



The Project on Reviewing the Strategic Plan

of the Department of Highways
(2017-2021)

in Line with the 20-year
National Strategy



Executive Summary Report



The Project on Reviewing the Strategic Plan of the Department of Highways (2017-2021)

in Line with the 20-year National Strategy



Executive Summary Report

Review of strategies and plans

related to the Department of Highways' operations



The Department of Highways is a state agency under the Ministry of Transport. It is responsible for constructing highway infrastructure throughout the country as well as linking it with international highways. Highway maintenance is another responsibility of the department as it provides convenience and safety nationwide. The Department of Highways is aware of the importance of internal and external changes as well as the operation in accordance with the guideline for driving the country.

“Department of Highways” has realized the importance of the preparation of “**strategic plans**” in order to use as guideline for the operation to achieve success according to the mission to establish a government agency according to the law. Therefore, the Department of Highways prepared a “**Strategic Plan of the Department of Highways**” for the years 2017 - 2021, which became effective in 2017.

The 20-year National Strategic Plan (2018 - 2037) is the country's first national long-term strategy developed as framework and guideline

for all government agencies to ensure that the country achieve its vision of becoming “**a developed country with security, prosperity, and sustainability in accordance with the Sufficiency Economy Philosophy**” with the national slogan, “**Security, Prosperity, and Sustainability**”

After the National Strategy (2018-2037) was promulgated, the cabinet resolution, made on 4th December 2017, classified plan into 3 levels Plan Level 1: the 20-years National Strategy. It is a country's goal for sustainable national development in accordance with the principle of good governance which shall be employed as a framework for formulating consistent and integrated plans in a congruous drive to achieve the aforementioned goals, Plan Level 2: Master Plans under National Strategy, Country Reform Plan, National Economic and Social Development Plans, and Policy and National Security Plan; and Plan Level 3: a clear Action plan according to each agency's responsibility. It needs to be consistent with plan level 1 and 2.



Since the Strategic Plan of the Department of Highways would terminate in 2016 and the economic, social and environmental situations in the country had changed, the Strategic Plan of the Department of Highways for the years 2017 - 2021 has been reviewed in consistent with government policy, the 20-year National Strategy and used as a guideline for successful operation.

Therefore, the Department of Highways conducted a study and reviewed the 20-year National Strategy, Master Plans under National Strategy, Country Reform Plan, the 12th National Economic and Social Development Plan, Logistics Development Strategy Plan, the Strategic Plan of the Department of Highways for the years 2017 - 2021 and other related plans in order to develop a Department of Highways action plan Phase 1 (2020 - 2022), risk management plan of Department of Highways Phase 1 (2020 - 2022), and annual action plan of Department of Highways (2022), which would be used as guidelines for formulating the policy framework in operating and integrating the action plan with other agencies both internal and external effectively.

The Department of Highways has planned to develop a long-term land transport system plan by determining the main operation framework in 4 phases throughout 20 years according to the direction and future foresight of transportation development. It focuses on the continuous action plan in each phase and immediate solutions to basic issues on transportation in the first phase in order to achieve the sustainable goal in phase 4 along with the continuous development of organization to enhance transportation efficiency so that all citizens can conveniently accessed (inclusive transport) safety, and eco-friendly (Green and Safe Transport). Innovation, technology and management are used as crucial tools to improve highway system development process in every phase. The operation details of each phase is explained below.



Phase 1 (2000 - 2022)



It focuses on solving traffic basic problem on highway system network along with highway development that is safe for road users. Moreover, creating the foundation of organization structure, management system, work management, personnel competency, instruments and technology to support the development in the next phase and accelerate the infrastructure development in incomplete highway network or missing link/bottleneck align with the main transport corridors. The details of the project/ procedure are as follows:

1) To solve the road accident problem. The Moscow Declarations designated 2011 - 2020 as Decade of Action for Road Safety with the goal of reducing traffic-related fatalities to less than 10 fatalities per 100,000 population by 2020.

2) To develop and promote service quality standards of highway system network by training transportation service providers and relevant personnel so that they have necessary knowledge and skills to work in compliance with the set standards.



Phase 2 (2023 - 2027)

Development of Phase 2 continues from phase 1. It focuses on creating learning organization culture that is consistent with the current and future situation together with digital transformation in order to develop a work plan. The details of the project/procedure are as follows:

1) To monitor and develop a road safety system to reduce road fatality rate according to the Moscow Declarations.

2) To monitor and develop efficient maintenance of highway and bridges to ensure serviceability as well as road users' convenience, safety and satisfaction.

3) To develop highway system network according to the Intercity Motorway Master Plan.

4) To develop highway system network to promote logistics and specific area development such as special economic zone and Eastern Economic Corridor (EEC) development.

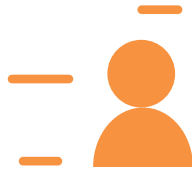
5) To develop highway system network to support Transit Oriented Development (TOD).



6) To develop the accessible highway system network for every group of people including elderly people, people with disabilities and low-income people with the standard convenient equipment and service providers who have knowledge in facilitating correctly.

7) To adopt technology and innovation to develop appropriated highway system network including organization reform, reorganization and law in order to drive highway system network development to achieve a digital transport system.

8) To promote serviceability to meet the high standard by developing its own technology and innovation, reducing dependence on technology from abroad to develop sustainable transportation systems, for example, the "Made in Thailand" product policy, and so forth.



Phase 3 (2028 - 2032)

Development of Phase 3 continues from phase 2. It focuses on improving the quality of highway network serviceability by developing the use of technology and innovation continuously. The details of the project/procedure are as follows:

1) To monitor and develop the road safety system, aims to reduce the mortality rate from road accident.

2) To monitor and develop efficient maintenance of highway and bridges to ensure serviceability as well as road users' convenience, safety, and satisfaction.

3) To develop highway system network according to the Intercity Motorway Master Plan.

4) To develop highway system network to support Transit Oriented Development (TOD).

5) To develop highway network to promote logistics and multimodal linkage among road, railway, water and air transport systems.

6) To develop the accessible highway system network for every group of people including elderly people, people with disabilities



and low-income people with the standard convenient equipment and service providers who have knowledge in facilitating correctly.

