Performance Management of Road Administration in Japan

March 2004

Performance Management Office
Road Bureau, Ministry of Land, Infrastructure and Transport
Chapter 4  Basic Direction of Road Administration Reform

4-3  Reform of Administration System

(1) Basic viewpoint
- It is important to shift to an outcome-based road administration that achieves its mission by ensuring good services provided by roads.

(2) Direction of reform
- Exact understanding of road users' needs and accurate identification of and concentration on the most effective investment choices should make a great difference.
- Establishing an evaluation system using outcome indicators that clearly show policy goals is essential.

Chapter 6  Administration System Reform

6-1  Distinction by Evaluation System

(1) Introduction of an evaluation system for distinction
- An evaluation system using indicators that reflect the outcome of programs and projects (outcome indicators) should be incorporated into administration management, and efficient and effective implementation of projects should be aimed for.

(2) Improvement of evaluation of projects
- Evaluation of projects based on consistent criteria should be carried out.

(3) Improvement of policy evaluation
- Road administration should shift to a type of operation that uses outcome indicators as the guiding principle.
- Analysis and evaluation of achievements according to the outcome indicators should be carried out every year.
- Results should be appropriately assimilated into the budgeting process.
2. Establishment of The Performance Management Office

Organization of the Road Bureau

- Director General
  - Deputy Director General
  - General Affairs Division
    - Road Fund Planning Office
      - Supervision Office of Japan Highway Public Corporation and Honshu-Shikoku Bridge Authority
    - Road Administration Division
    - Road Traffic Control Division
    - Planning Division
    - National Expressway Division
    - National Highway Division
    - Regional Road and Environment Division
    - Toll Road Division
  - Road Use Coordination Office
  - ITS Policy and Program Office
  - Economic Research, Traffic Survey and Census Office
  - Road Disaster Prevention Countermeasure Office
  - Regional Road Coordination Office
  - Road Environment Planning Office
  - Performance Management Office
3. Advisory Committee for Public Management of Road Administration

Advisory Committee for Public Management of Road Administration (established in March 2003)

- **Committee**
  - **Chairperson**
    - Shun'ichi Furukawa: Prof., Institute of Policy and Planning Sciences, University of Tsukuba
  - **Members**
    - Hitoshi Ieda: Prof., Graduate School of Engineering, The University of Tokyo
    - Jirou Umeda: Advisor, Government and Corporate Governance Renovation Sector, Japan Management Association Consultants (JMAC), Inc.
    - Nobusato Kitaoji: Prof., School of Administration and Informatics, University of Shizuoka
    - Yukiko Tabuchi: Senior Staff Researcher, Research Center for E-Government, Mitsubishi Research Institute, Inc.

- **Items of Review**
  1) Review of "Appropriate Form of New Road Administration Public Management"
     This review is to study the way public management of road administration based on an evaluation system using outcome indicators should be.
  2) Review of "Performance Plan" and "Achievement Report"
     This review is to study a "performance plan" and a "achievement report" indispensable for administration management based on outcome indicators.
Management shifting from "theory" to "practice"

- Policy evaluation system
  - Management shifting from "theory" to "practice"
  - Policy assessment (Setting goals, etc.)
  - Post-evaluation (Measuring achievement, etc.)

- 3 keys for outcome-based road administration
  - Annual cycle of management
  - Clarity and feasibility
  - Partnership with citizens

- 5 main strategies for implementation
  - Establish Policy Goals with Indicators
  - Collect Data Effectively
  - Make Performance Plan and Achievement Report
  - Reflect in Budgets and Personnel Affairs
  - Secure Accountability

- Reflect in budgets and personnel affairs
  - Setting goals
  - Validity of measures
  - Performance Plan

- Measuring achievement of implementation
  - Achievement Report

- Improvement of Administrative Efficiency
  - Improvement of Administrative Transparency

- Citizen
  - Involvement

- Outcome-based implementation of measures and projects
  - Administrative management system
Establishment of a Management Cycle
Establishing an Administration Process That Prioritizes the Outcome - Taking Fiscal Year 2003 As an Example -

