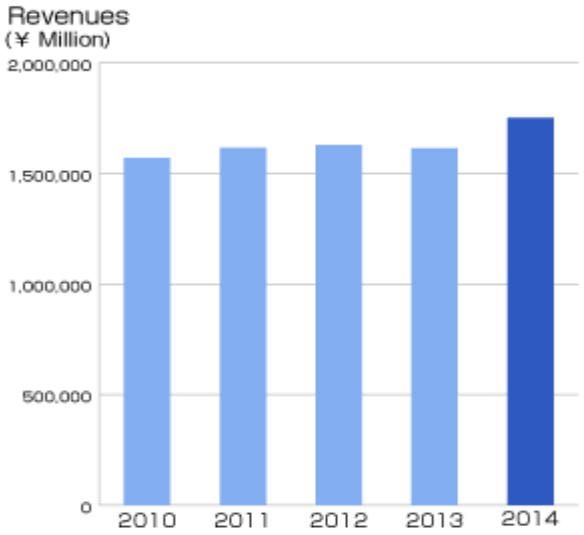
Every move we make is aimed at advancing society and bringing an enriched life to future generations.

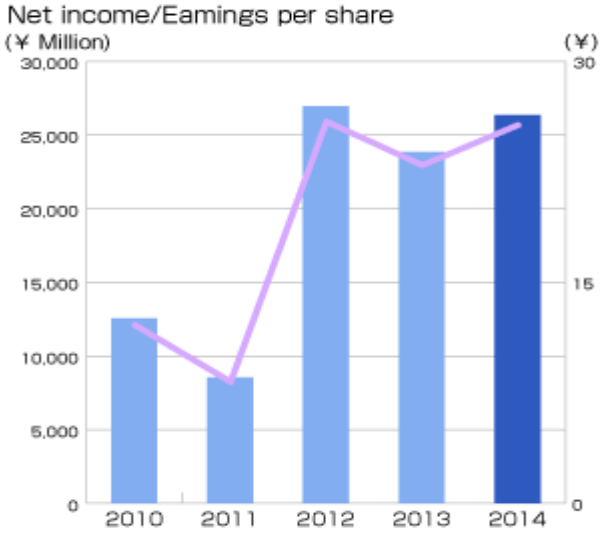
NIPPON EXPRESS

Nippon Express in Figures

Name	NIPPON EXPRESS CO., LTD.
Formal establishment	October 1, 1937
Paid-in Capital	70,175 million yen
Employees (Parent)	33,153

Consolidated Financial Summary (As of March 31, 2014)





Overseas Network

Present at 481 locations in 40 countries and 229 cities. (as of September 2014)

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Contents

1. Nippon Express Group Corporate Philosophy and ASEAN Transport Network

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3. Project in Malaysia -Result-

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5. CDM vs. JCM

Introduction of Our CDM Project

Project Objective

- Improvement of Transportation
- Digital Tachograph System
- Drivers Training
- As “Marketing Strategy”