7) To promote serviceability to meet the high standard by developing its own technology and innovation.

8) To adopt technology and innovation to develop appropriate highway system network including organization reform, reorganization and law in order to drive highway system network development to achieve a digital transport system.

9) To develop energy-saving and eco-friendly highway system network.

10) To enhance highway network to support traveling using electric technology and unmanned vehicles.



Phase 4 (2029 - 2032)

Development of Phase 4 continues from phase 3. It focuses on creating organization culture based on sustainability to have a positive effect for the country in competitiveness, society toward people's quality of life and environment in line with the international guideline. The details of the project/procedure are as follows:

1) To monitor and develop the road safety system, aims to reduce the mortality rate from road accident.

2) To monitor and develop efficient maintenance of highway and bridges to ensure serviceability as well as road users' convenience, safety and satisfaction.

3 To develop highway system network according to the Intercity Motorway Master Plan.

4) To develop highway system network to support Transit Oriented Development (TOD).

5) To adopt technology and innovation to develop appropriated highway system network including organization reform, reorganization and law in order to drive highway system network development to achieve a digital transport system.



6) To develop energy-saving and eco-friendly highway system network.

7) To develop the accessible highway system network for every group of people including elderly people, people with disabilities and low-income people with the standard convenient equipment and service providers who have knowledge in facilitating correctly.

8) To develop its own technology and innovation to build knowledge about highway system network development for the country and increase national competitiveness on sustainable basis.

The development of Department of Highways Action plan phase 1 (2020 - 2022) is done simultaneously with the preparation of Risk Management Plan in the context of Department of Highways Action plan phase 1 (2020 - 2022) in order to optimize operational efficiency. **Simultaneously the annual Action plan (2022)**, is developed to ensure operational consistency, efficiency, transparency, and accountability which leads to people's happiness, economic drive, participation of all sectors and national benefit by considering on sufficient and sustainable economy. Simultaneously, the Department of Highways Action plan phase 1 (2020 - 2022) is done with Levels 1, 2 and 3 to make the operation unity, to promote work and integration between agencies, to reduce redundancy and wasteful use of the natural resources as well as to support budget allocation for maximum efficiency.

Strategy and relevant plans review on the operation of the Department of Highways. In reviewing Plan Levels 1, 2 and 3 of the office of the National Economic and Social Development Councils, policy deployment to strategy for driving each development issue is determined to 2 characteristics which are: a strategy directly connected to development issue driven by the agencies where its mission align with the direct development issue; and a strategy that supports the development issue driven by the agencies where its mission support the main agencies to drive perfectly. To make it more clear, the consultant classified the strategy into 2 groups which are direct strategy and indirect strategy under various plan levels.

Plan level 1

Strategy 2: Competitiveness Enhancement

Plan level 2

Master Plan under National Strategy

Issue (7)	Infrastructure, logistics and digital systems
Issue (2)	Foreign affairs
Issue (5)	Tourism
Issue (6)	Smart city and space
Issue (9)	Special economic zone
Issue (18)	Eco-friendly growth

Plan level 3

Ageria



The 20-year strategic plan on transportation development (2018-2037)

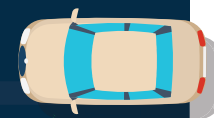
Functional

Strategy 1:	Integrated Transport Systems
Strategy 2:	Transport Services
Strategy 5:	Technology and Innovation

Strategy 1: Highway System Development

Summary Review of Department of highways action plans and related plans

National Strategy



Strategy 4: Social Cohesion and Equity

Strategy 5: Eco-Friendly Development and Growth

Country Reform Plan

Issue (5)
Main issue 1: Economy to increase national competitiveness
Sub issue 1.2: Infrastructure development in the country and regional connection
Reform activities 4: become a regional hub for trade and investment
Issue 1: Logistics development for connectivity

The 12th National Economic and Social Development

Strategy 7: Infrastructure and logistics system development
Strategy 3: Economy strengthening
Strategy 4: Eco-friendly growth for sustainable development
Strategy 9: Regional, urban, and economic zone development
Strategy 10: International cooperation for development

The Third Thailand Logistics Development Plan (2017-2021)

Strategy 2: Development of infrastructure and facilities

Strategy 1: Supply chain enhancement

The Transportation Action Plan Phase 1 (2020-2022)

Strategy 1: Accessible & Eco-friendly
Strategy 2: Safety & Security
Strategy 3: Efficiency & Competency
Strategy 4: Strategy Driven Factors

The 3rd Transportation Action Plan to support Thailand's logistics system development (2017-2021)

Strategy 1: Domestic Infrastructure Connectivity
Strategy 2: Gateway for Linkage
Strategy 3: Area for Economic Drive



Action Plan of Department of Highways Phase 1 (2020-2022)

Strategy 2: Level of Serviceability

Strategy 3: Safety

Strategy 4: Management System

Connectivity between Plan level 1 (National Strategy), level 2 and 3 with the Department of Highways Action Plan Phase 1 (2017 - 2021)
Remarks: Blue letter means Direct Strategy Green letter means Indirect Strategy

The Strengths, Weaknesses, Opportunities and Threats Analysis

of Department of Highway (SWOT Analysis)

The Department of Highways has analyzed the Strengths, Weaknesses, Opportunities and Threats (SWOT analysis) based on the results of the internal factor analysis, the external factor analysis, the focus group as well as the results of questionnaires and interviews with other stakeholders as shown below.

