

ဆောက်လုပ်ရေးဝန်ကြီးဌာန



The Republic of the Union of Myanmar
Ministry of Construction
Department of Highways



**FUTURE EXPRESSWAY PROJECTS
IN MYANMAR**



September 4, 2019

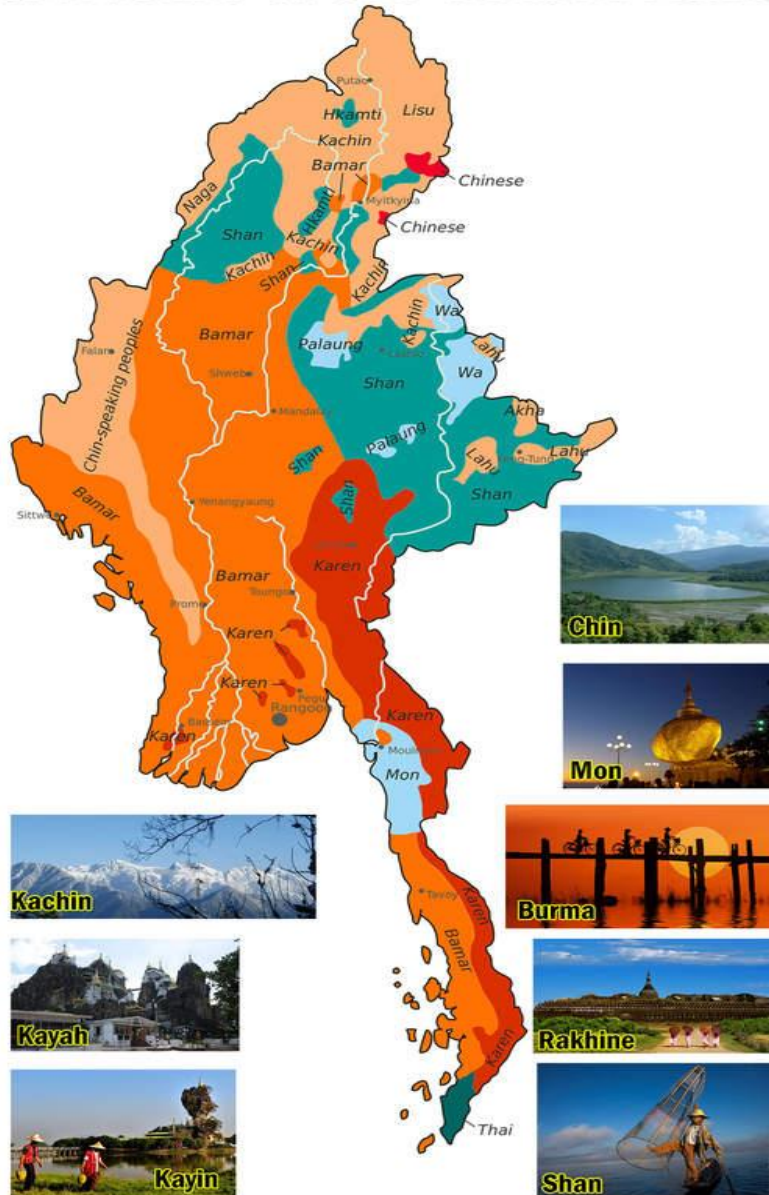
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Ministry of Construction

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Department of Highways (DOH), Ministry of Construction
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Welcome to the Golden Land



OVERVIEW OF MYANMAR

Population

- 54.365 Millions

Country Area

- 676578 km²
- 936 km (East – West)
- 2051 km (North – South)

Road Length

- Approximately 170,000 km

Number of Registered Vehicles

- 6.8 millions vehicles

Neighboring Countries

- Bangladesh, India, China, Lao, Thailand

Total Length of Coastline

- 2800 km

Special Economic Zone (SEZ)

- Dawei SEZ, Kyaukphyu SEZ, Thilawa SEZ

GDP

- 71.21 Billions USD in 2018

GDP Growth

- 6.2% in 2018

GDP Per Capita

- 1571.9 USD in 2018



Key Performance Indicator (KPI) for Road Length, DOH

- Total Road Length - 42335 km (2018-2019)
- B.O.T Road Length - 4870.25 km (25 Companies)
- Pave Road - 29883.51 km (2018-2019)
- Pave Road (%) - 70% of DOH Road
- Road Density - 0.063 km/ sq.km (2018-2019)
- 0.780 Km/ 1000 Pop (2018-2019)
- 6.224 Km/ 1000 Veh (2018-2019)
- 125 Veh/ 1000 Pop (2018-2019)

Infrastructure Investment Needs in Myanmar

- ❑ Demand and Supply Analysis
- ❑ Economic Analysis
- ❑ Standardization Analysis

No	Analysis	Source	Needs (Billion USD)	Remarks
1	Demand and Supply Analysis	Arterial Road Networks Master Plan, DOH	41.53	2015-2030
2.	Economic Analysis	ADB 2015 Report	45 to 60	2015-2030
3.	Standardization Analysis	MOC's Vision 2030	32.04	2016-2030



Estimated length - 589 km

Type of Project - Brown Field Project

Passable Cities - Naypyitaw, Mandalay

The products from Yangon-Thilawa port will be easily exported to not only local region but also foreign countries, especially India and China by passing this road and moreover, it can be easily accessed to the Hanthawaddy International Airport.





တိုင်းဒေသကြီးနှင့် ပြည်နယ်မြေပုံ



Estimated Length - ~ 460 km

Type of Road - 4 Lane Concrete Road

Type of Project - Green Field Project

Estimated Cost - US\$ 1870 Millions

Passable Cities - Mandalay, Sagaing,
Kathar, Myohla,
Myitkyinar

Beneficial effect of Construction

It can reduce 92 km road length and 5 hours travel time than before. It can also easy access road to China and India.