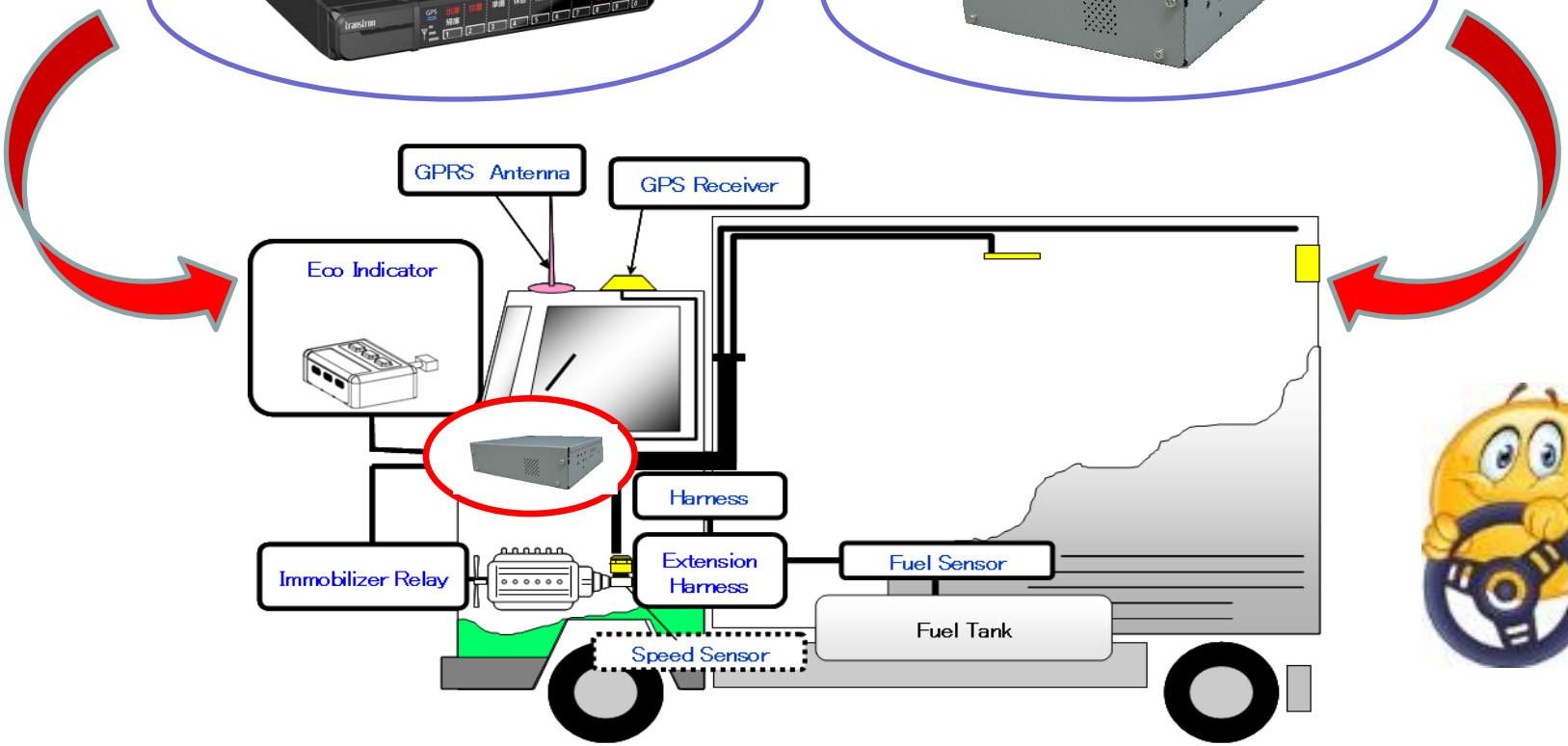
Project Participants

- Nittsu Transport Service (M) Sdn. Bhd.
- Nippon Express (Malaysia) Sdn. Bhd.
- Nippon Express Co., Ltd.
- Nittsu Research and Consulting, Inc.