S



Strengths

- S1 Agencies under Department of Highways clearly understand their responsibilities and mission related to DoH goals
- S2 Having specialized knowledge/expertise in the organization
- S3 Knowledge management and transfer to the staff
- S4 Capability to get to funding resources

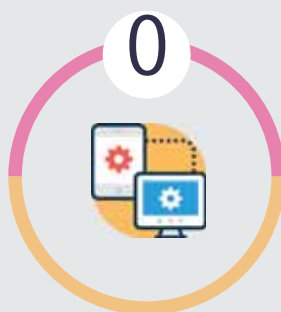
W



Weaknesses

- W1 Insufficient staff and lack of specific expertise
- W2 Success Indicators not related to the operation guidelines
- W3 Lack of regulations for risk planning and implementation the plan
- W4 Lack of accuracy on project assessment causing inefficient and ineffective allocation of state budget and loans
- W5 Lack of communication in the organization
- W6 Lack of integration within the operation between organizations

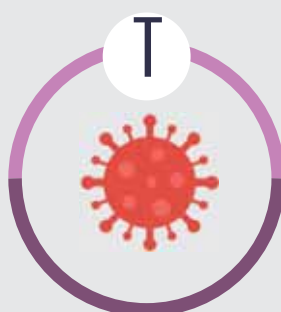
O



Opportunities

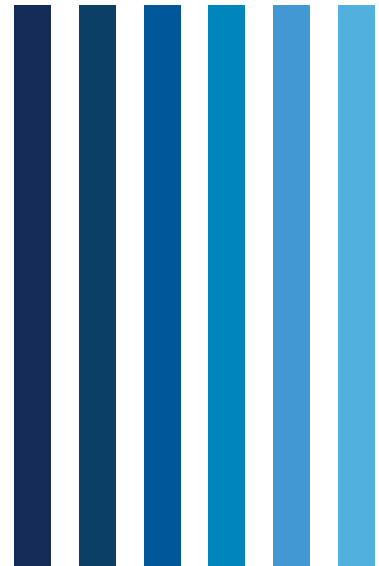
- O1 Access to a variety of knowledge, new ideas and technologies on road development
- O2 Collaboration with private sector and educational institutions

T



Threats

- T1 The COVID-19 pandemic situations
- T2 Misunderstanding and concerns of public regarding the impact from operations of the Department of Highways



Department of Highways Action Plan Phase 1 (2020 - 2022)



Mission



Develop highway system to create perfect connectivity, accessibility and mobility to make progress of the country both in terms of economics and society



Supervise serviceability and safety on highways to meet the standard in order to delivery good service to people



Develop organization Management system according to Good Governance principle

Vision

Safe and convenient highway system connects to development of basic infrastructure of the country



The dimension of the convenient highway system



The dimension of the safety highway system



The dimension of the connected highway system



The dimension of the organization highway system

The success assessment for the Department of Highways' Vision. It defines the critical assessment model that appears in the four dimension vision

Target of the service

1) Development of highway system to create connectivity, accessibility and mobility for balanced and perfect travel, transportation and logistics systems

2) Development and maintenance of serviceability of highway system that is fast, inclusive, and up-to-date

3) Integrated supervision and development of safety standard on highway system in order to elevate quality of life of people and reduce economic loss

4) Continuous development of organizational management system according to Good Governance principle in order to connect balance in economics, society and environment based on sustainability

Value

“High performance, Intelligent technology, Good knowledge, Honesty, Work smart, Accountability, Year-round commitment, Synergy”



High performance



Work smart



Intelligent technology



Accountability



Good knowledge



Year-round commitment



Honesty



Synergy



Culture

D

Deliver Good Service to People

O

Obligate Governance and Sustainability

H

Hold Accountability for Interests of Nation and People



Action plan, Goals, Indicators, Development Guidelines

3.2.1 Action plan on Highway system Development

1) Target: Highway system development which creates connectivity, accessibility and mobility that is qualified and responds to the demands

2) Goals:

(2.1) To have highway system that responds to the demands of the users, make progress of the economy and develop the country by developing highway system's network that is perfectly accessible and connectable

(2.2) To have highway system with mobility to support the journey, transportation and logistics system by monitoring and solving the performance of highway system continuously

(2.3) To support sustainable highway system development by gaining understanding and cooperating with local people and private sector in project development procedure

(2.4) To continuously develop efficiency of highway system development process by conducting modern researches, innovations, standards, regulations, technology and digital technology integratedly and sustainably

Key Success Indicators and Goals for Action plan on Highway System Development

Key Success Indicators	Year 2018	Year 2019	Year 2020	Year 2021	Year 2022
(1) The success of development and improvement on the national highways and/or concession highways development as planned.	80	80	80	85	90
Unit: Percent					
(2) The success of development and improvement on the motorway development as planned	80	80	80	85	90
Unit: Percent					
(3) Proportion of population access to various forms of transportation within 1 hour	77.0	77.5	78.0	78.5	79.0
Unit: Percent					
(4) Cost of goods transportation per GDP, considering only the transportation on highway system	4.3	4.3	4.2	4.1	4.0
Unit: Percent					
(5) Satisfaction of the relevant parties on highway system development	80	80	80	80	80
Unit: Percent					



3) Development Guidelines

(3.1) Develop and improve highway system in order to respond to traffic demand of the country and the region

(3.2) Develop and improve highway system in order to support Special Economic Zone, tourism, border trade and security

(3.3) Increase mobility on highway system and develop connectivity with various forms of related transportation system

(3.4) Develop and increase efficiency of the investment with private sector, design survey, land ownership acquisition and environmental management

(3.5) Develop and improve standard and regulations related to roads in terms of design, construction, control, maintenance, safety and services

(3.6) Develop and promote development researches, innovation creation, use of technology, information technology system creation and integration of digital technology in terms of highway system development

4) Plans/Projects/Activities

(4.1) Overpasses on National Highway No. 35 Thon Buri-Pak Tho (Rama II) Construction Project

(4.2) National Highway Network Construction Project

(4.3) Highway development project to support the Eastern Economic Corridor (EEC)

(4.4) Parallel Skyway Extension on Borommaratchachonnani Road Construction Project

(4.5) Project to study and analyze the suitability of private sector investment

(4.6) Bridge and drainage system development

(4.7) Resolve traffic issues in Bangkok, its vicinity and the main cities

(4.8) Rigorously expanding the main roads into four traffic lanes (Phase 2)

3.2.2 Action Plan on Serviceability Level

1) **Target:** Maintenance of serviceability level of highway system to continuously comply with the standard

2) **Goals:**

(2.1) To have highway system that maintains good serviceability by maintenance of highway system to continuously comply with the standard

(2.2) To efficiently facilitate the users by controlling truck weight to meet the standard and developing forms of service to be up-to-date

