

NEXCO-WEST CAPABILITIES for EXPRESSWAYS

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We have solutions to make expressways in the world better.

Theme



- √ General Information
- ✓ Construction
- **√**0&M
- ✓ Overseas Business

Company Profile



Company name: West Nippon Expressway Company Ltd.

• Representative: Yoshinari Ishizuka (President, CEO)

• Date of establishment: October 1st, 2005

• Toll road operation: 3,453km (As of July. 2015)

• Number of Traffic: 2.71 million per day (Average in FY2014)

Shareholders' equity: 475 million USD

• Toll Revenue: 7,181 million USD (FY2014)

• Associated revenue : 1,442 million USD (FY2014)

• Employees: 2,376 (As of March 2015)

Head office: Osaka, Japan

Credit rating:
 A1 (MOODY'S)

AA+ (Rating & Investment Information, Inc.)

Business Scheme of Expressways in Japan



Japan Expressway Holding and Debt Repayment Agency (JEHDRA)

Holding expressways

Repaying debts

Agreement

Transferring expressway assets and debts

Leasing Expressway assets

Paying the rent

NEXCO-West

Constructing expressways

Operating expressways

Collecting tolls

Approval

Approval

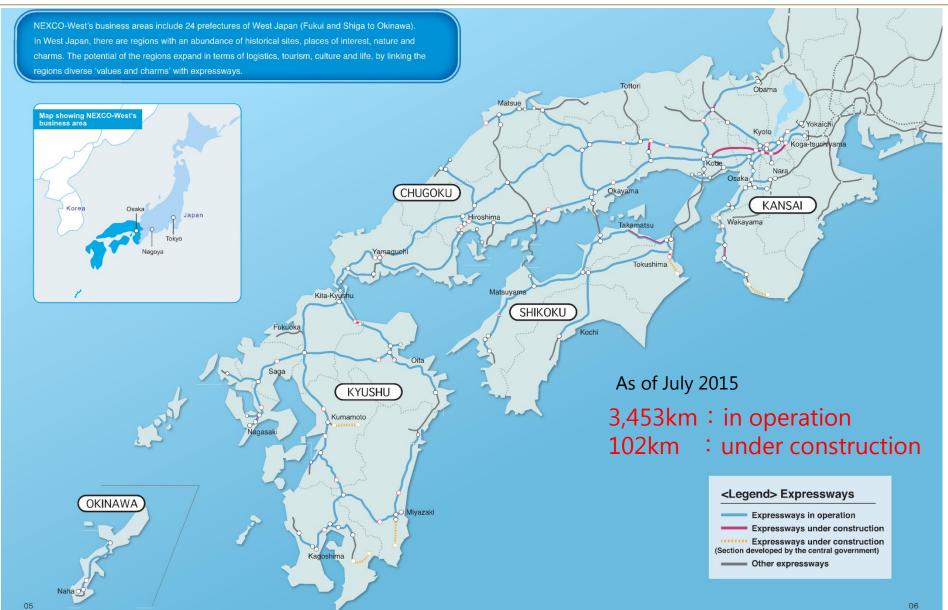
Minister of Land, Infrastructure, Transport and Tourism