ပြည်ထောင်စု မြန်မာနိုင်ငံတော်

မြောက်



Type of Road - 4 Lane Concrete Road

Type of Project - Brown Field Project

Estimated Cost - US\$ 2028 Millions

Passable Cities - Yaykyi, Ngathaing
Chaung, Ohishitpin
Junction, Badan
Junction, Myaing,
Linkadaw Junction,
Sarlinkyi, Moneywa

Beneficial effect of Construction

It is one of the main arterial road networks and shortest road from North to South direction in Myanmar and it can promote the flow of good services throughout the country as well as foreign countries.



ROAD NETWORK SIX PACKAGES

Minbu – Ann – Kyaukphyu Expressway (E4)

ပြည်ထောင်စု မြန်မာနိုင်ငံတော်

တိုင်းဒေသကြီးနှင့် ပြည်နယ်မြေပုံ



Estimated Length - 350 km

Type of Road - 4 Lane Concrete Road

Type of Project - Green Field Project

Estimated Cost - US\$ 875 Millions

Passable Cities - Minbu, Ann, Maei, Kyaukphyu

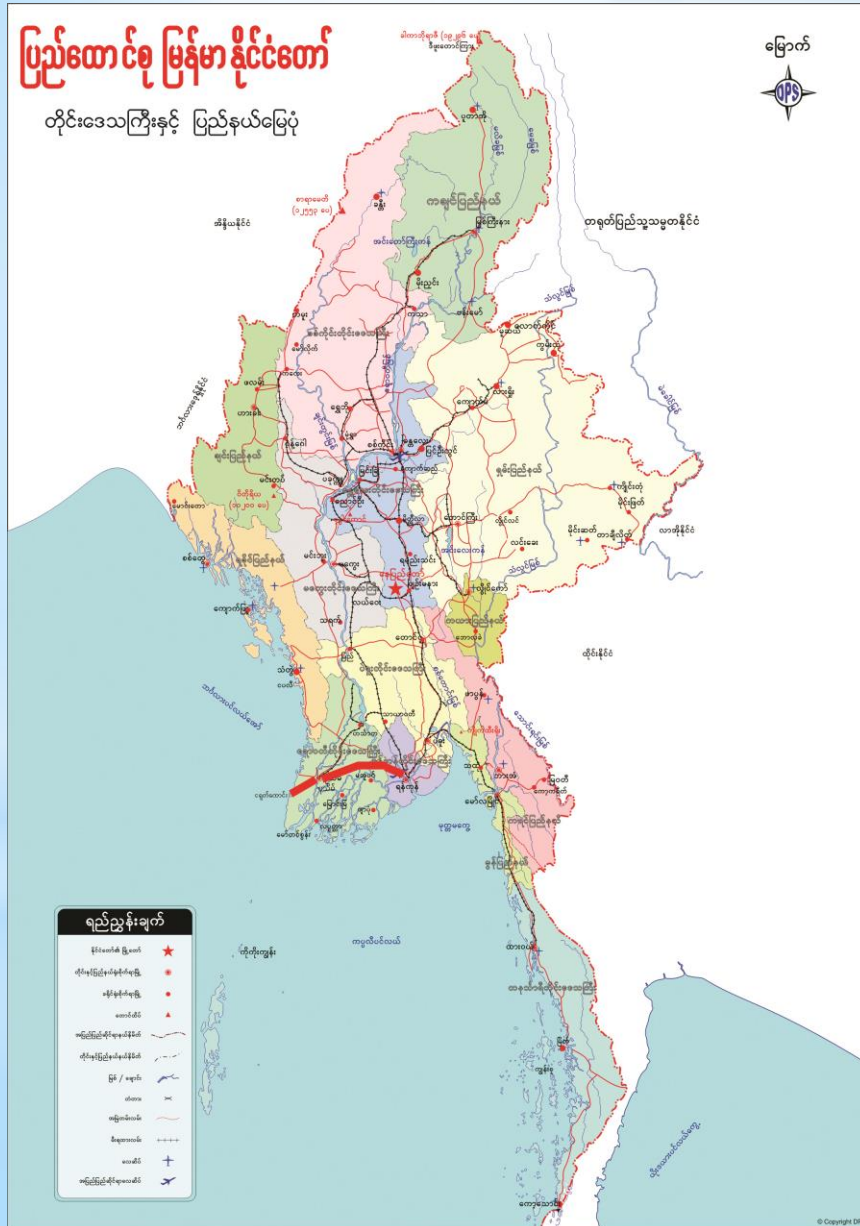
Beneficial effect of Construction

It is one of the parts of Shwe Li-Kyaukphyu corridor road that connects to China. It can export trade to the international network by passing Kyaukphyu deep seaport.



ROAD NETWORK SIX PACKAGES

Yangon – Patheingyi – Ngazun Expressway (E5)



Estimated length - 304 km

Type of Road - 4 Lane Concrete Road

Type of Project - Green Field Project

Estimated Cost - US\$ 760 Millions

Passable Cities - Hlaingtharyar, Nyaungtone, Pantanaw, Kyaungkone, Kangyi Daunt, Patheingyi

Beneficial effect of Construction

If Ngazun Industrial Seaport is well developed, it can communicate easily the whole region of Myanmar as well as the ASEAN and Asia countries.