(2.3) To support the sustainable maintenance of serviceability level, landscape of the road shoulder, pavement of highway system via cooperation from local people and private sectors

(2.4) To develop efficiency of continuous serviceability maintenance by using researches, innovation, technology, modern digital technology in an integrated and sustainable manner

Key Success Indicators and Goals for Action plan on Serviceability Level

Key Success Indicators	Year 2018	Year 2019	Year 2020	Year 2021	Year 2022
(1) Percentage of the distance of national highways that have better criteria on International Roughness Index of road surface than specified criteria (IRI not more than 3.5 meter per kilometer)	82	82	82	82	82
Unit: Percent					
(2) Proportion of trucks that exceeds the weight limit decreases, comparing to the base case (per million trucks)	10	10	15	15	20
Unit: Percent					
(3) Average satisfaction of the users and beneficiary concerning the maintenance of serviceability level of highway system	80	80	80	80	80
Unit: Percent					

3) Development Guidelines

(3.1) Develop and increase efficiency of highway system maintenance

(3.2) Develop and increase efficiency of disaster solving on highway system

(3.3) Develop and increase efficiency of vehicle weight management for logistics and transportation system

(3.4) Develop and increase efficiency of serviceability

(3.5) Develop and increase efficiency of the maintenance of landscape of the road shoulder, pavement as well as participation of the locals and people sector

(3.6) Develop and promote development researches, innovation creation, use of technology, information technology system creation and integration of digital technology in terms of maintenance and other serviceability on highway system

4) Plans/Projects/Activities

(4.1) The production of highway network maintenance

(4.2) Restoration of inter-regional highway network project

(4.3) The production of highway network development

(4.4) Rest Area and Weight Control Station Development Project



3.2.3 Action plan on Safety

1) Target: Safety promotion of highway system integratedly

2) Goals:

(2.1) To have safe highway system by duly and continuously revising and controlling according to the standards

(2.2) To ensure safety on modern highway system by continuously developing traffic system,

controlling system and Road Assessment Index

(2.3) To promote sustainable safety on highway system by integratedly supporting value and understanding on safety with people and related organizations

(2.4) To develop efficiency of continuous safety on highway system by using researches, innovation, technology, modern digital technology integratedly and sustainably

Key Success Indicators and Goals for Action Plan on Safety

Key Success Indicators	Year 2018	Year 2019	Year 2020	Year 2021	Year 2022
(1) New roads with road safety index passed criteria 3	60	65	70	75	75
Unit: Percent					
(2) Crash rate per traveling vehicle	4.55	4.39	4.23	4.07	3.87
Time per hundred million kilometres					
(3) Death rate from accidents on highways per one hundred thousand people	2.66	2.39	2.15	1.94	1.75
Unit: people per one hundred thousand people					
(4) The success in resolving risky and dangerous point on the highway	80	80	80	85	90
Unit: Percent					
(5) Percent of satisfaction of the related parties in terms of safety on highways	80	80	80	80	80
Unit: Percent					

3) Development Guidelines

(3.1) Develop and increase efficiency of accident prevention in order to increase security level and decrease accidents on highway system

(3.2) Develop and improve accident reduction measures in order to increase security level and decrease accident on highway system

(3.3) Develop and increase efficiency of the supervision on any usage and actions on roads, road shoulders and pavements, as well as other use of highway's assets

(3.4) Develop and support publication and study of rules, values and discipline on safety on highway system

(3.5) Develop and increase efficiency of traffic systems and related monitoring systems

(3.6) Develop and promote development researches, innovation creation, use of

technology, information technology system creation and integration of digital technology in terms of safety provision on highway system

4) Plans/Projects/Activities

(4.1) Road Safety Facilitation Activity

(4.2) Preventing and Safety Facilitation during Festivals Activity

(4.3) Improving Road Safety in front of schools Activity

(4.4) Construction of Overpasses across Railways Activity

(4.5) Upgrading Road Safety of Large Intersection Activity

(4.6) Upgrading Road Safety at-grade U-turns Activity

(4.7) Improving Road Safety on Hazardous Intersection Activity

3.2.4 Action Plan on Management System

1) Target: Sustainable promotion of organization management system with Good Governance

2) Goals:

(2.1) To be responsible for the mission by pursuing the strategies through the work plan, projects and activities in an integrated manner

(2.2) To continuously have efficient

organization by increasing the efficiency of management, resources, public relations, environment management and digital technology

(2.3) To have sustainable organization by developing personnel, researches, innovations, laws, regulations, rules and work procedures

(2.4) To be responsible for public benefits by taking actions and managing requests based on honesty and Good Governance

Key Success Indicators and Goals for Action Plan on Management System

Key Success Indicators	Year 2018	Year 2019	Year 2020	Year 2021	Year 2022
(1) The success level of budget expense procedure (PART)	72	73	74	75	76
Unit: Percent					
(2) Success of the operation according to information technology and digital technology development plans of Department of Highways' internal parties	80	80	80	85	85
Unit: Percent					
(3) Success of the actual utilization from researches, development, as well as innovation creation of Department of Highways' internal parties	50	50	50	60	60
Unit: Percent					
(4) Success of complaint management on the highway	86	86	86	86	86
Unit: Percent					
(5) Satisfaction of stakeholders	80	80	80	80	80
Unit: Percent					

3) Development Guidelines

(3.1) Develop and support strategies implementation and monitoring as well as developing work plan, projects and activities

(3.2) Develop and increase efficiency of procurement, machine management, public relations and operation of the organization

(3.3) Develop and support the preparation of digital technology infrastructure

(3.4) Develop and support human resource development and management, together with knowledge and work experience expansion

(3.5) Develop and support development researches, innovation creation, as well as the revision of laws, regulations, rules and operational procedure in order to catch up with global society

(3.6) Develop and support complaint management, environmental management, participation with the locals and management system based on Good Governance system

4) Plans/Projects/Activities

(4.1) Expenses list of government staff

Throughout the year, the Department of Highways has determined to continually develop highway network for road users and develop highway system to create perfect connectivity, accessibility and mobility to make progress for the country both in terms of economy and society. It also supervises serviceability and safety on highways to meet the standard in order to deliver good service to people.