August 2002

Budget request for 2003

March 2003

BUDGET DECISION FOR 2003

June 13, 2003

SUMMARIZATION OF PROPOSALS BY THE ROAD ADMINISTRATION PUBLIC MANAGEMENT RESEARCH GROUP

April to June 2004

Post-evaluation

2002

Setting of target values

2003

2003 Performance Plan

• July 2003: Official announcement of the Plan

Implementation

2003 Achievement Report

• April to June 2004: Official announcement of the Report

Post-evaluation

2004

2005

Reflection

Setting of target values

Implementation

Post-evaluation
The Way Public Management of Road Administration Should Be

**USA**
- DOT
  - U.S. DOT Strategic Plan
- FHWA
  - FHWA Strategic Plan

**UK**
- DFT
  - Transport 2010 The 10 year Plan
- HA
  - Strategic Roads 2010

**Japan**
- The MLIT
  - Key Plan for Infrastructure Development
- Road Bureau
  - Key Plan for Infrastructure Development

**Planning level**
- Performance plan
- Business plan
- Performance plan
- Business plan

**Execution level**
- Implementation of measures and projects
- Performance report
- Annual report
- Performance report
- Annual report

- Performance of numerical targets
- Analysis of causes
- Annual numerical targets
- Validity of measures and projects
4. Outline of “Performance Plan for Road Administration 2003”

- Starting “outcome-based” road administration from 2003
  - Implement of an outcome-based public management system where numerical targets set beforehand using indicators (outcome indicator) that express outcome of road projects, evaluate afterwards, and then reflect in the subsequent measures and projects from 2003.

- Making “Performance Plan” which indicates the numerical targets to be achieved in a year’s time using 17 indicators
  - Compile and disclose as “Performance Plan for Road Administration”, which indicates the setting numerical targets to be achieved in a year’s time using 17 indicators such as “time loss due to road congestion,” “hours of road work,” and “Ratio of death and injury due to road accidents” and evaluating the validity of the measures and projects for achieving targets concerning outcomes of road policy based on the budget in 2003.

- Disclosing back data for each prefecture at the same time, such as congestion status
  - Disclose together with the “Performance Plan” relevant back data such as indicator value for each prefecture in order to enable the public to check the validity of the numerical targets and the measures and projects for achieving them.

- Making “Performance Plan” for each prefecture
  - For road administration that meets the characteristics and needs of a region, “Performance Plan” will be formulated and disclosed for each region, such as prefecture, which indicates the numerical targets and measures and projects for achieving them in addition to the undertaking at the national level.

- Evaluating degree of achievement after a year and reflecting it in the subsequent administration
  - The degree of achievement for each numerical target is measured after a year, the reason analyzed if it has not been met, and the evaluation result is compiled and disclosed as the “Achievement Report.” Furthermore, the evaluation result is properly reflected in the subsequent measures and projects.
Current indicator value and numerical target

Back data

Disclose back data related to the indicator value for each prefecture.

For example, project location is selected by based on accurate and detailed data such as the cause of accidents by each location and priority is given to those with an urgent need for countermeasures.

Current situation and problems

Accidents on trunk roads concentrating on specific locations

53% of accidents on the basic freeway segment of trunk roads were concentrated in just 6% of the trunk roads.

Issues and adopted measures

Intensive measures against accident prone locations on trunk roads

“Urgent measures against accident prone locations (3,956 locations selected)”

Priority is given to locations with a high incidence of accidents based on detailed data analysis

Intermediate target is to reduce the ratio of death and injury accidents by about 10% by FY 2007 down to 108 cases per 100 million vehicle/km
<table>
<thead>
<tr>
<th>Policy Theme</th>
<th>Current Indicator</th>
<th>Value (FY2002)</th>
<th>Target for FY2003</th>
<th>Target for FY2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. National</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Expressway</td>
<td>235 hr/km²/yr</td>
<td></td>
<td>225 hr/km²/yr</td>
<td>20% reduction</td>
</tr>
<tr>
<td>1.2 Environment</td>
<td>15.46 million access/yr</td>
<td></td>
<td>2.6 points</td>
<td>3.0 points</td>
</tr>
</tbody>
</table>