ROAD NETWORK SIX PACKAGES

Thilawa – Thanatpin – Kyeikhto Road (E6)



Estimated Length - 135 km

Type of Road - 4 Lane Concrete Road

Type of Project - Green Field Project

Estimated Cost - US\$ 338 Millions

Passing Cities - Khayann, Thonekhwa, Thenatpin, Kyitehto

Beneficial effect of Construction

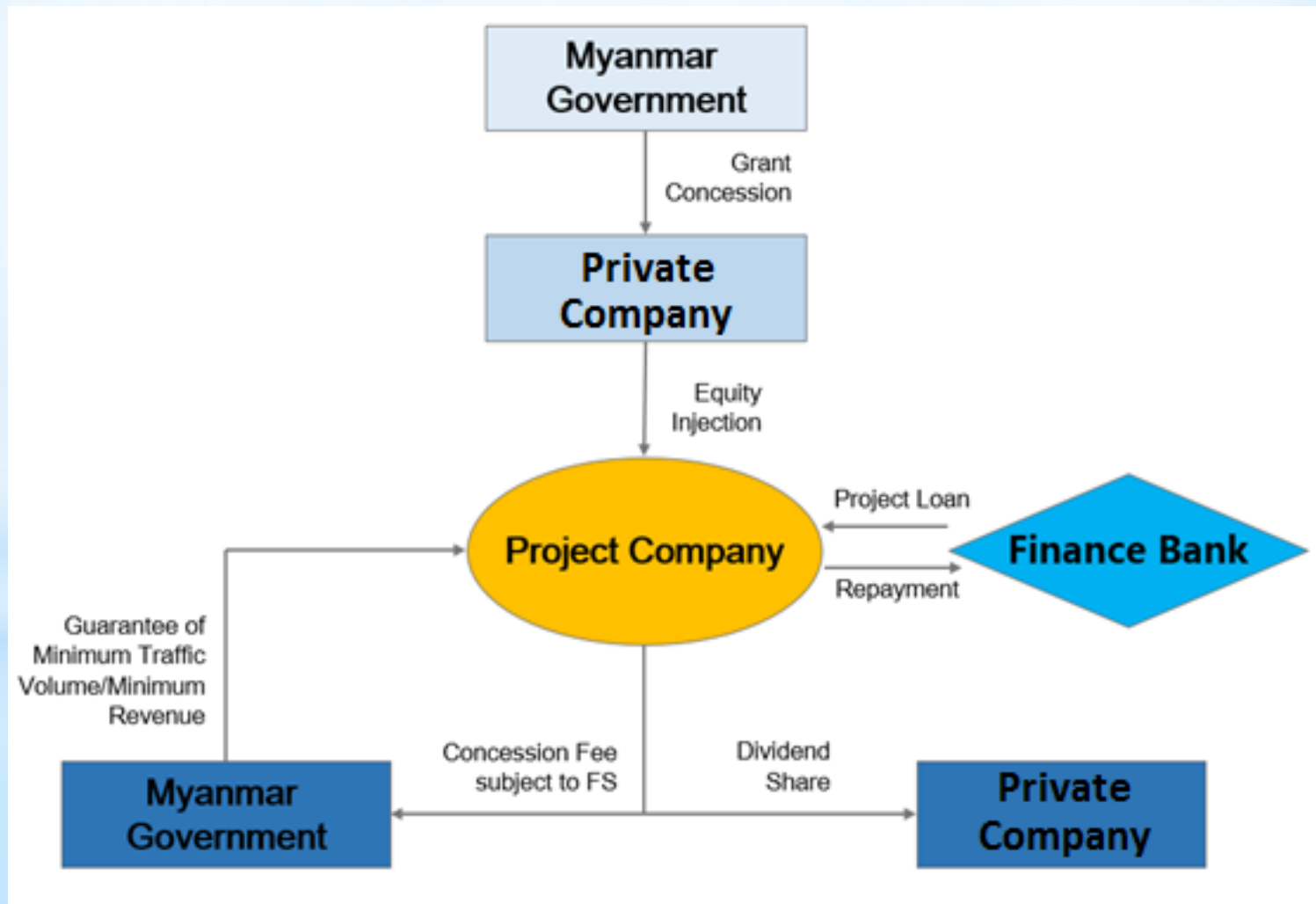
It can solve future traffic jam and also is better road linkage between Thilawa Industrial Port and international countries through this road.