In 2020 - 2022, the Department of Highways has planned to develop highway network throughout the country to create connectivity and mobility for balanced and

perfect travel and transportation system, as well as logistics. Moreover, it maintains the serviceability of the highway system that is fast, inclusive and up-to-date; integrated supervision and development of safety standard on highway system in order to elevate quality of life of people and reduce economic loss; and continuously develops organizational management system according to Good Governance in order to connect balance in economy, society and environment based on sustainability. The important projects operated by the Department of Highways are as follows.

Production/plan/project/activity	Fiscal year and budget (unit: million baht)			Performance	
	2020	2021	2022	2020	2021
Strategic Issue No 1: Highway system development which creates connectivity, accessibility and mobility that is qualified and responds to the demands					
Strategy 1.1: Develop and improve highway system in order to respond to traffic demand of the country and the region					
The production of highway network has been developed (1/2)	927.6085	955.4368	1,109.7100	1,562.0000	1,210.4500
Bridge and drainage system development activity	927.6085	955.4368	1,109.7100	1,562.0000	1,210.4500
Intercity motorway construction project (1/2)	32,942.9102	33,931.1975	8,454.8593	12,649.4994	10,450.2717
Construction of intercity motorways	32,942.9102	33,931.1975	8,454.8593	12,649.4994	10,450.2717
Overpasses on National Highway No. 35	966.9140	1,739.2966	4,490.8034	966.9140	1,739.2966
Thon Buri - Pak Tho (Rama II) construction project					
Overpasses on National Highway No. 35	966.9140**	1,739.2966**	4,490.8034	966.9140	1,739.2966
Thon Buri - Pak Tho (Rama II) construction					
National highway network construction project (1/5)	30,617.9397	33,153.0950	40,755.5610	34,340.6707	43,403.7000
Highway construction to develop regional area	3,134.0000**	5,081.9000**	3,771.1800	3,134.0000	4,931.9000
National highway construction	9,608.8066	9,897.0708	19,036.7377	13,410.8553	19,605.3991
Bridge and interchange construction	3,723.2819	3,834.9804	2,341.1595	2,878.1513	3,174.2069
Resolve traffic issues in Bangkok, its vicinity and main cities	1,474.1354	1,518.3595	4,096.9803	3,193.9030	4,607.7446
Acceleration of main road expansion into four traffic lanes (Phase 2) Activity	6,589.5374	6,787.2235	2,802.0335	4,448.8631	3,124.3994
Highway development through community	377.6804	389.0108	2,308.2700	1,564.4000	2,315.5000
Construction activity to increase highway efficiency	5,710.4980**	5,644.5500**	5,687.2900	5,710.4980	5,644.5500
Construction activity to increase road shoulder	-	-	711.9100	-	-
Strategy 1.2: Develop and improve highway system in order to support Special Economic Zone, tourism, border trade and security					
National highway network construction project (2/5)	8,067.7297	8,309.7616	4,791.7576	7,588.8105	7,052.5067
Highway construction to support the special economic zone	4,305.7412	4,434.9134	2,963.7672	3,804.5191	3,368.7361
International highway linkage construction	3,761.9885	3,874.8482	1,827.9904	3,784.2914	3,683.7706
Highway development project to support Eastern Economic Corridor (EEC)	4,144.8302	4,269.1751	6,047.6625	9,586.7292	8,534.3795
Highway development activity to support Eastern Economic Corridor (EEC)	4,144.8302	4,269.1751	6,047.6625	9,586.7292	8,534.3795

Remarks: Data in 2020 and 2021 Report Review on the 4-year Action Plan of Department of Highways according to the Strategic Plan of Department of Highways 2017 - 2021

*Name of plan/project/activity was changed

** Document Review from Expenditure Budget, Fiscal years 2020 and 2021



Production/plan/project/activity	Fiscal year and budget (unit: million baht)			Performance	
	2020	2021	2022	2020	2021
Strategy 1.3: Increase mobility on highway system and develop connectivity with multimodal transportation					
National highway network construction project 3/5)	2,179.7718	2,245.1650	992.3270	1,691.2630	1,082.9785
Highway construction connecting with transport system	2,179.7718	2,245.1650	992.3270	1,691.2630	1,082.9785
Parallel skyway extension on Borommaratchachon-nani Road construction project	44.4570	45.7907	-	57.1408	-
Parallel skyway extension on Borommaratchachonnani Road construction	44.4570	45.7907	-	57.1408	-
Strategy 1.4: Develop and increase efficiency of the investment with private sector, design survey, land ownership acquisition and environmental management					
Intercity motorway construction project (2/2)	4,113.8986	4,237.3156	-	-	-
Land ownership acquisition for intercity motorway construction	4,113.8986	4,237.3156	-	-	-
National highway network construction project (4/5)	3,182.7000	3,278.1810	3,249.9892	3,202.2705	3,532.8794
Land ownership acquisition for highway construction	3,182.7000	3,278.1810	3,249.9892	3,202.2705	3,532.8794
Project to study and analyze the suitability of private sector investment	38.7229	39.8845	-	53.6026	-
Study and analysis of the suitability of private sector investment	38.7229	39.8845	-	53.6026	-
Strategic Issue No 2: Maintenance of serviceability level of highway system to continuously comply with the standard					
Strategy 2.1: Develop and increase efficiency of highway system maintenance					
The production of highway network has been maintained (1/4)	18,401.3670	19,479.9168	21,062.4889	20,760.2074	22,640.4501
Highway maintenance	18,401.3670	18,953.4081	20,697.1549	20,760.2074	22,113.9414
Bridge maintenance	-	526.5087**	365.3340	-	526.5087
Restoration of inter-regional highway network Project	5,743.8883	5,603.8654	6,095.4532	5,157.2628	6,651.9323
Restoration of inter-regional highway network	4,080.1210**	4,202.5247**	4,284.6100	3,493.4955	5,250.5916
Increasing service efficiency of main highways	1,663.7673**	1,401.3407**	1,810.8432	1,663.7673	1,401.3407
Strategy 2.2: Develop and increase efficiency of disaster solving on highway system					
The production of highway network has been maintained (2/4)	212.1800	218.5454	200.0000	200.0000	200.0000
Solving urgent traffic problems	212.1800	218.5454	200.0000	200.0000	200.0000