| Performance Indicator | Percentage of people who are able to have a safe and pleasant drive into the city, the center or daily life, in under 30 minutes | 68% (Access to 39 locations) |

| Road Administration Reform | Percentage of barrier-free main roads in the vicinity of passenger facilities with an average daily user volume of more than 5,000 | 63% (64% 64% 68%) |

| Road Administration Reform | Ratio of SPM environmental goal achievement | 59% (68%) |

| Road Structure Maintenance | Percentage of cities that have rescue routes covering a wide area in the event of disasters | Maintain current level |

| Living | Better Quality of Life | 66% (68% 76%) |

| Environment | Preservation and Creation of Environment | 17% (21% 23%) |

| Safety | Ensuring Secure and Safe Life | 66% (68% 76%) |

| Vitality | Restoration of Economic Vitality through Urban Renewal and Regional Coordination | 77% (80% 83%) |

| DSafety | DSafety | 77% (80% 83%) |

| PVitality | PVitality | 83% (86% 90%) |

| QSafety | QSafety | 80% (83% 86%) |

| QVitality | QVitality | 100% (100% 100%) |

| DSafety | DSafety | 100% (100% 100%) |

| PVitality | PVitality | 100% (100% 100%) |

| QSafety | QSafety | 100% (100% 100%) |

| QVitality | QVitality | 100% (100% 100%) |

| DSafety | DSafety | 100% (100% 100%) |

| PVitality | PVitality | 100% (100% 100%) |

| QSafety | QSafety | 100% (100% 100%) |

| QVitality | QVitality | 100% (100% 100%) |

| DSafety | DSafety | 100% (100% 100%) |

| PVitality | PVitality | 100% (100% 100%) |

| QSafety | QSafety | 100% (100% 100%) |

| QVitality | QVitality | 100% (100% 100%) |
Congestion time loss per person and per no. of vehicles owned by prefecture

“3D Congestion Map” for each nationwide, prefecture (Ibaragi Prefecture) and urban area (Mito City)
ETC usage ratio by prefecture (top) and increase in usage seen since August 2002 (bottom)
5. Overview of the "Key Plan for Infrastructure Development"

Key Plan for Infrastructure Development Law

Approved on March 28, 2003, promulgated on March 31, 2003, and implemented on April 1, 2003
(jointly submitted by the National Police Agency, the Ministry of Agriculture, Forestry and Fisheries and the Ministry of Land, Infrastructure and Transport)

Measures for intensive, effective and efficient promotion of infrastructure development projects should be taken, including development of infrastructure development key plans.

- Plans for 9 projects of different genres
  - Roads
  - Traffic safety facilities
  - Airports
  - Ports and harbors
  - Urban parks
  - Sewerage
  - Flood control
  - Steeply sloping ground
  - Coasts

Note: 2002 and 2003 were the final years. Plans in double frames have their own respective urgent measures laws.

Key Plan for Infrastructure Development

- Infrastructure development projects included in the Key Plan
  Roads, traffic safety facilities, railroads, airports, ports and harbors, route signs, parks and green areas, sewerage, rivers, sand control, landslides, steeply sloping ground, coasts (including projects and "software" measures and policies integrally implemented to enhance effectiveness of projects)

- Basic philosophy
  Thorough decentralization of power, consideration of effective use of local characteristics and private sector resources, etc.

- Plan items
  (1) Outline of the key targets and projects to be implemented for achievement of the targets
    → Outcome-based targets should be prioritized (total project cost should not be included).
  (2) Measures for effective and efficient implementation of projects
    → Clarifying specific reform action policies for infrastructure development
      • Seeking understanding and cooperation of local residents
      • Ensuring linkage between projects
      • Cost reduction
      • Effective use of existing stock
      • Appropriate bidding and contracting procedures, etc.
  (3) Other items necessary for intensive, effective and efficient implementation of projects

<Process for development and implementation of plans>

- Public involvement
  - Listening to opinions of local governments

- Preparation of plan

- Cabinet decision

Re-examination of a plan during its implementation in order to incorporate changes in social and economic conditions should be made obligatory.
Policy evaluation should be made.
Systems related to a plan should be reviewed in the last year of the plan and necessary measures, if any, should be taken accordingly.
On October 10 the cabinet approved priority planning of infrastructure development based on the law for priority planning of infrastructure development (Law No 20, 2003) which passed the 156th regular Diet session in March 2003. The plan, which has a planning period of five years from 2003, puts together projects in nine areas (roads, facilities for traffic safety, airports, harbors, city parks, sewage, river improvement, steep locations, and beaches).