Digital Tachograph System I

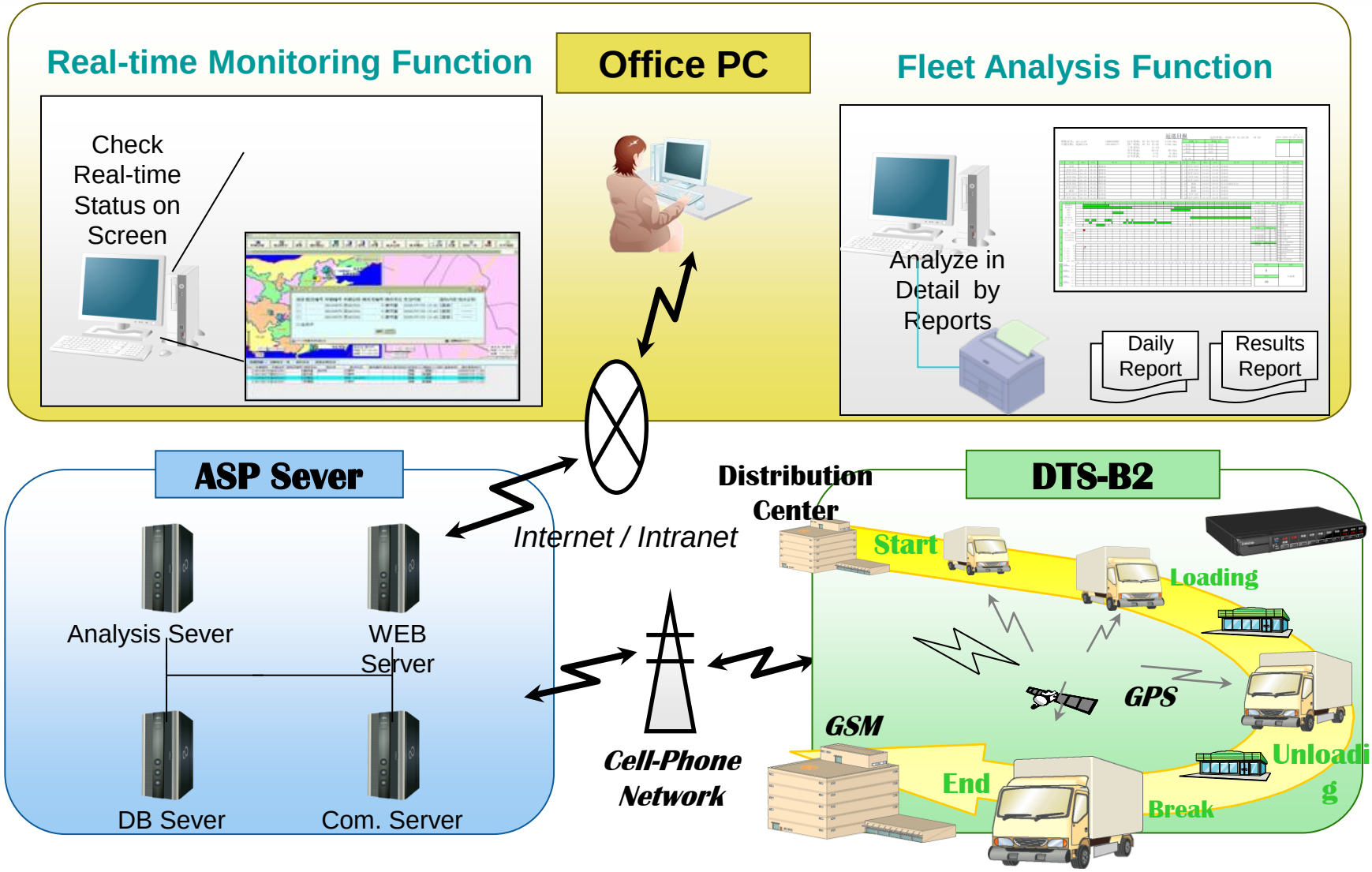
On-Board Terminal

Data Transmission and Other Device



~ Collection and Processing System~

Digital Tachograph System II



Drivers Training on Safety and Eco Driving I

Drivers were briefed on the 5 factors contributing to safety and eco driving:

1) Speeding

2) Engaging the Correct Gear
(Within permitted RPM – green zone)

3) Steady Driving
(No Sudden Acceleration or Deceleration)

4) No Engine Idling

5) Driving within the permitted hours

Training Centers

In the IZU Training Centre (Japan), Nippon Express provides safety and operational training to its employees and assists them in acquiring fundamental driving and vehicle maintenance skills.

Outline of a facility	
Site area	98,324㎡
Building Area	6,396㎡
Total floor area	13,104㎡
Training Equipment	
Driver training course	Area 21,900㎡ Circumference 600m
For training units	Truck 43 Forklift 14
Accommodation	
Total floor area	10,675㎡
Number of guests	174

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Trainings Overseas (Examples)

① Lectures (Basics of Eco-Driving)

② Group Exercises

③ Trial Eco-Driving (accompanied by an instructor)

① Reduced speed
② No sudden acceleration
③ No idling
④ Appropriate tire pressure
⑤ Daily car inspection

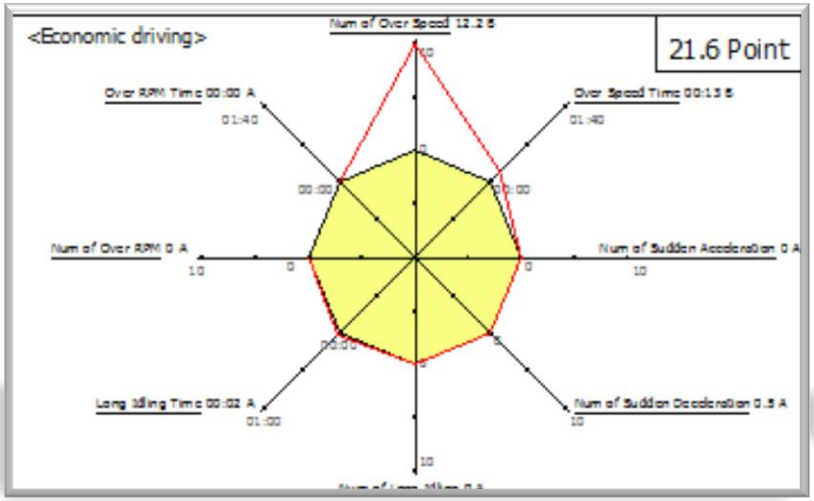
Drivers Training on Safety and Eco Driving II

Drivers Training on Safety and Eco Driving

Generation of Daily Reports

1. **Daily Report**
   Working History, Work Chart, Violation Chart, Time Chart, Fuel Chart, Evaluation and Mileage
2. **Daily Safety Report**
   2 Radar Chart
   (for safety and economic driving)