Remarks: Data in 2020 and 2021 Report Review on the 4-year Action Plan of Department of Highways according to the Strategic Plan of Department of Highways 2017 - 2021

*Name of plan/project/activity was changed

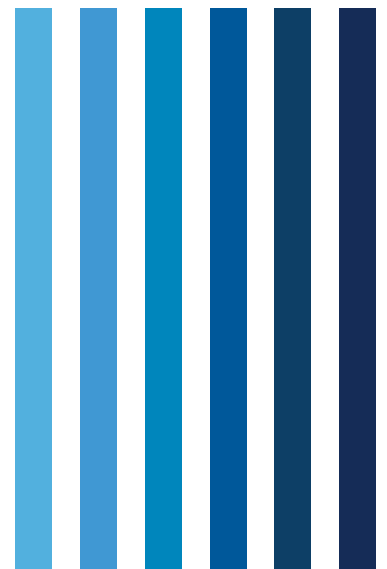
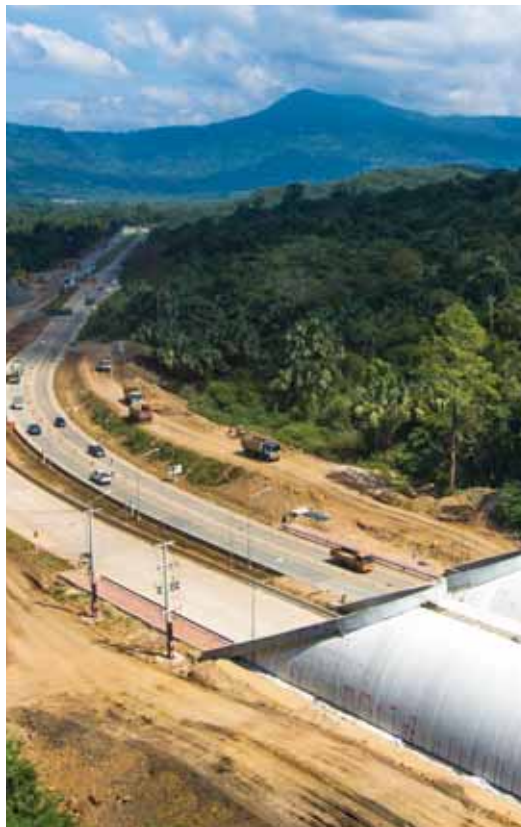
** Document Review from Expenditure Budget, Fiscal years 2020 and 2021

Production/plan/project/activity	Fiscal year and budget (unit: million baht)			Performance	
	2020	2021	2022	2020	2021
Strategy 2.3: Develop and increase efficiency of vehicle weight management for logistics and transportation system					
The production of highway network has been maintained (3/4)	819.3313	843.9112	529.0730	439.9732	416.8800
Vehicle weight control on highways	819.3313	843.9112	529.0730	439.9732	416.8800
Strategy 2.4: Develop and increase efficiency of serviceability					
Rest area and weight control station development project	1,263.6640	2,103.8559	1,980.9894	1,263.6640	2,103.8559
Rest area and weight control station development	1,263.6640	1,660.4832	1,547.9794	1,263.6640	1,660.4832
Rest area construction to meet road work standards	-	443.3727**	433.0100	-	443.3727
Strategy 2.5: Develop and increase efficiency of the maintenance of landscape, the road shoulder, pavement as well as participation of the locals and people sector					
The production of highway network has been maintained (4/4)	-	218.0000	247.0000	-	218.0000
Improve the highway landscape and architecture	-	218.0000**	247.0000	-	218.0000
Strategic Issue No 3: Safety promotion of highway system integratedly					
Strategy 3.1: Develop and increase efficiency of the accident prevention to promote safety and reduce accident on highways					
Production of safe highway network	4,525.6480	4,334.7584	4,910.5596	4,387.8234	5,330.6746
Facilitating and supporting highway police's operations of road safety	538.7236	554.8854	394.9117	520.3530	476.5411
Road safety facilitation	3,282.4246	3,380.8973	4,277.6451	3,170.9303	4,598.6354
Preventing and safety facilitation during festivals	23.3398	24.0400	12.0821	21.4701	21.4701
Increasing the efficiency of traffic signage on ASEAN highway	106.0900	109.2727	51.5000	100.0000	48.4260
Improving road safety in front of schools	575.0700**	265.6630**	174.4207	575.0700	185.6020
National highway network construction project (5/5)	1,209.9713	1,246.2704	948.1859	1,117.0168	975.2045
Construction of overpasses across railways	1,209.9713	1,246.2704	948.1859	1,117.0168	975.2045
Highway safety enhancement project	1,525.1488	2,888.2432	3,525.4800	2,086.3900	3,663.3290
Upgrading road safety on large intersections	1,215.6949	1,252.1657	1,643.3820	1,702.5000	1,769.9910
Improving the direction of lanes for safety	309.4539	318.7375	539.8470	383.8900	575.9980
Upgrading highway hazard prevention standards	-	817.3400**	801.8510	-	817.3400
Upgrading road safety at-grade U-turns	-	500.0000*	474.9000	-	500.0000
Improving road safety on hazardous intersections	-	-	65.5000	-	-
Strategic Issue No 4: Sustainable promotion of organization management system with Good Governance					
Strategy 4.1: Develop and support strategies implementation and monitoring as well as developing work plan, projects and activities					
Expenses list of government staff	5,386.9395	5,548.5476	4,926.0066	5,067.9898	5,043.4298
List of government staff	5,386.9395	5,548.5476	4,926.0066	5,067.9898	5,043.4298
Developed highway network productivity (2/2)	2,340.1545	2,410.3592	1,104.1420	1,404.2035	1,396.7067
Directing and supporting highway development	2,340.1545	2,410.3592	1,104.1420	1,404.2035	1,396.7067

Remarks: Data in 2020 and 2021 Report Review on the 4-year Action Plan of Department of Highways according to the Strategic Plan of Department of Highways 2017 - 2021

*Name of plan/project/activity was changed

** Document Review from Expenditure Budget, Fiscal years 2020 and 2021





Risk management

Risk Management Plan under the Action Plan of DOH Phase 1 (2020 - 2022)

The Department of Highways has determined that the action plans and risk management plans are essential tools to help the Department of Highways to achieve the indicated goals. The Department of Highways started preparation of the in-house risk management system in the fiscal year 2006 with an aim to reduce or avoid possible risk factors which may cause damage or losses to the organization as well as to ensure that the organization could operate according to the indicated strategic goals.

