

# Long term financial plans, and prioritizing investments when funds are limited



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Central Asia Regional Economic Cooperation Program

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# What is a Long Term Financial Plan (LTFP)?

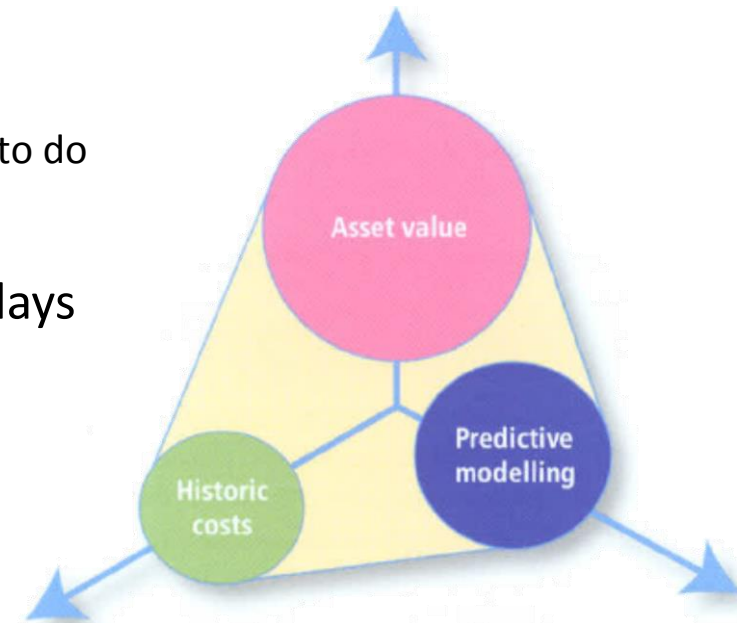
- Covers all the costs associated with maintenance, renewal and expansion of the assets
  - May exclude road authority staffing costs
- How will the costs be paid for
  - Road & fuel taxes
  - Tolls
  - General taxes
  - Development partners
- While some improved focus on RAM can close a small funding gap (maybe 20%), beyond this your LTFP is more a wish than a plan

# Long Term?

- Minimum of 10 years, but ideally 20-30 year planning period
- Should cover one full cycle of periodic resurfacing works
- If an historic 'peaky' construction profile, then keep in mind when that peak may come due for renewal
  - Often an issue if a major bridge replacement programme was implemented