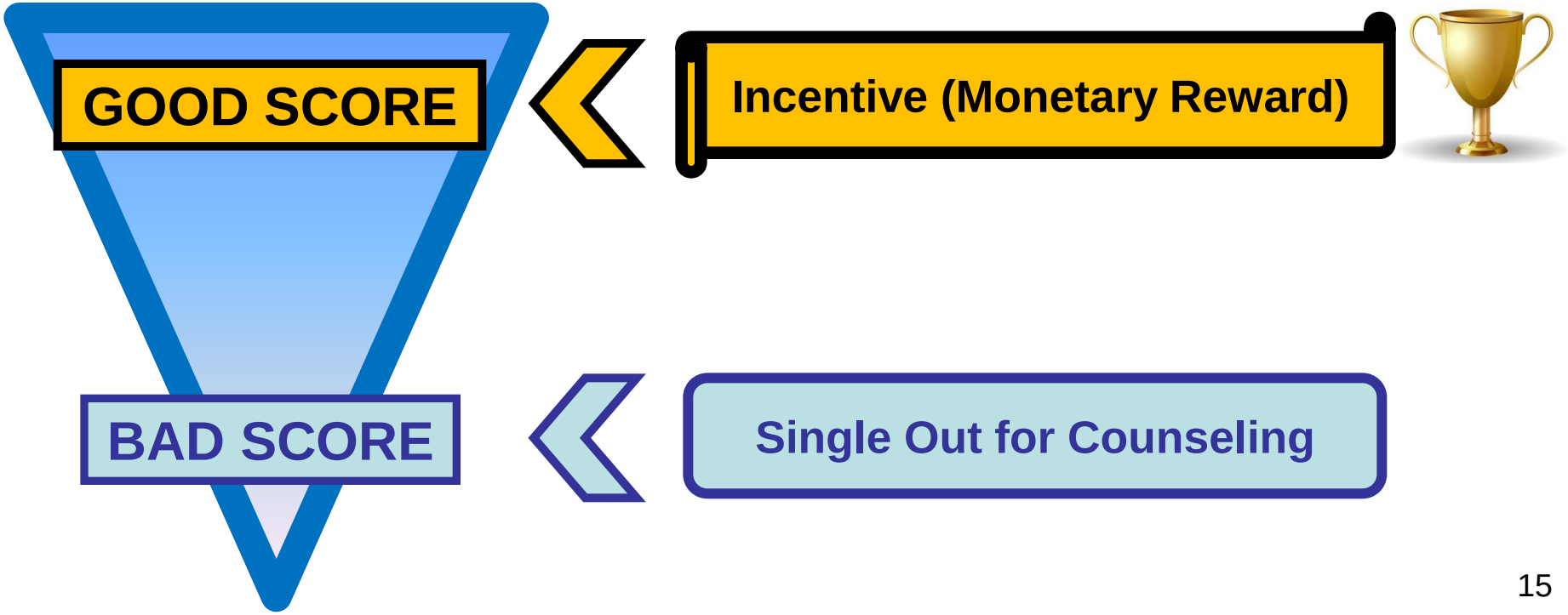
Daily Monitoring



Generation of Monthly Report (Providing Incentives)

3. **Ranking Report** (Monthly)

A List of Drivers with Ranking Awarded Based on the Evaluated Performance Score



Contents

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2. Project in Malaysia -Overview-