Project Implementation Models

1. Pure BOT
2. PPP
3. G2G
4. Mixed G2G + PPP

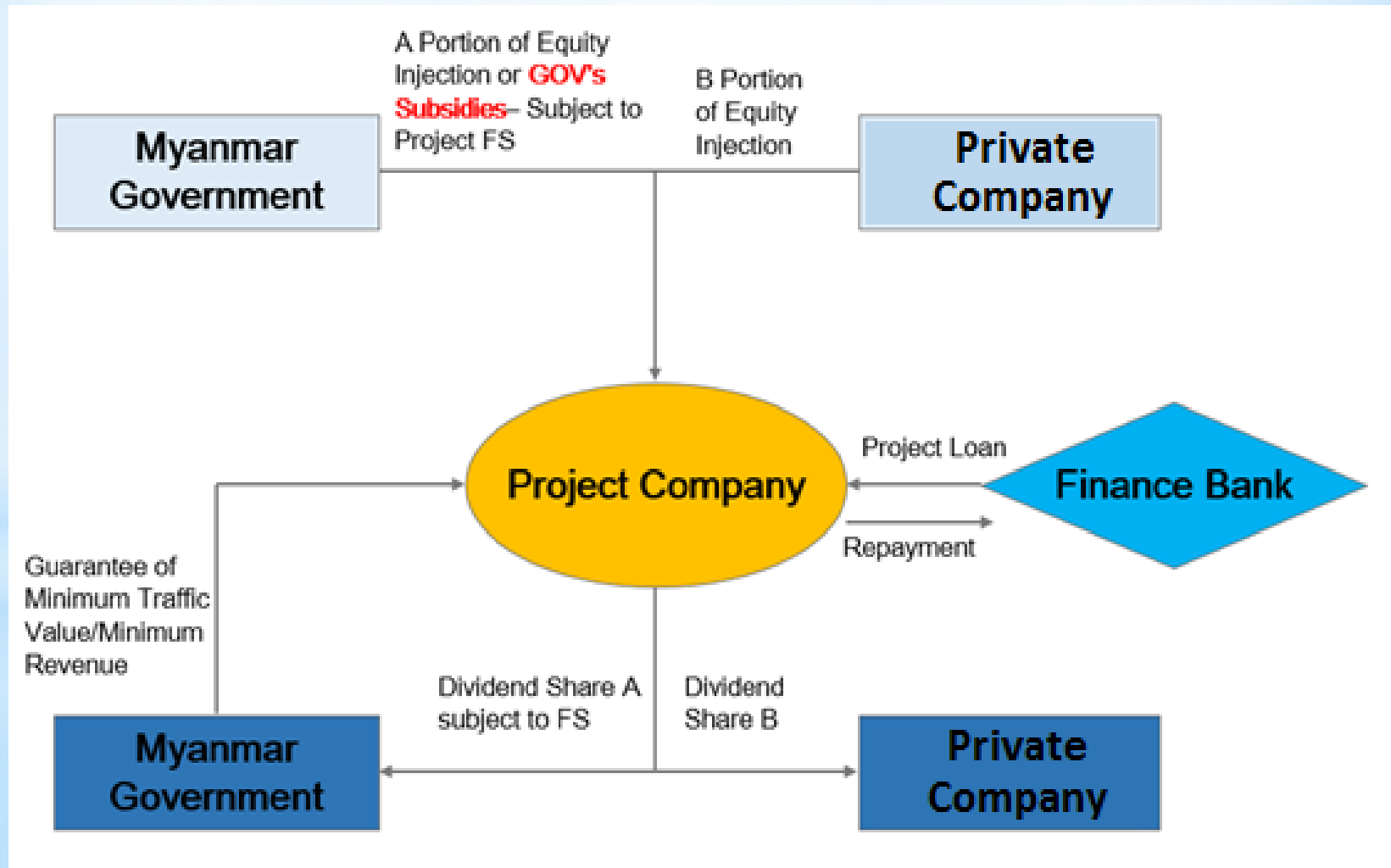
Pure BOT Model

Key Advantage: Government's Certain Subsidies Contribution to Make the Project Financially Viable to further attract Private Sector's Investment to Project Implementation.



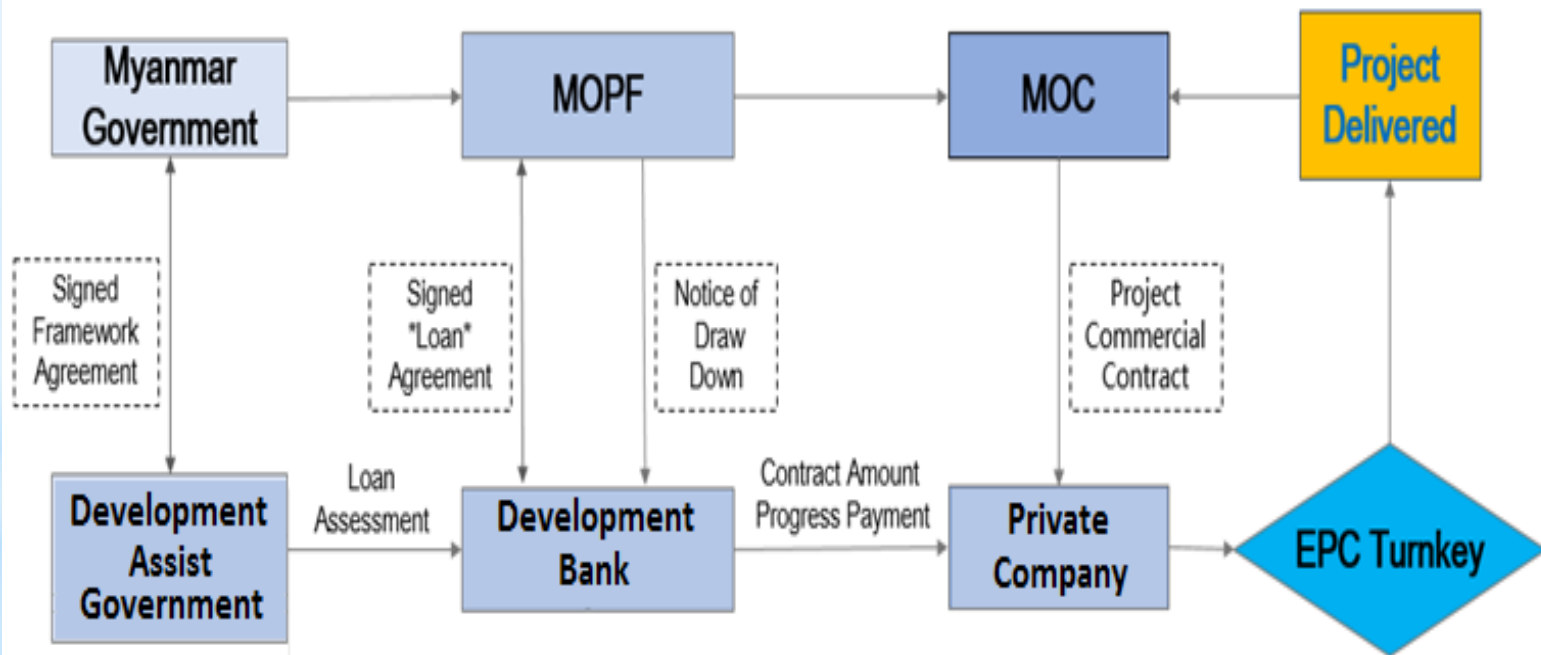
Public-Private Partnerships (PPP) Model

Key Advantage: Project itself is financially viable, Private Sector's Investment for Project Implementation which will reduce Government's Finance Overburden.