The full text of the priority planning for infrastructure development as approved by the cabinet and its reference materials can be seen on the Website of the Ministry of Land, Infrastructure and Transport (http://www.mlit.go.jp/kasha/kisha03/01/011009_.html).

Points of the ‘Key Plan for Infrastructure Development’

Following on from discussions arising from “the solid principles” established in June 2001 and “the reform and outlook” in January 2002, infrastructure development planning has been reformed for the first time in fifty years.

- Target results as seen from the nation have been stipulated in the priority planning
  - Planning details have been switched from “project costs” of carrying out the work to “results to be achieved” as seen by the nation.

- Reform principles for developing infrastructure have been determined in the priority planning
  - Strengthening project alliances.
    - Project planning for nine areas has been put together into one. Setting up transverse priority targets (for example, a greenery indicator that combines parks, roads, rivers, ports, and private properties into one).
  - Strengthening project alliances among ministries and agencies (for example, increasing the spread of sewage treatment in the nation, which is an issue common to the Ministry of Land, Infrastructure and Transport, the Ministry of Agriculture, Forestry and Fisheries and the Ministry of Environment).
    - Stating that issues will be tackled through alliances with the private sector and linking up soft measures with hardware.
  - Promoting the participation of residents from the stage of project conception.
  - Significant reduction of costs.
    - For projects carried out by ministries and related corporations, costs of the work are to be reduced, standards are to be reviewed and projects undertaken more quickly to achieve a 15% reduction in total costs, excluding price changes.
  - Thorough implementation of Plan, Do, and See. Do away with waste. To be reflected in a distinctive budget.
    - Plan, do, and see the details of planning.
    - For each project, strict implementation of integrated project evaluation from before to after the project. This includes evaluation at the time of adopting a new project, reevaluation of the project during implementation, and evaluation after completion.
  - Disclosure of information, including data. To be reflected in policies.
  - Use of private capital, such as PFI, and its capabilities
  - Improving the discretion of local autonomies in regard to national treasury aid.

- Priority planning will be used extensively as a means of dialogue among the country, local governments, and nation
  - Participation by the people and local governments in making plans has been authorized by law.
### Priority Targets and Indicators in Key Plan for Infrastructure Development

#### Living
- Realization of an affluent life through full life space

#### Safety
- Promotion of improved disaster prevention and strengthening traffic safety measures and crisis control

#### Environment
- Preservation and creation of environments from a global basis to close-to-home basis

#### Vitality
- Formation of an attractive and active economic society by the strengthening of international competitiveness, the regeneration of cities, regional alliances and the promotion of tourism

#### Indicators

<table>
<thead>
<tr>
<th>Priority Targets</th>
<th>Description</th>
<th>2002</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Formation of a barrier-free society</td>
<td>To cope with declining birth rate and aging society</td>
<td>50%</td>
<td>70%</td>
</tr>
<tr>
<td>(2) Formation of beautiful urban life space</td>
<td>Full of water and greenery</td>
<td>12m²/person</td>
<td>13m²/person</td>
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<tr>
<td>(3) Formation of good residential environments</td>
<td></td>
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<tr>
<td>(2) Building a strong nation</td>
<td>Against large-scale earthquakes and fires</td>
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<tr>
<td>(3) Strengthening overall traffic safety measures and crisis control</td>
<td></td>
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<td></td>
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<tr>
<td>(2) Improving living environments related to urban air pollution and noise</td>
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<tr>
<td>(1) Securing transportation services of an international level</td>
<td>And improving international competitiveness and attractiveness</td>
<td></td>
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<tr>
<td>(3) Improving comfort and convenience of urban transportation</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(4) Activation of regions and economy through regional and tourism exchanges</td>
<td></td>
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</tbody>
</table>