3. Project in Malaysia -Result-

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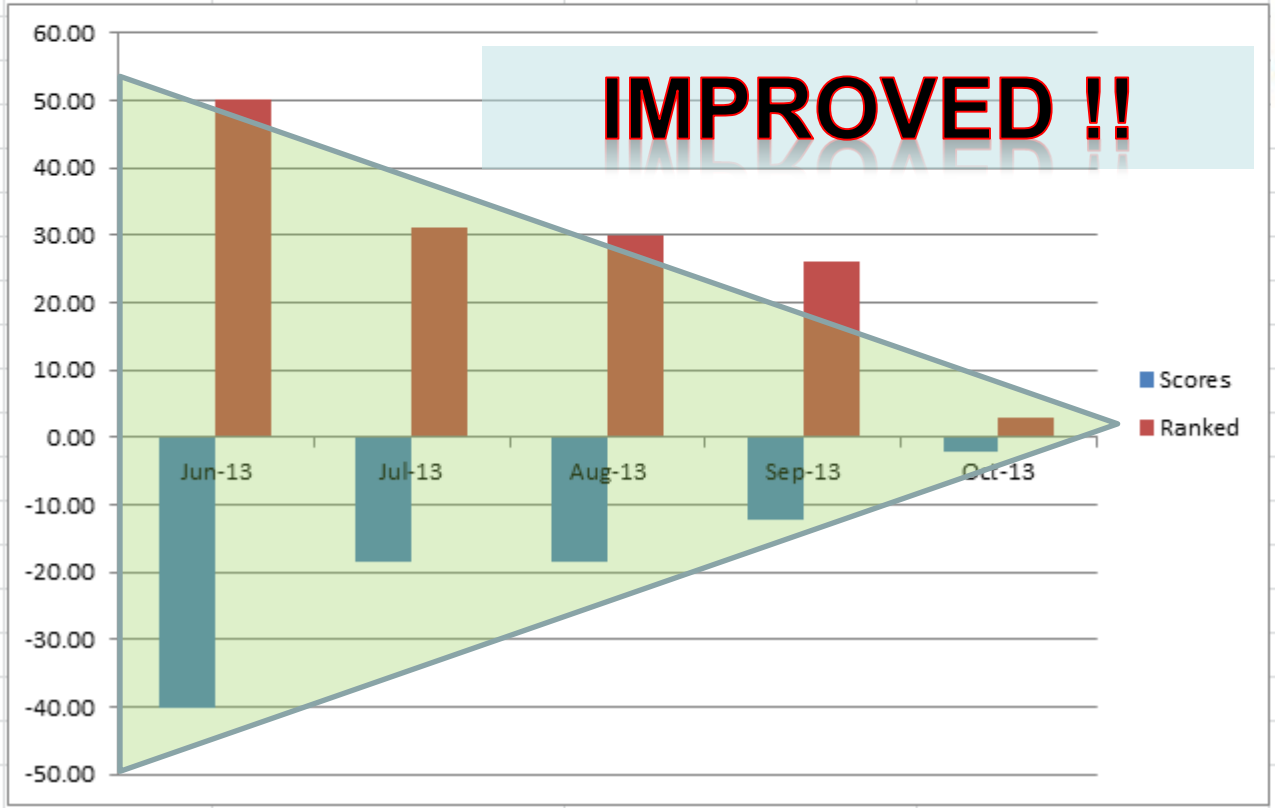
5. CDM vs. JCM

Result and Benefit I

Driver Ranking & Performance Scores for period Jun- Oct 2013

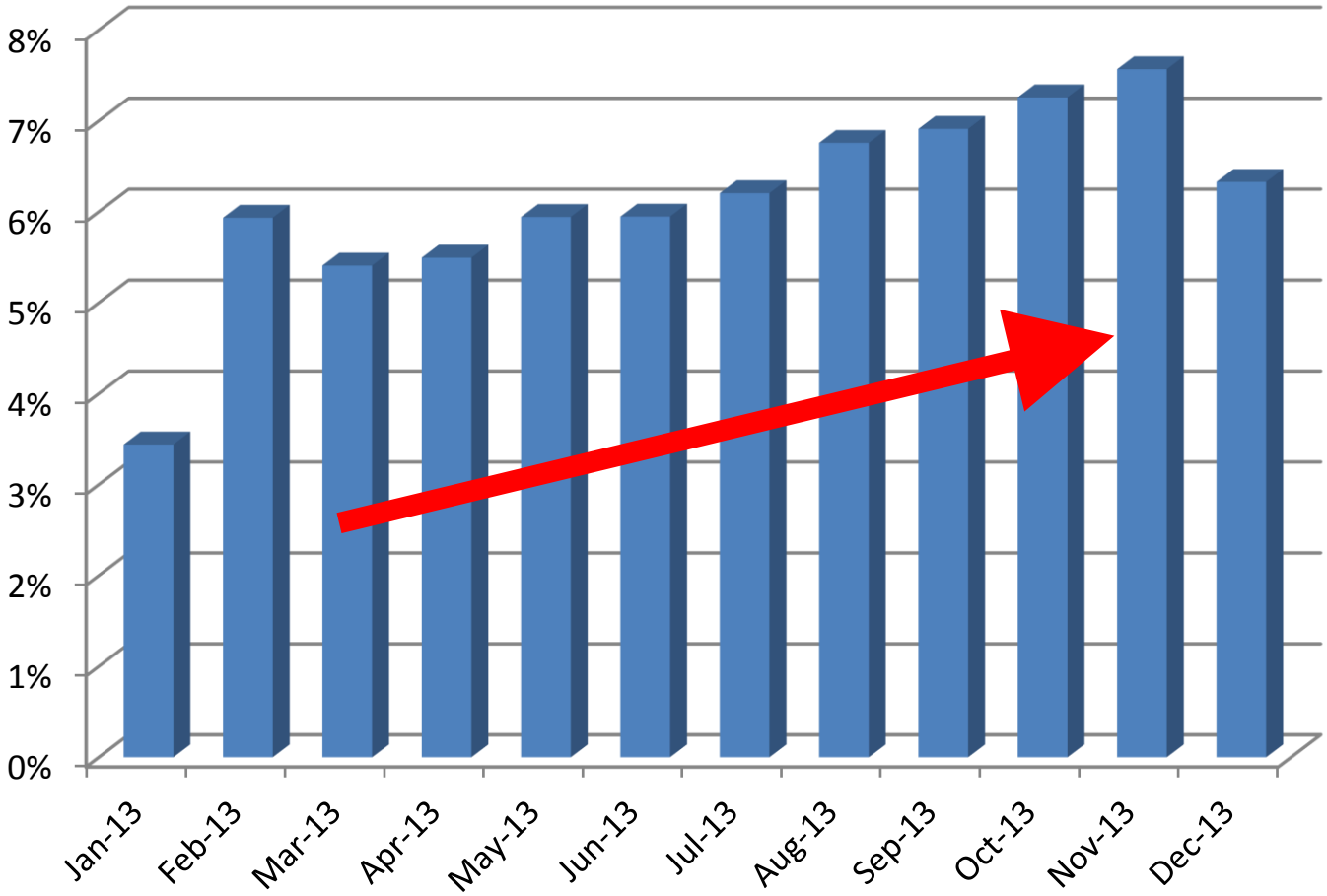
	Month	Scores	Ranked
DRIVER - A	Jun-13	-40.04	50
DRIVER - A	Jul-13	-18.52	31
DRIVER - A	Aug-13	-18.42	30
DRIVER - A	Sep-13	-12.34	26
DRIVER - A	Oct-13	-2.05	3