Government to Government (G2G) Model

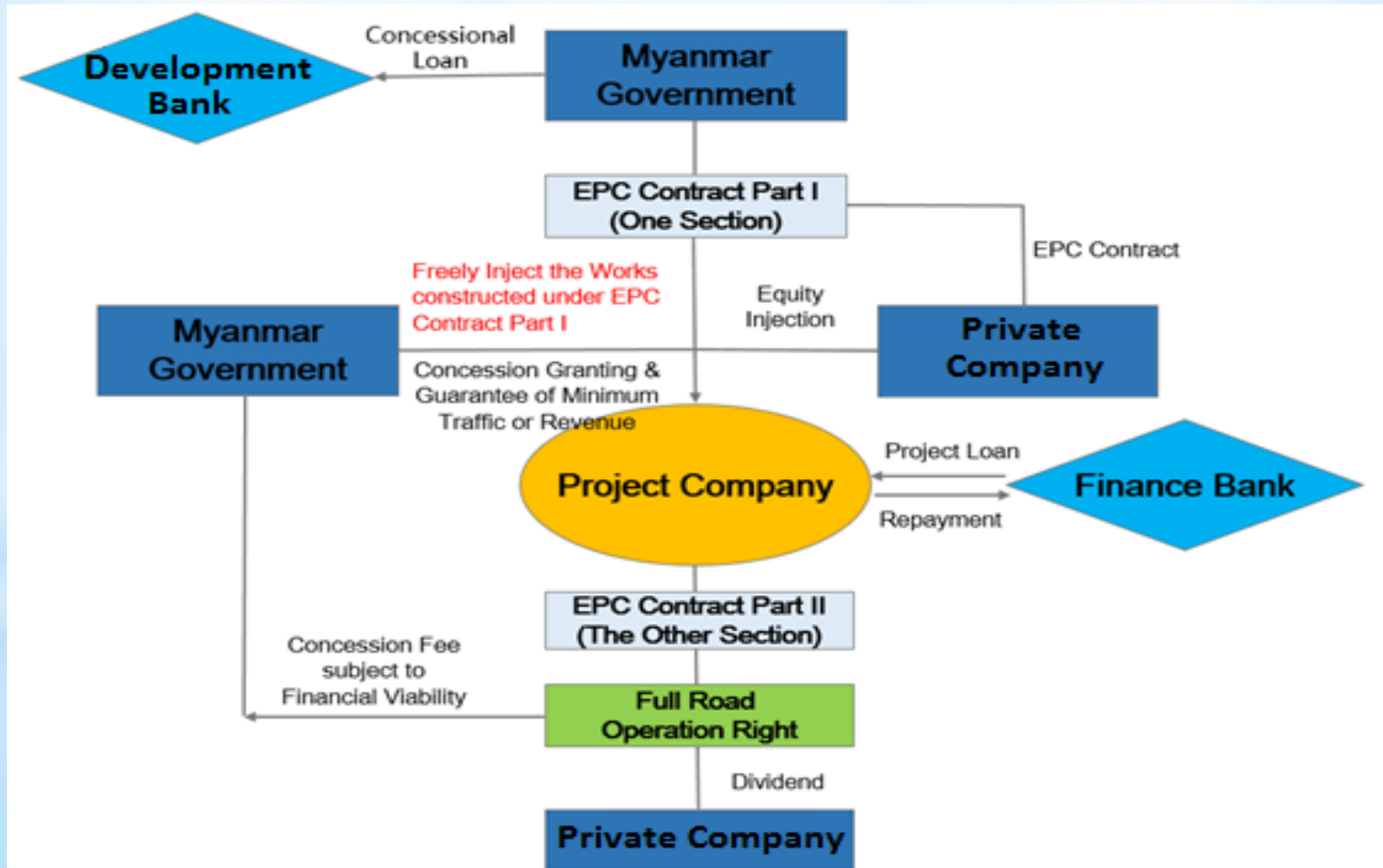
Key Advantage: Fast Process for Project Implementation by Government's Direct Loan from Development Partner. The development partner is giving Larger Scale of Concessional Loan/Preferential Buyer's Credit Facilities to Support the Project Implementation.



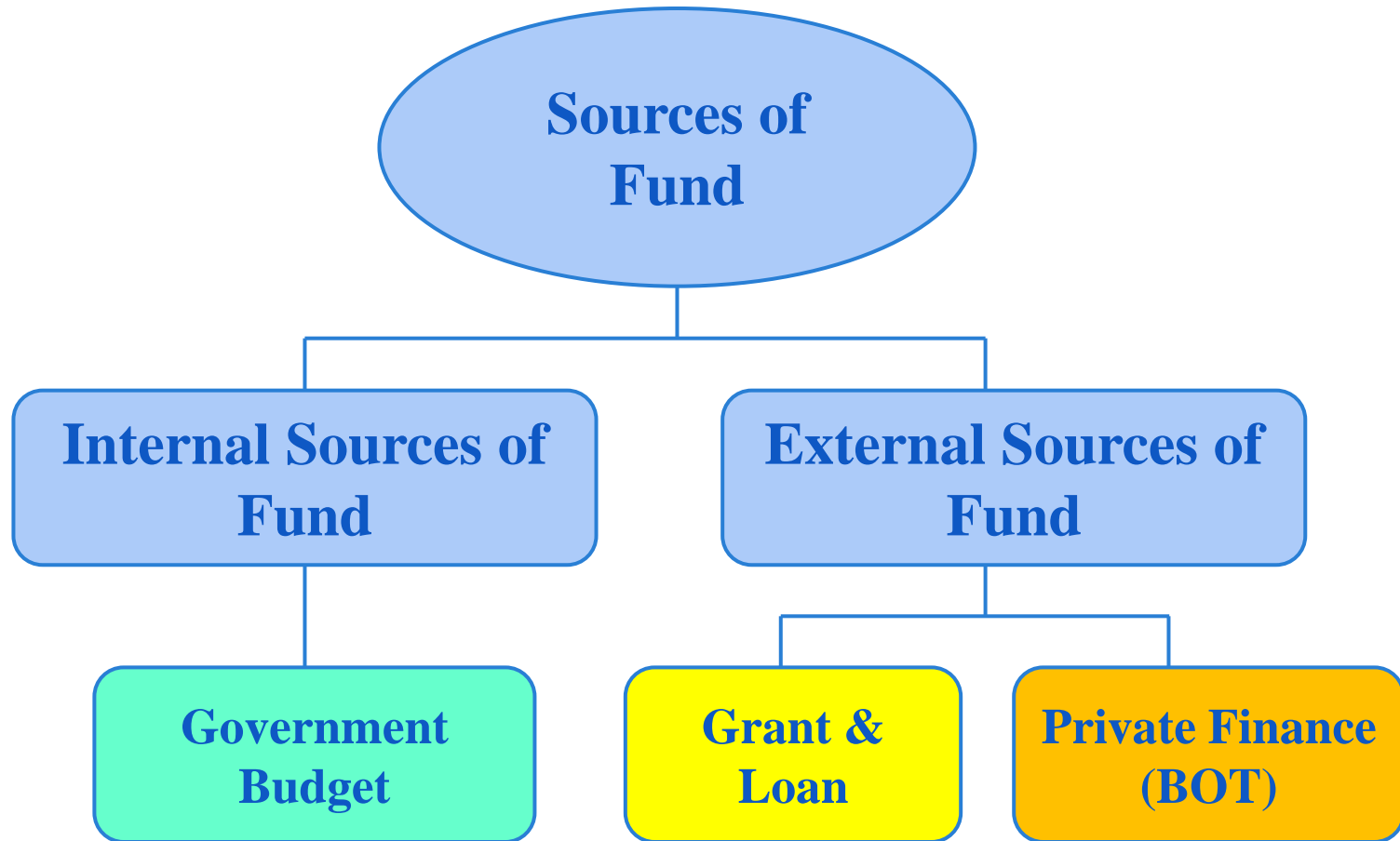
Loan: Government Concessional Loan /
Preferential Buyer Credit