#### Key Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2002</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of main roads in the vicinity of passenger facilities with an average daily user volume of more than 5,000</td>
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</tr>
<tr>
<td>(road) 17% (FY2002)</td>
<td>about 50% (FY2007)</td>
<td></td>
</tr>
<tr>
<td>Area of secured public space with water and greenery in cities-an increase of about 10% (12m²/person in 2002 - 13m²/person in 2007) by FY2007</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of trunk roads in urban area without telephone poles</td>
<td>7% (FY2002) - 15% (FY2007)</td>
<td></td>
</tr>
<tr>
<td>Percentage of cities that have rescue routes covering a wide area in the event of disasters</td>
<td>66% (FY2002) - 76% (FY2007)</td>
<td></td>
</tr>
<tr>
<td>Ratio of death and injury due to road accidents</td>
<td>18 incidents/100 million vehicle-km (FY2002) - about 10% reduction (FY2007)</td>
<td></td>
</tr>
<tr>
<td>Ratio of NO2 environmental goal achievement</td>
<td>64% (FY2002) - about 80% (FY2007)</td>
<td></td>
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<tr>
<td>Achievement rate of required limits on nighttime noise</td>
<td>61% (FY2002) - 72% (FY2007)</td>
<td></td>
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<tr>
<td>Ratio of roads with access to hub airports and ports</td>
<td>59% (FY2002) - 68% (FY2007)</td>
<td></td>
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<tr>
<td>Time loss due to congestion</td>
<td>810 million man hr/yr (FY2002) - about 10% reduction (FY2007)</td>
<td></td>
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<tr>
<td>Hours of road work</td>
<td>35 hr/km-yr (FY2002) - about 20% reduction (FY2007)</td>
<td></td>
</tr>
<tr>
<td>Ratio of roads with access to hub airports and ports</td>
<td>59% (FY2002) - 68% (FY2007)</td>
<td></td>
</tr>
<tr>
<td>Ratio of main cities in neighboring regions that are connected to each other by an upgraded national road</td>
<td>2% (FY2002) - 77% (FY2007)</td>
<td></td>
</tr>
</tbody>
</table>
6. Linking Outcome with Budget (introduction of performance based budget)

- **Tasks for FY2003**
  - Specify the numerical targets for road administration
  - Start "outcome-based public management"
  - Before FY2002
  - Declaration of numerical targets
  - Evaluation
  - Performance Plan
  - Achievement Report

- **Tasks for FY2004**
  - Link the "outcome" to the budget system and spending to advance "outcome-based public management" to the 2nd stage
  - Introduction of "Outcome-purchasing type on budget operation"
  - Specify the outcome target at the submissions stage
  - Budget submission according to the outcome (set numerical target at the same time)

- **Objective**
  - Significance of Outcome-Based Public Management of Road Administration
    - Improving road administrative efficiency, spreading "outcome-based" philosophy to all departments, reforming awareness of administrative employees
    - Improving road administrative transparency, disclosing cost on "outcome" and rebuilding the trust between public and administration

- **Method**
  - Construct "Cycle of Management" in which numerical targets are set every year, and the evaluation results are reflected
  - Discretionary powers are given to the field office in exchange for strict evaluation of outcome
  - Shifting from "Budgeting by road type" to "Budgeting by performance"

- **Budgets**
  - Budget for inter-regional collaborative projects
  - Budget for improving designated national roads
  - Subsidize budget for improving national roads
  - Subsidize budget for modification of prefecture roads
  - Subsidize budget for street projects, etc.
  - Budget for projects to achieve smoother traffic
  - Budget for improving environment along roads
  - Maintenance budget for traffic safety facilities