Borrowing funds

General Information

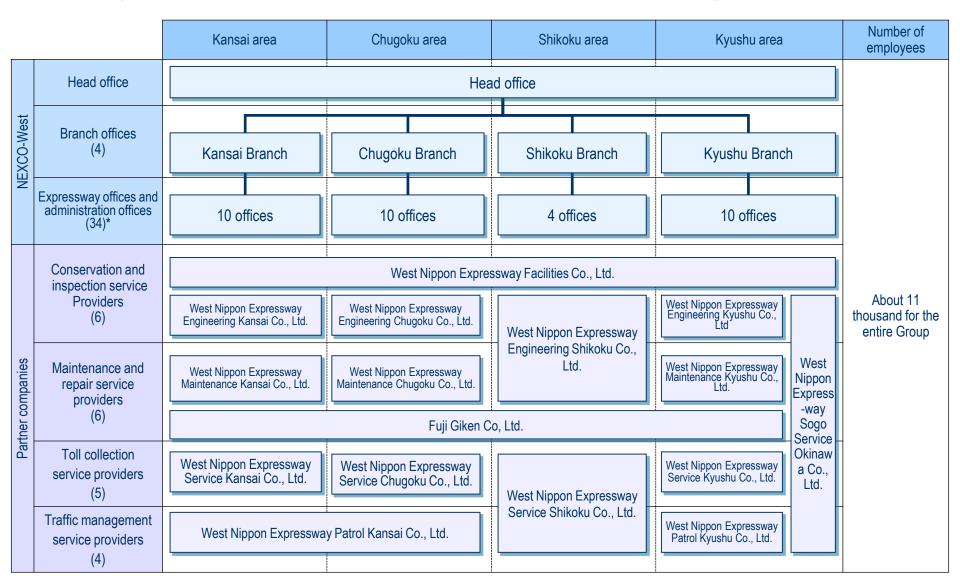
Business Area





Cooperative Structure with Affiliate Companies





*Operation office only

Business Fields



① Construction (102km)

- •Conduct study and research on the effects and feasibility of expressway projects
- Manage expressway construction projects in effective and efficient ways



② Operation and Maintenance (3,453km)

- •Operate and maintain expressways for 24-hour
- Main four category works:
 Toll collection works, Traffic management,
 Inspection, and Maintenance



3 Associated Business

(Rest Area Business, New Business and Overseas Business)

 Construct and operate restaurants, shops, gas stations and so forth



Total Management



Tasks in project

- **Planning**
- Public Meeting
 - Survey
 - Design
 - Design negotiation
 - Land acquisition
 - Construction
 - Opening

- ✓ Economic survey
- ✓ Estimation of traffic volume
- ✓ Environmental impact research
- ✓ Public meeting on project overview
- ✓ Installation of center peg
- ✓ Site survey
- √ Geological survey
- ✓ Road design
- ✓ Bridge design
- ✓ Tunnel design etc.
- ✓ Public meeting on design
- ✓ Installation of area indicating peg
- ✓ Negotiation of land acquisition
- ✓ Construction
- √ Completion inspection



Public meeting



Geological survey



Opening ceremony

Construction Records in Difficult Situations



Construction works without stopping traffic





Construction works in mountainous area (earthwork)





Business Fields in O&M



Toll collection



Toll collection at toll booth



Electronic Toll Collection (ETC)