Mixed G2G + PPP Model

Key Advantage: Give the Solution for Government to Solve the Funding Source by G2G Model for Government's Subsidies and Further Implement the Full Project through PPP Model.



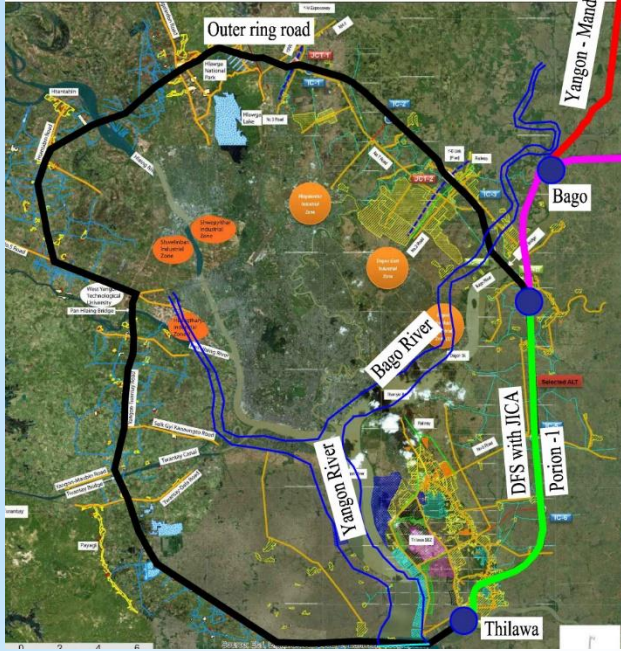
Sources of Fund



Specific Budget sources and Timelines for Expressway Projects in Myanmar			
Project Name	Proposed Budget Source	Proposed Timeline	Remarks
Yangon-Mandalay Expressway (E1)	Pure BOT	2021-2025	DFS ongoing
Mandalay-Myitkyinar Expressway(E2)	G2G or PPP model	2022-2025	DFS ongoing
Pathein-Monywa-Shwebo Road (E3)	PPP model	2023-2027	Planning
Minbu-Ann-Kyaukphyu Expressway (E4)	G2G or PPP model	2022-2024	DFS ongoing
Yangon-Pathein-Ngayokekaung Expressway(E5)	G2G or PPP model	2022-2024	DFS ongoing
Thilawa-Thanatpin-Kyeikhto Road (E6)	G2G or PPP model		DFS ongoing
DFS – Detailed Feasibility Study			

Thilawa-Thanatpin-Kyeikhto Road (E6)

Yangon Outer Ring Road



These are 3 road portions;

1. Thilawa to outer ring junction (DFS with JICA, loan negotiation in 2020 and EPC Tender in 2020-2021)
1. Outer ring to Thanatpin (Planning)
2. Thanatpin to Kyeikhto (DFS with ADB)



CONCLUSIONS

- * These priority projects are the future Expressway projects for Department of Highways, Ministry of Construction, Myanmar.
- * All of these roads play as national economic corridor of Myanmar and serves a vital role of effective transportation connectivity for all over our country as well as International countries.
- * Moreover, we actually would like to invest these Expressways by Government to Government (G to G) budget with soft loans, Private Public Partnership (PPP) with B.O.T model and also collaborative International Agencies.