- **Etc.**

- **Budget Submission**
  - National version (Jul 2003)
  - Regional version (Aug-Sep 2003)
  - Jun-Jul 2004
<table>
<thead>
<tr>
<th>Related Indicators</th>
<th>Items</th>
<th>Budget amount for 2003</th>
<th>Project cost</th>
<th>Requested amount for 2004</th>
<th>Project costj</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percentage of people able to have a safe and pleasant drive into the city, the center of daily life, in under 30 minutes</td>
<td>¥739.1 billion</td>
<td>¥756.3 billion</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Project cost for smooth transportation</td>
<td>¥2,084.3 billion</td>
<td>¥2,229.1 billion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Time loss due to congestion</td>
<td>¥2,229.1 billion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Project cost for regional alliance support</td>
<td>¥435.2 billion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ratio of high standard road usage</td>
<td>¥739.1 billion</td>
<td>¥756.3 billion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ratio of main cities in neighboring regions that are connected to each other by an upgraded national road</td>
<td>¥435.2 billion</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Project cost for improving transportation safety</td>
<td>¥126.3 billion</td>
<td>¥106.8 billion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ratio of nighttime noise</td>
<td>¥126.3 billion</td>
<td>¥106.8 billion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Project cost for improving roadside environment</td>
<td>¥450.7 billion</td>
<td>¥435.2 billion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percentage of cities that have rescue routes covering a wide area in the event of disasters</td>
<td>¥228.7 billion</td>
<td>¥222.8 billion</td>
<td></td>
<td></td>
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</tbody>
</table>
Evaluation of new projects, projects in progress and post-completion projects

- Preparation
  - Procedure for application of urban planning and assessment
- Commencement of work
  - Explanation of plan
    - Survey
    - Design consultation
  - Acquisition of right-of-way
  - Implementation of work
- Completion and opening

(upon beginning of preparation)

Evaluation of new projects
(stared on a trial basis for projects implemented in 1997 and on a full basis for those in 1999)

Upon commencement of the project

Public works project

While the project is underway

Re-evaluation
(started for projects in 1999)

Opening

After completion of the project

Post-evaluation
(started on a trial basis in 1999 in some selected areas, on a full basis for projects under direct management in 2001, and on a full basis for all projects in 2003)
Evaluation Method for National Expressways

**Will social benefit exceed cost***?**
Social benefit - Cost* > 0
Whether to continue on with the project or not

**Can the toll road cover administration cost?**
Toll income - Administration cost > 0

**Evaluation based on objective indicators:**
- Cost versus benefit (consideration of project progress)
- Profitability
- Other external effects
  evaluation based on above

**Routes and sections where toll is desirable**
- Improvement to be carried out by a new organization or corporation
- Review of structural standard, etc. to be considered with the locals aimed at further cost reduction

**Routes and sections where non-toll is desirable**
- Improvement through a new direct control system by MLIT

* Nakamura criterion used “balance of cost” in view of project progress, but “total cost” has been used from the viewpoint of making a stricter evaluation.

Sections where it is difficult to make improvement using toll road system.

Reconsider comprehensively by carrying out thorough review of structure and standard.
When a new project is evaluated, the prerequisites as well as effects and needs should be analyzed using evaluation indexes that include a benefit-cost ratio.

<table>
<thead>
<tr>
<th>Prerequisites of a project</th>
<th>Evaluation of the effects and necessity of a project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency of investment</td>
<td>[Indexes from the viewpoints of four policy themes]</td>
</tr>
<tr>
<td>(Benefits must exceed cost.)</td>
<td>1. Vitality  - Recovery of economic vitality through urban restoration and regional linkage -</td>
</tr>
<tr>
<td></td>
<td>- Example: It will form a circular road network in an urban area.</td>
</tr>
<tr>
<td>Completion of survey</td>
<td>2. Living  - Improvement of quality of life -</td>
</tr>
<tr>
<td>(Routes must have been settled and their right-of-way must have been acquired.)</td>
<td>- Example: It will help an area designated in the Traffic Barrier-free Law as an important development area become a barrier-free area.</td>
</tr>
<tr>
<td>Enabling environment</td>
<td>3. Safety  - Safe and secure living -</td>
</tr>
<tr>
<td>(The environment to ensure smooth execution of a project must have been established.)</td>
<td>- Example: It will make the road an emergency transport road.</td>
</tr>
<tr>
<td></td>
<td>4. Environment  - Creation and preservation of the environment -</td>
</tr>
<tr>
<td></td>
<td>- Example: It will reduce the level of noise.</td>
</tr>
<tr>
<td></td>
<td>(Evaluation indexes currently under review)</td>
</tr>
<tr>
<td>Route of Route</td>
<td>Sections Evaluated</td>
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<tr>
<td>---------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>National Expressway 1</td>
<td>Route 1: Norma to Romo</td>
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<tr>
<td></td>
<td>Route 2: Shinsa to Airai</td>
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<tr>
<td></td>
<td>Route 3: Kawa to Shiroya</td>
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</tbody>
</table>