(An Example of Certain Driver)

Result and Benefit II

Monthly Percentage "CO_2" Reductions for our Long Hauled Vehicles
(% tage Reductions)

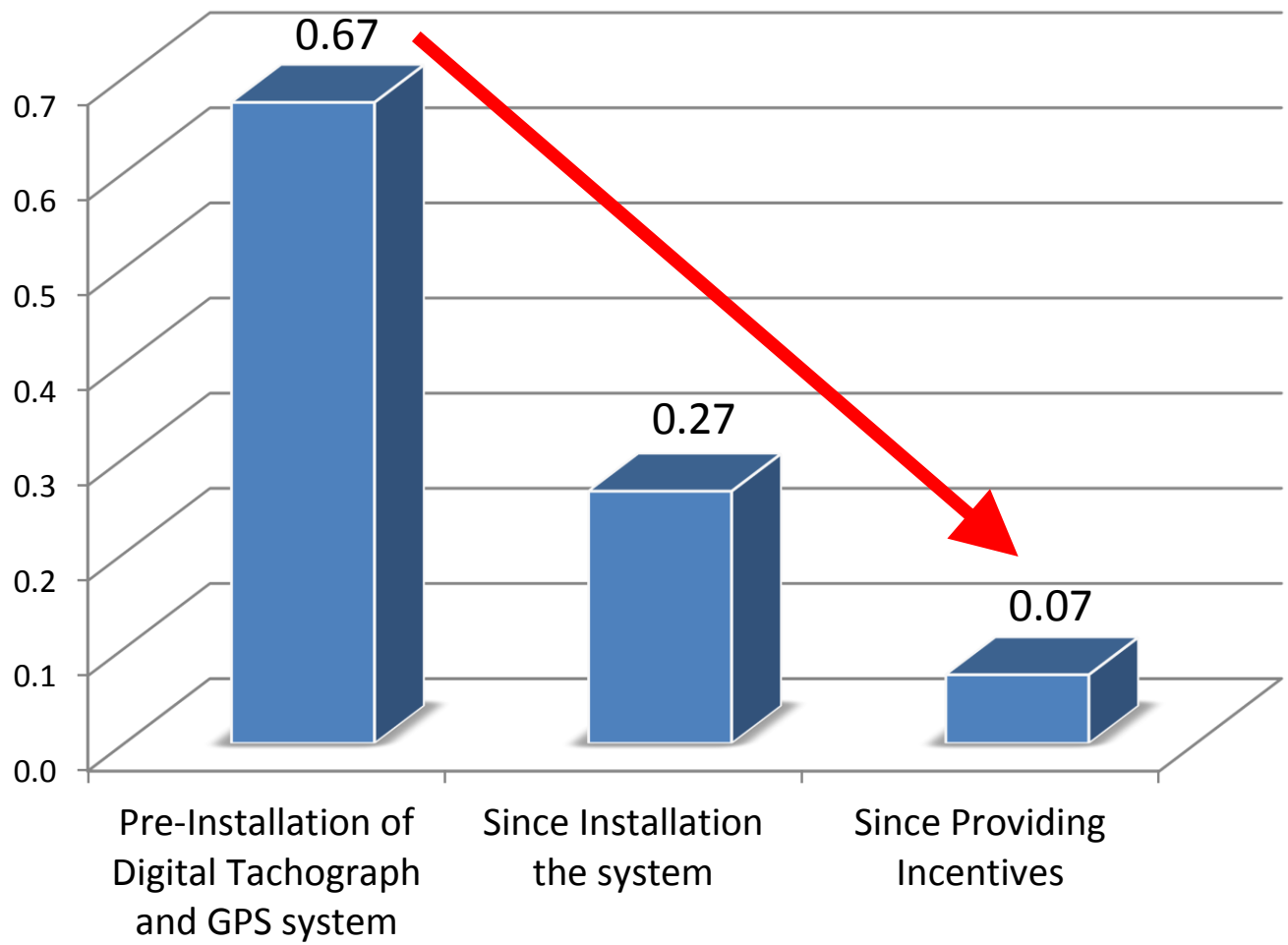


GHG Emission Reductions under the CDM

- Monitoring Period:
  - October 29, 2012 – April 30, 2013 (6 months)