THANK YOU FOR YOUR ATTENTION

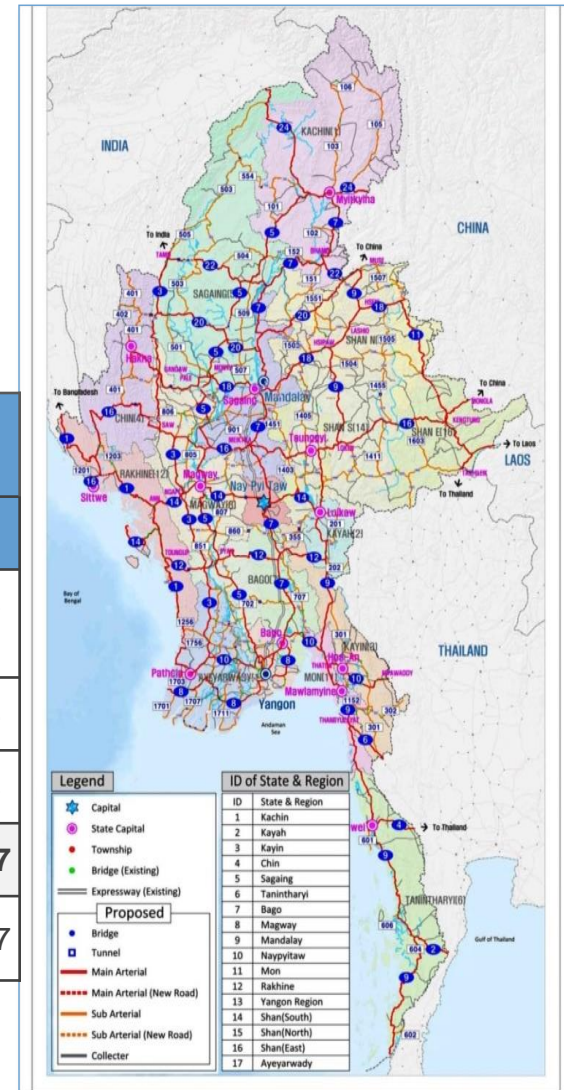
Demand & Supply Analysis

Arterial Road Networks Master Plan (2030)

- Arterial Road Networks Master Plan 2030 is drawn by Ministry of Construction and KOICA.
- US\$ 41,530 million ⇒ could be evaluated as ‘positive development’
 - ▣ Positive development: *Transport infrastructure is leading economic development*

Road Class	Total		20yrs (2016~2035)		P1 (2016~2020)		P2 (2021~2025)		P3 (2026~2030)	
	Length	Cost	Length	Cost	Length	Cost	Length	Cost	Length	Cost
Expressway	9,470 (597)	50,941 (1,172)	3,879 (597)	18,424 (1,172)	558	2,886	1,165 (364)	5,722 (871)	2,156 (233)	9,816 (301)
Main Arterial	13,224	27,617	9,029	18,282	2,794	5,784	2,062	3,455	4,173	9,043
Sub Arterial	11,684	25,461	2,429	4,824	347	525	694	1,091	1,388	3,208
Sum	34,378	104,019	15,337	41,530	3,699	9,195	3,921	10,268	7,717	22,067
Proper Investment based on GDP:				41,106		8,349		9,331		23,427

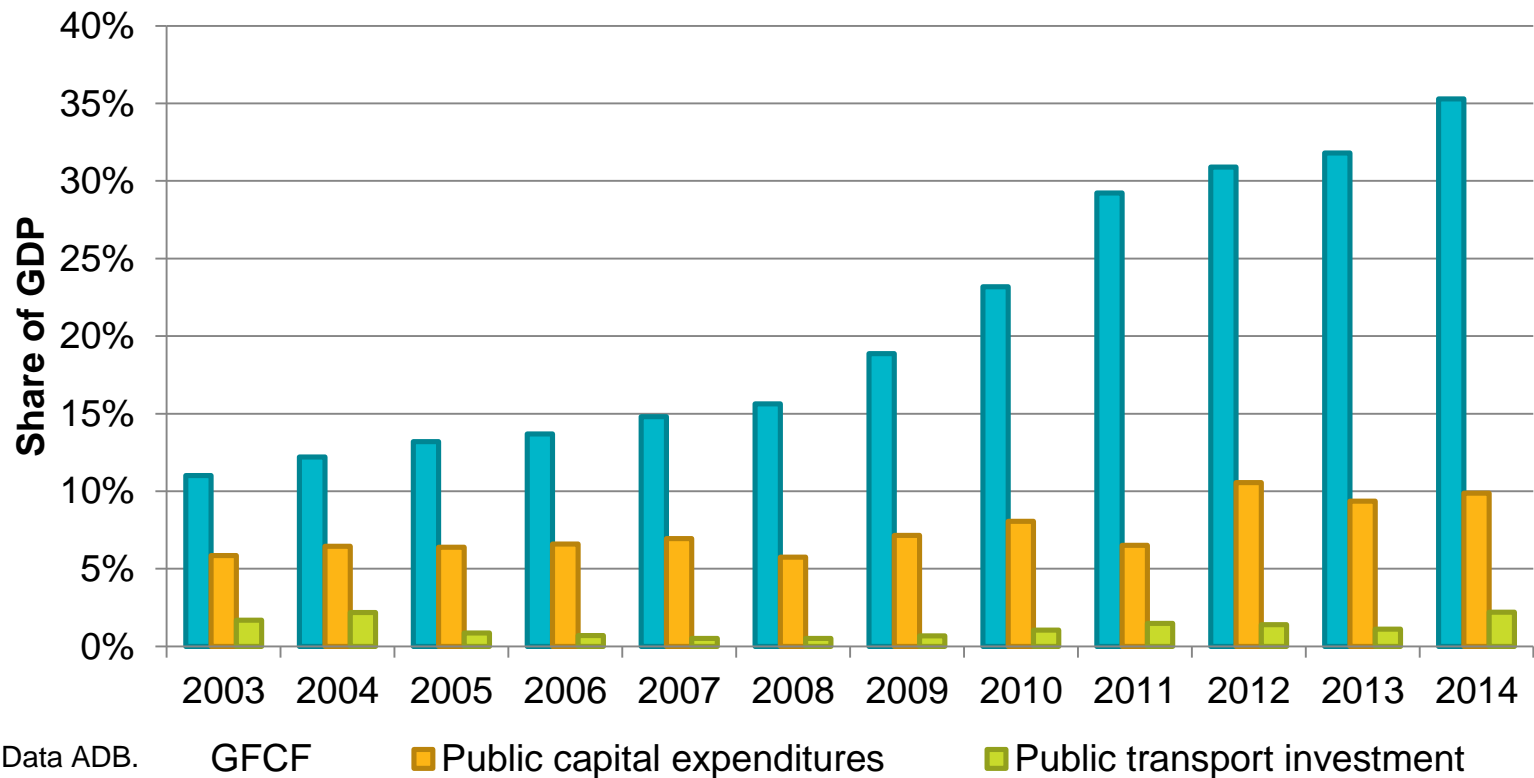
Note : () stands for the cost and the length for improvement of the existing expressway