Based on the above-mentioned risk factors, the consultant has prioritized the risk factors in large and small group brainstorming meetings with the management of the Department of Highways. It was found that there are 5 risk factors at high-very high levels, which are:



1. Delay in disbursement of budget due to the obstacle in the area such as late handover of land, utilities problems, highway encroachment problems, prohibited tree problems



2. Over-budgeted construction cost or cost overrun



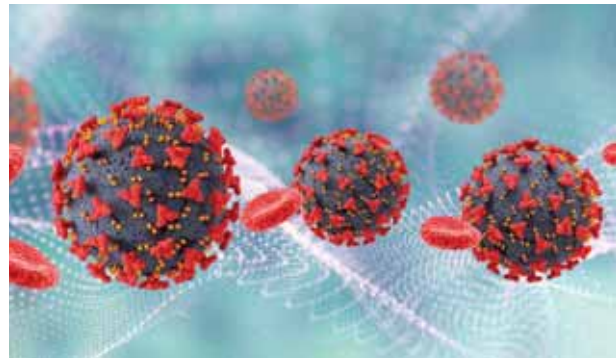
3. Road closed zone or damage caused by external factors such as natural disasters, which resulted in road closure for more than 24 hours



4. Accident at work zone



5. The new wave of COVID-19 pandemic which impeded agencies from accomplishing the core missions of the Department of Highways



Interviews with the divisions responsible for each risk factor were arranged to determine key risk indicators, risk control activities, target value of risk control. Also, in risk management plans for 2017 - 2021, international tools for risk control including Risk Dashboard and Risk Map were presented for the executive management to follow up and for the Department of Highways to manage risk control.

Based on the results of risk management, it was found that there were 5 risk factors to be addressed during the year 2017 - 2021 with risk management plans in the context of the Action Plan of the Department of Highways. The details of risk management plans are summarized as below.

Risk Management Plan

2020 - 2022



Highway System Development

Risk Factors

Delay in disbursement of budget due to the obstacle in the area such as late handover of land, utilities problems, highway encroachment problems, prohibited tree problems

Over-budgeted construction cost or cost overrun

Level of Risk

Very high

Very high

Risk Control Activities

1. Review standard procedures in managing handover of land and procedures for regular follow up and problem solving
2. Appoint the committees and agencies to follow up and solve problems of the projects
3. Procedures for regular follow-up and problem solving

1. Appoint the committee to analyze the cause, follow up and solve problems of the projects
2. Procedures for regular follow-up and problem solving

KRI

Percentage of disbursement of budget according to the disbursement plan

Proportion of projects with cost overrun

Unit

Percentage

Percentage

Target Value

More than 90%

Reduced by 2%

Responsible Agency

Bureau of Planning/
Bureau of Road Construction/
Highway District

Bureau of Planning/
Bureau of Road Construction/
Highway District



Serviceability Level	Safety	Management System
Road closed zone or damaged caused by external factor such as natural disasters which resulted in road closure for more than 24 hours	Accident at work zone	The new wave of COVID-19 pandemic which impeded agencies from accomplishing the core missions of the Department of Highways
Very high	Very high	Very high
<ol style="list-style-type: none"> 1. Considering to allocate the budget that is enough for emergency case 2. Agency readiness for emergency case 3. Analyze the network's weakness plan and development of information technology for upgrading management, follow up and report of efficiency of the highway structure 	<ol style="list-style-type: none"> 1. The committee to check the navigator/safety in the construction area to meet the standard 2. Collecting the statistical data of the accident happened in the construction area. 	<ol style="list-style-type: none"> 1. Establish an agency to be responsible for the project by assigning the committee to set the policy and supervise the agency. 2. Provide knowledge and understanding to the staff about their roles and responsibilities of the agency in terms of readiness
Number of damaged roads that cannot be used for more than 24 hours (per year)	Frequency of crashes (Accident at work zone)	Success percentage on readiness and response to new COVID-19 pandemic
Route	times	percentage
Decreased by 1 route	Decreased by 2%	More than 80%
Bureau of Highways Maintenance Management/Office of Highway 1-18/ 104 highway districts/ Intercity Motorways Division	Bureau of Highways Safety	Office of the Secretary



Executive Summary Report

Action Plan of Department of Highways Phase 1 (2020-2022)

Action Plan of Department of Highways Phase 1 (2020 - 2022) was developed to present various scenarios that are important to the development of Action Plan of Department of Highways which consists of characteristics of Department of Highways (current status), external changes, opinions of the stakeholders and the situation of the Department of Highways (i.e. strengths, weaknesses, opportunities and threats); to present details of the Action Plan of Department of Highways for years 2017 - 2021 which consist of organization's vision, mission, value, culture, service goal, strategic issues, strategic goals, strategy, strategic objectives, vision's indicators with target value and strategic indicators with target value; and to present connectivity between the Action Plan of Department of Highways with the responsibility of internal units of Department of Highways together with basic details of the development of project plan that connects with the strategic issues and strategies.



Innovation & Management

Green & Safe Transport

- Green & Safe transport
- Use of clean/alternative fuels

Inclusive Transport

- Access to transport service with equality & equity
- Universal Design & service design

Transport Efficiency

- Improved transport & logistics efficiency
- Reduced transport & logistics costs
- Development of domestic & international transport connectivity

Action Plan of Department of Highways Phase 1 (2020 - 2022) Framework

Three issues are implemented as a framework and future foresight of transportation development under The 20-year strategic plan on transportation development (2018 - 2037).