Traffic management



Traffic Patrol Squad



Traffic control center

Inspection



Hammering inspection for bridge



Inspection for message sign board

Maintenance



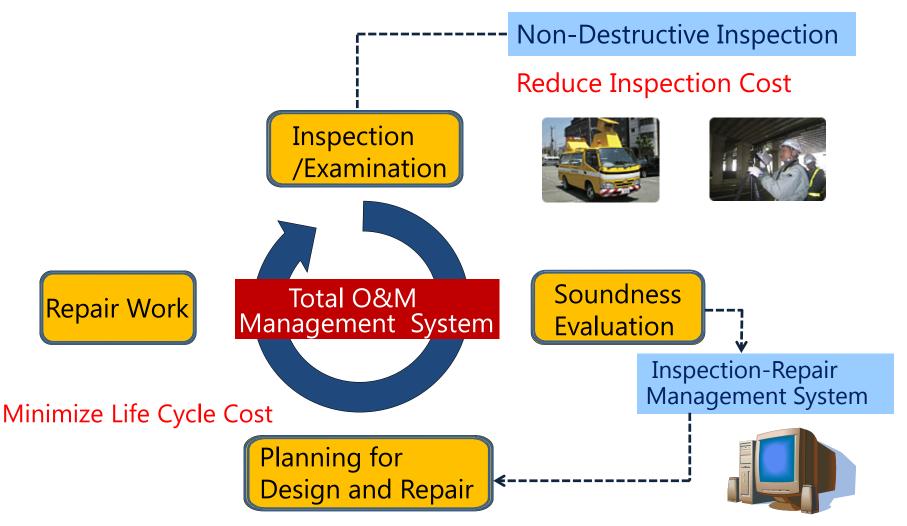
Road cleaning sweeper



Emergency pothole repair







Inspection/Repair History Database developed in our computer system

Non-Destructive Inspection System



Crack, Rut and IRI Inspection Vehicle

- Read the crack conditions and automatically output on drawing
- Rut and IRI conditions are output in CSV format
- Possible to inspect in the day time
- IRI is calculated by each 10m, 100m and 200m



Contents	Velocity	Width of Road	Accuracy of Measurement
①Crack Photographing System	Maximum 100km/h	5.0m	Readable: 1.0mm Crack
②Rut Measuring System		5.0m	Accuracy: ±3mm for Rut depth (%) in Traverse Profile
③IRI Measuring System		_	Accuracy: ±30% for standard deviation(%) in Vertical Profile

Non-Destructive Inspection System



Inspection Technology for Concrete Bridges

<Auto CIMA>

- High place inspection without special vehicle (Maximum height 40m)
- Objective evaluation without close visual inspection
- Just 15 minutes to get accurate drawing
- Automatic crack detection (Minimum width 0.2mm)

STEP2:
Basic Drawing
on Site (in 2min)

STEP4:
Detected Crack Drawing
(in 100min)

STEP1: Photographing

STEP3: Accurate Drawing (in 15min at Office)

Auto CIMA is highly praised in NETIS (New Technology Information Site):
 http://www.m-netis.mlit.go.jp/news/20140911.html (in Japanese)

Non-Destructive Inspection System



Screening Tool adopted in USA

Screening system for inspection places on bridge slabs.

Analysis software for slab deterioration

Infrared camera









Robotic Assisted Bridge Inspection Tool (RABIT™)

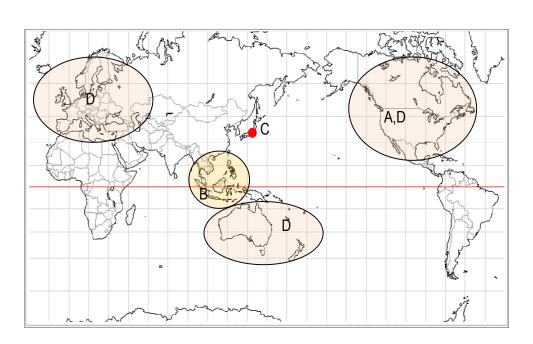
- Plan to inspect about 1,000 bridges in 7 states in 5 years
- FHWA(Federal Highway Administration) promotes to produce on a large scale

Business Fields Overseas



A) Non-Destructive Inspection Business

NEXCO-West USA, Inc., subsidiary company established in Washington DC in 2011, is extending a reach of inspection business.



B) PPP road projects in Indonesia

Representative office in Jakarta, established in 2011, participated in PPP road Project in 2014 for the first time.

C) JEXWAY(Est. 2011)