- Baseline Emissions
  - 1,622 tCO_2
- Project Emissions
  - 1,550 tCO_2
- Emission Reductions
  - 72 tCO_2 (total)
  - **1.6 tCO_2 (*per truck*)**

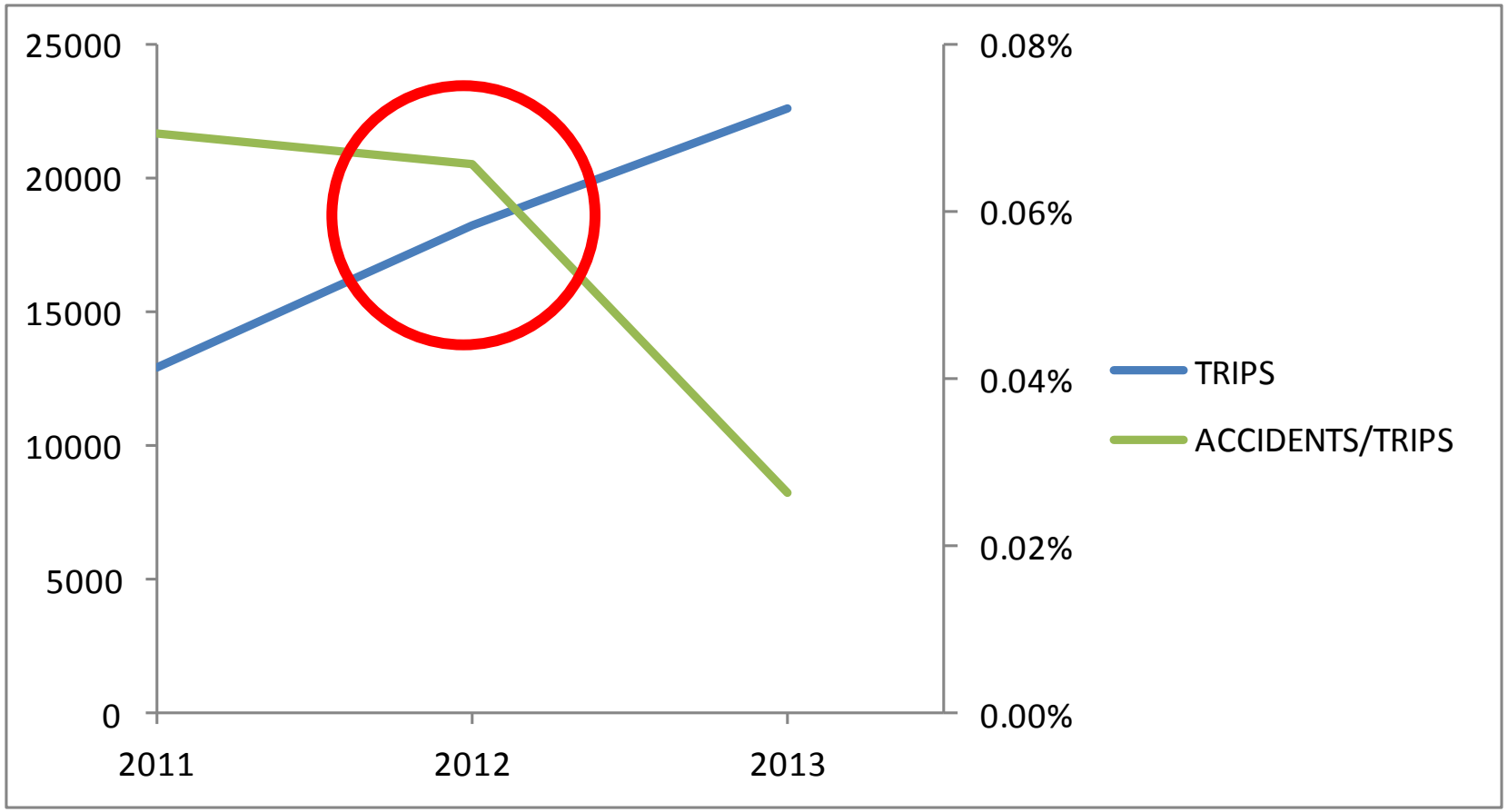
Result and Benefit III

ACCIDENTS / 1,000 TRIPS 2011-2013 (event-delimited)