1. Green and Safe Transport
2. Transport Efficiency
3. Inclusive Transport

However, the conceptual framework for the development of all three issue must be promoted personal development, technology of research and development. To bring effective innovation and Management to develop transportation system.

Recommendations for improving roles, missions and strategies

Article 1

Problems

The processes of formulating the policies and strategies of the Department of Highways partially lack concepts integration and guidelines to drive the missions in consistency with the development directions according to the National Strategy, Master Plan, Government Policies, and other relevant plans to support the Department of Highways in solving national problem effectively.

Article 2

Problems

The numbers of indicators in operation assessment of the Department of Highway are not consistent with the goals of the plan. Some indicators cannot be summarized due to

- (1) the details of calculation method and lack of clarity of data
- (2) goals or standard criteria not reflect the operations/performance
- (3) readiness of baseline data used in calculation (incomplete data/unsystematic record)
- (4) lack of integration in database system among agencies which causes the indicators that require data and components from various agencies (particularly from external agencies) to not be effectively calculated. Therefore, estimation or representative values are needed for calculation.

Article 3

Problems

The projects under the Action Plan Phase I (2020-2022) lacked clear objectives identifying, assessments, and indicators in environmental dimension as well as public participation. It also needs to promote some issues in sustainable development dimension in accordance with the operations of the Department of Highways; for example, connectivity of comprehensive network in consistency with social development which easily accessible to all groups of people, effective cross-border transportation, and reduction of energy consumption and greenhouse gas emissions.

Article 4

Problems

Preparing a risk management plan focuses mainly on SWOT Analysis along with internal factor analysis but lacks connection with external factor analysis results to identify and determine strategic issues to make the organizations more effective.

Recommendations

Study, review, collect and analyze statistical data related to traffic or engineering to make an empirical evidence database and to summarize facts reflecting the situations of the Department of Highways. This also includes problems or challenges which the Department of Highways are currently encountering. These data will be used for synthesis and analysis of the situation using SWOT Analysis for policy formulation and conducting the mission of the Department of Highways in the next step.

Recommendations

Improve the processes of restoring, collecting, and success assessment

- (1) preparing a baseline data to analyze base values and goals of the specific indicators, and preparing database for all detailed indicators
- (2) improving the success indicators of appropriate strategies
- (3) appointing the main and support agencies to be responsible for operation assessment with success indicators.

Recommendations

Setting goals and success indicators of road transportation development system to focus on the development to support the adjustment of normal life, travelling behaviors, and business operation patterns in order to support development distribution to the regions and the changes in environmental context to meet the needs of all users by developing the modern highways networks system, upgrading the people's quality of life, and support sustainable development in the future.

Recommendations

Study trends and directions of changes in both of internal and external economy, society, and environment to analyze the external factors which might affect to guidelines and goals of the missions of the Department of Highways. Making a risk management plan for the Department of Highways including the guidelines for development and highway infrastructure management for coping with the changes.

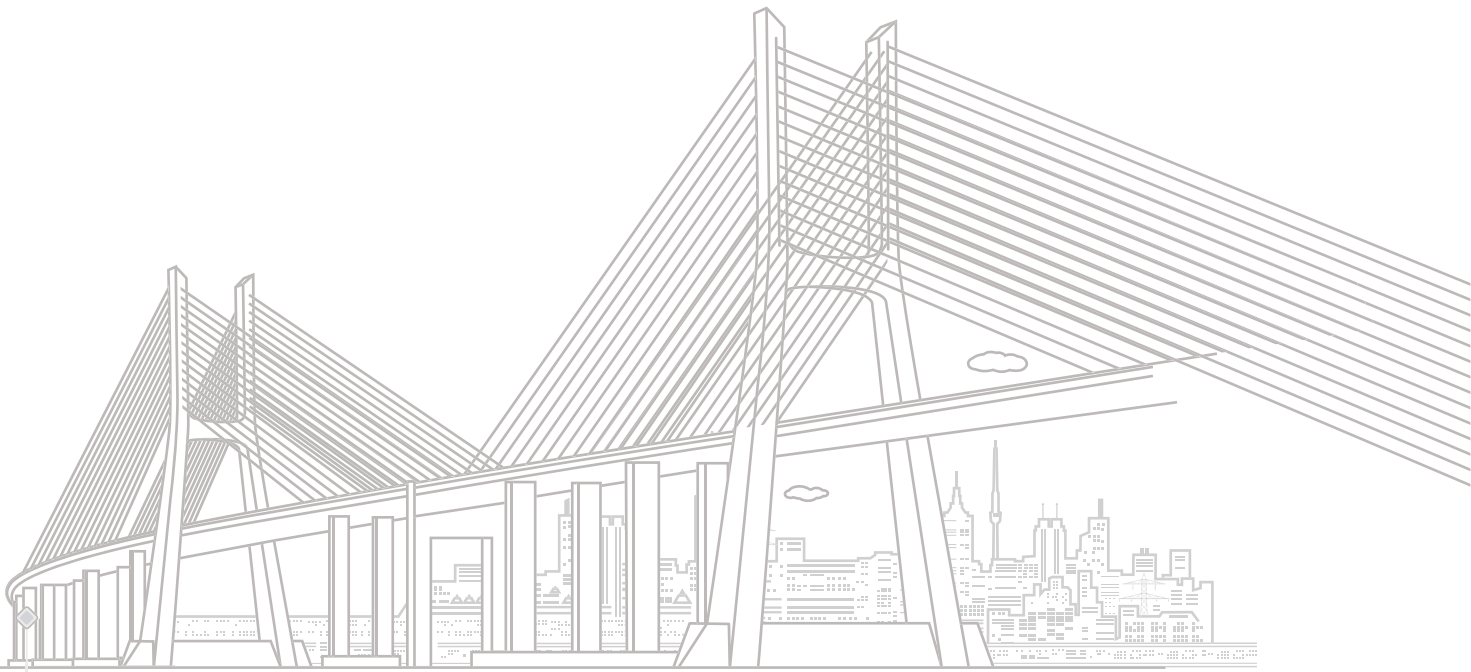


The Project on Reviewing the Strategic Plan of the Department of Highways (2017-2021)

in Line with the 20-year National Strategy



Executive Summary Report



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