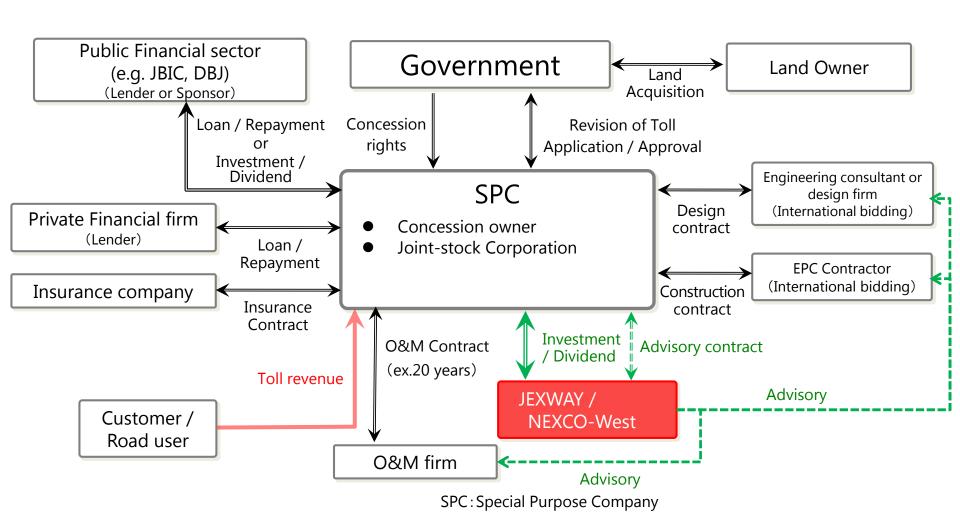
Jexway, jointly established by 5 expressway companies in Japan, specializes in overseas road project business.

D) PPP road projects in developed countries

Questing for PPP road projects in North America, Europe and Oceania, collaborating with other Japanese companies.

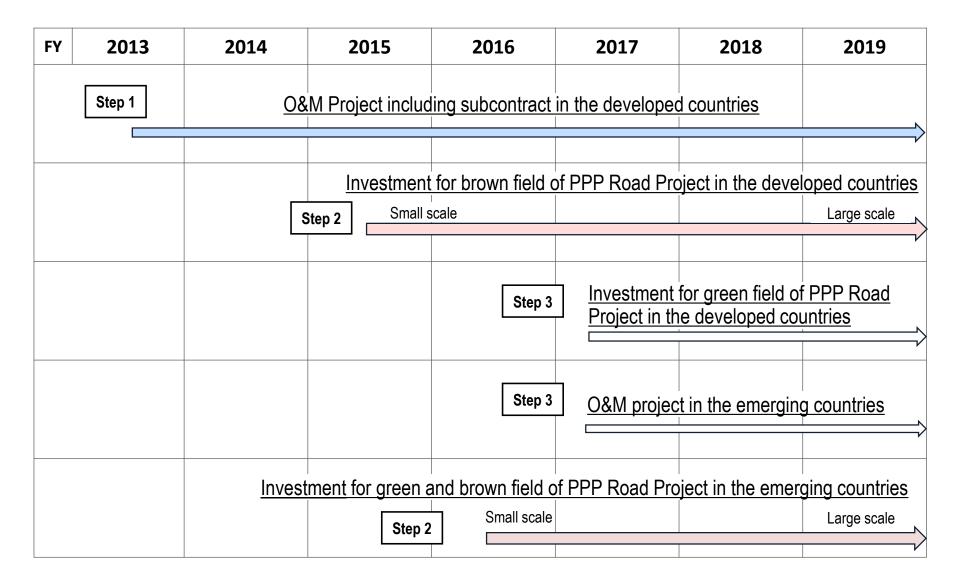
Business Strategy





Business Strategy





Ability in Consulting Services



We have conducted more than 20 projects with JICA and JBIC.

- Mainly contributed to development for Asian countries
- Highly Skilled advisory services for construction work control
- Financing with low-interest rate through JBIC fund or JICA fund



Advisory Services for Construction Work Control in Philippine



Track Records in the world

Participation in BSD Road Projects



1) PT Nusantara Infrastructure Tbk. (NI)

- Private infrastructure company
- Established in 1995
- Business field: transportation, communication, distribution networks, financial institutions and markets, and energy supply system

2) BSD Road Projects

Open: February 2nd 1999

Length: 7.2km

(Earthwork(fill:3.9km, cut: 3.1km),

5 bridges(0.2km), 1 IC, 1 Rest Area)

Period: Aug. 2010~ Oct. 2028

3) Business Participation Process:

- Jan. 2015 Share Purchase
- •Aug. 2015 Technical Cooperation (Plan)