Result and Benefit IV

TRIPS AND ACCIDENTS / TRIPS (%) 2011-2013 (yearly)



Co-benefit (by High-Quality Transportation)

- *Management*
  - Driver's Consciousness toward Safety and Environment
  - Work Environment Improvement
  - Operational Efficiency Improvement
- *Traceability*
  - GPS
  - Driving Behaviors
  - Security
- *Expectation to further improvement "KAIZEN"*
  - Well Managed Transport Chain
  - To Be a Good Example in Malaysia and Asian Countries
- *Increase Our Presence*

Economic Effects

1. Costs of digital tachograph on-board terminals vary between USD 1,000 – 3,000, but it is possible to pay back the investment within 3-4 years
2. In addition to improved fuel efficiency, accidents are also reduced, leading to reduced maintenance and insurance costs

⇩

A sustainable project with numerous co-benefits

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3. Project in Malaysia -Result-

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Contribution to Sustainable Development

More Efficient Use of Fossil Fuels

GENERATE BENEFITS

Environmental
Reduction of CO_2, NOx, PM

Social
Less Accidents

Economic
Improvement of Fuel Efficiency

Contribution to Management

Current Status of JCM Project in Viet Nam

Jul 2014	Draft JCM methodology is developed
Jan 2015	JCM methodology is approved/stakeholders' meeting with drivers is conducted
Feb 2015	Reference emission data collection is completed
May 2015	Digital tachographs are imported in Viet Nam Draft PDD is prepared

Feelings as a project member (1)

- Taking opportunity to start the project
  - Participants would have not started if a scheme of CDM had not exist.
    - Feasibility study funded by NEDO and GEC
    - Chance to get information of technologies and products
- Sharing target among employees
  - Becoming closely tied domestically
    - Denying atmosphere among operational staffs before project start

Feelings as a project member (2)

- Reputation from Japan orient consignors
  - Able to report HQ in Japan as an action to save environment
  - Reason to select trucking company
  - Punctuality and reduction of cargo damage
- Among group companies of Nippon Express
  - Spreading information to affiliated company in Asia, “something good may happen in Malaysia…!?”
  - Good opportunity to settle Japanese management knowledge into oversea branches
  - Creating new added value for sales

Feelings as a project member (3)

- Others
  - “I expect you to be a good example of MRV in transportation sector” by MNRE(Malay Gov.)
  - Getting chance to take part in ADB workshop, seminar by Japanese gov. etc.
  - Getting connection to ASEAN country governments and public organizations
  - Exposure to mass media and environmental businesses

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JCM and CDM: A Comparison

	JCM	CDM
Advantages	1. Simplified methodologies compared to the CDM 2. Smooth validation and verification process 3. A subsidy-based mechanism (not market–dependent) 4. Automatic additionality	1. Locally-based DOEs 2. Clear common rules with certain flexibility for localization 3. Tradable carbon credits (CERs)
Disadvantages	1. Limited number of TPEs (Third Party Entity (Only two available for the transport sector in Viet Nam) 2. Country-specific rules and methodologies	1. Onerous process up to registration 2. Onerous issuance process 3. Uncertainties related to constant regulation changes, including updates of methodologies 4. Additionallity is established for each project (unless automatic additionaity is recognized for specific technologies or under an approved standardized baseline)
Common Advantages of Project-Based Mechanisms	1. Important mechanisms for improving the project economy 2. Various monitoring and data collection requirements lead to overall improvement of the project management	
Areas with lack of clarity	1. Are costs of Validation and Verification lower compared to the CDM? 2. What will happen with the JCM credits in the future?	1. Future development of the CDM market

CDM vs JCM
Difference of Methodology

- Index of Service level
  - CDM: ton-km
    - Based on every slip of cargo delivery order
    - Complicated calculation process
  - JCM: km
    - Driving distance in a period based on odo-meter
    - Simplicity to capture data

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NITTSU
MAN

CDM PROJECT
かいぜん KAIZEN 改善
Clean Development Mechanism
ECO-DRIVING TRAINING
14th ~ 16th December 2012
Nittsu Balakong Depot, Malaysia
TOWARDS A GREENER FUTURE
Nippon Express Co. Ltd.
Nippon Express Malaysia
Nittsu Transport Service
Nittsu Research Institute
& Consulting, Inc.
UNFCCC

THANK YOU ALL
FOR
YOUR ATTENTION TODAY

May, 2015

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