Note: The table above shows the summary of project evaluation results for National Expressways in Japan. The data includes construction cost, traffic in the future, cost benefit analysis, external effect, and social benefit analysis. The routes are categorized based on the sections evaluated, and the data is presented in thousands of yen (M) and million yen ($M). The evaluation is classified as Nov (A), B, C, or D based on the current evaluation.
#### Data-oriented performance management by National Highway Offices

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<th>Traffic Volume in 1999 (vehicle/24 hr)</th>
<th>Traffic Volume in 1999 (cases/yr)</th>
<th>Traffic Volume in 1999 (cases/100 million vehicle-km)</th>
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</table>

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**Figures in this chart are just imagery and do not represent actual sections or locations.**
<Reference> Outline of "Probe Car Survey"

- Real-time collection of running speed data by route
- Summation of daily real-time data by weekday/weekend, type of car, direction, etc. allows calculation of the outcome indicators and application to project evaluation.
9. Improving Accountability and Consumer Satisfaction

Customer Satisfaction (CS)

The concept of CS should be applied to road administration; an investigation to understand the level of user satisfaction, in which the level of satisfaction of road users, or the customers of roads, is evaluated in five stages, from 5 points (very satisfied) to 1 point (very unsatisfied).

- Satisfaction with regard to roads in general
- Satisfaction by type of road
- Satisfaction by type of measure, such as congestion or traffic safety, etc.
- Satisfaction with regard to road administration
- Satisfaction with regard to toll road rates

Basically, evaluation by 5 levels, from 5 points (very satisfied) to 1 point (very unsatisfied)
Comparison of 2002 and 2003 Results

Results of road user satisfaction survey (comparison with the last year)

- Road administration has changed recently
- Scenery along frequently used road
- Vehicle flow and congestion of expressways and toll roads
- There is a sufficient road network for daily activities
- Environment along roads around the house
- Frequently used roads in general
- Frequently used trunk roads such as national and prefectural roads
- Road condition around the house in times of abnormal weather such as heavy rain or snow
- Roads used frequently in daily activities
- Driving safeness of frequently used roads
- Vehicle flow and congestion of frequently used roads
- Frequently used expressways and toll roads
- Pleasantness of frequently used sidewalk for walking or cycling
- Way road work is done of frequently used roads
- Present situation of expressways and rate of toll roads
"Performance of disclosing of information" was adopted as one of the indicators to indicate the level of achievement of road administration.

The target is 100 million hits per year (roughly one hit by each citizen) in 2007.

The benchmarking technique, which discloses actual hits per office, was adopted.
11. Issues for outcome-oriented road administration

-- departure from the idea that plans with indicators automatically make administration "outcome-oriented" --

Communicate strategically
To establish communication with publics based on the facts representing the revolution of road administration, utilizing several measures including human networks between staffs and opinion leaders. Not be vain of revolution excursively.

Measure outcomes using indicators
To formulate performance plan and performance report by measuring outcomes using indicators and setting annual numerical target being aware that measurement itself is only a part of outcome-oriented administration.

Build in "outcome-oriented" consciousness into routine procedures
To change consciousness of staffs into outcome-oriented by building outcome-oriented activities in budget request, execution plan or other annual routine procedures.

Gather materials (visual contents or databases) for consciousness for outcome-oriented administration
To gather best practices to share them with all worksites all over the country, and to order data with which every work office became able to make diagnoses with numerical data representing actual situation instead of business instincts of persons responsible.

The first step: measurement
The second step: diagnosis
The third step: decision
The forth step: communication