Economic Analysis

GDP & Capital Investment

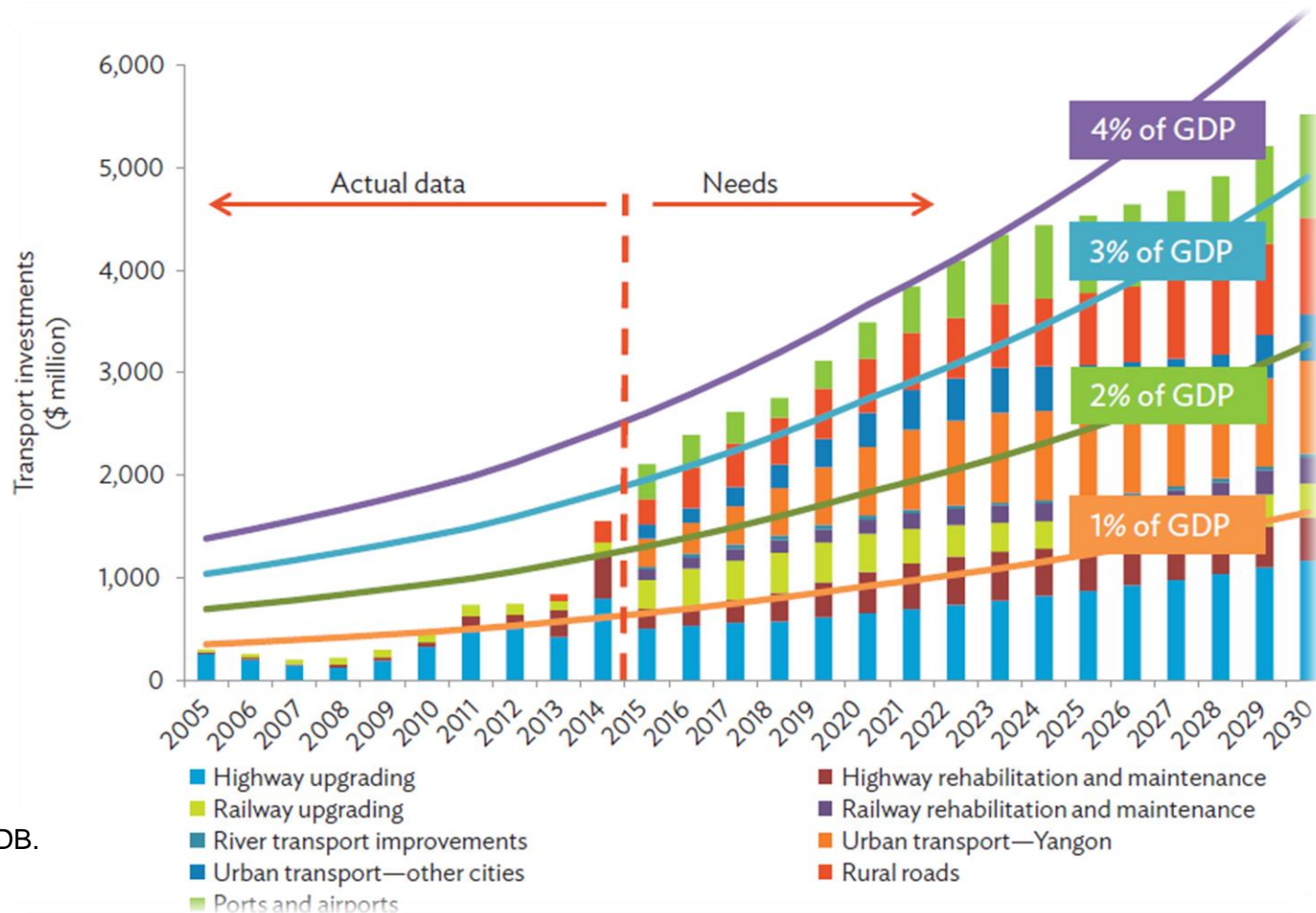
- 8% GDP growth rate requires Myanmar to invest (GFCF) 30%+ of its GDP
- Fast growing Asian countries dedicated 10-15% of GFCF to transport (3-4% of GDP)



- Myanmar's GFCF has increased in last 10 years
- Transport spending has lagged behind and could soon limit growth potential.

Economic Analysis

GDP & Capital Investment



Source: Data ADB.
2016.

- Transport investments need to rise from 1–1.5% to 3–4% of GDP

Economic Analysis

Needs for Myanmar Infrastructure Development

\$35 billion infrastructure investment requirement by 2025

- Highways : \$10.5 billion
- Rural roads : \$ 5.4 billion
- Urban transport : \$ 9.9 billion
- Railways : \$ 4.9 billion
- Ports & airports : \$ 4.6 billion
- River transport : \$ 0.4 billion

Maintenance and investment needs:
\$35.7 Billion
(2016-2025)

Source: Data ADB.
2016.

- \$45 to \$60 billion transport investment needs by 2030

Standardization Analysis

MOC's Vision 2030

Road and Bridge Infrastructure Investment Plan

The purpose of **MOC's Vision 2030** is to upgrade the Myanmar's Road Network to meet at least the **ASEAN Class III Standard** in 2030.

No	Department	Project Cost (Billion)			
		Phase I (2016-2020)	Phase II (2021-2015)	Phase III (2026-2030)	Total
1	Department of Highway	7870.025	8550.092	12297.816	28717.933
2	Department of Bridge	2370.00	1123.00	2057.00	5550.00
3	Department of Rural Road Development	2259.455	3431.675	3294.275	8985.405
	Total (MMK)	12499.48	13104.762	17649.091	43253.333
	Total (US\$)	9.26	9.71	13.07	32.04

Source : Integrated Master Plan, MOC