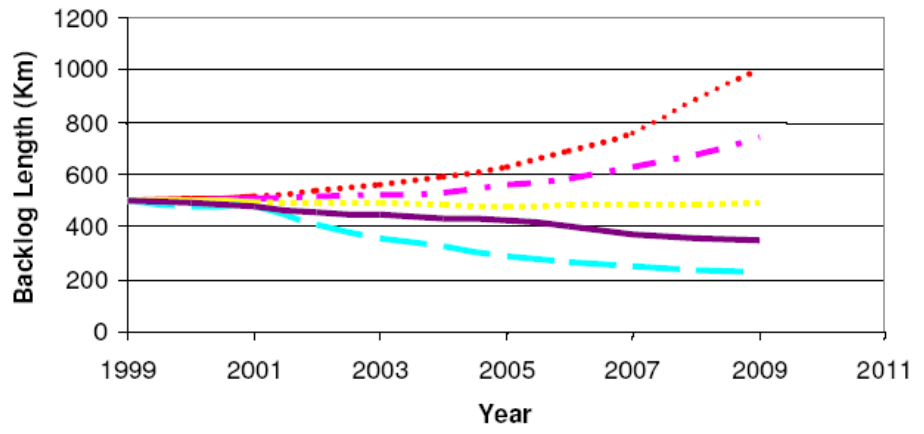
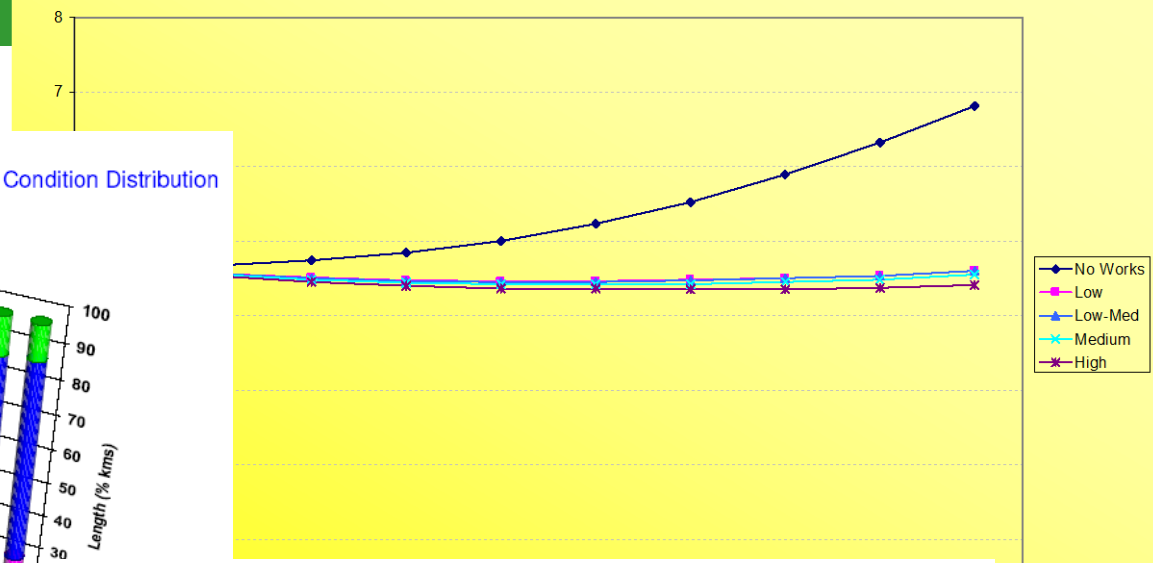
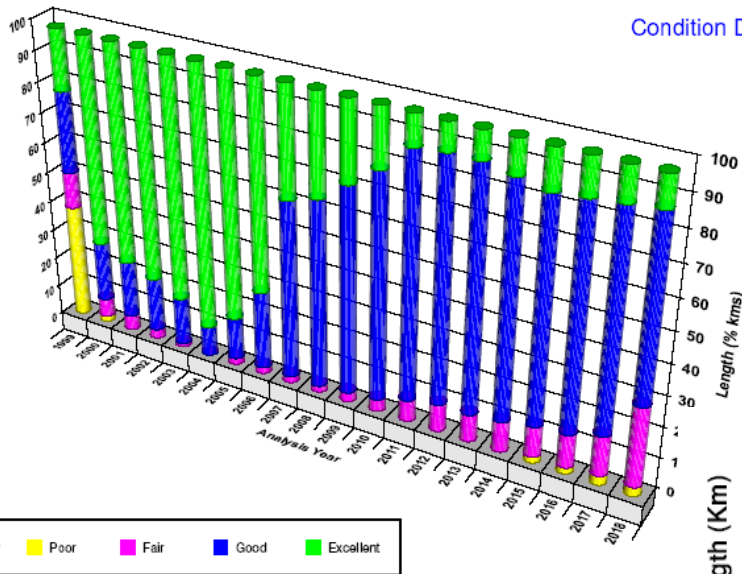
# Renewal Cost Forecasting

- Many approaches to consider
  - Predictive modelling (e.g. HDM-4)
    - These systems generally take significant data and expertise to yield reliable results
  - Historic costs (trend analysis)
    - If you have significant growth in traffic or assets, then is the past a reliable projection of the future?
  - Asset valuation (average life cycles)
    - Often the less reliable (confidence), but easiest to do
- Unlikely to give the same answer
  - Defines a boundary of where the answer lays



International Infrastructure Management Manual (2011)

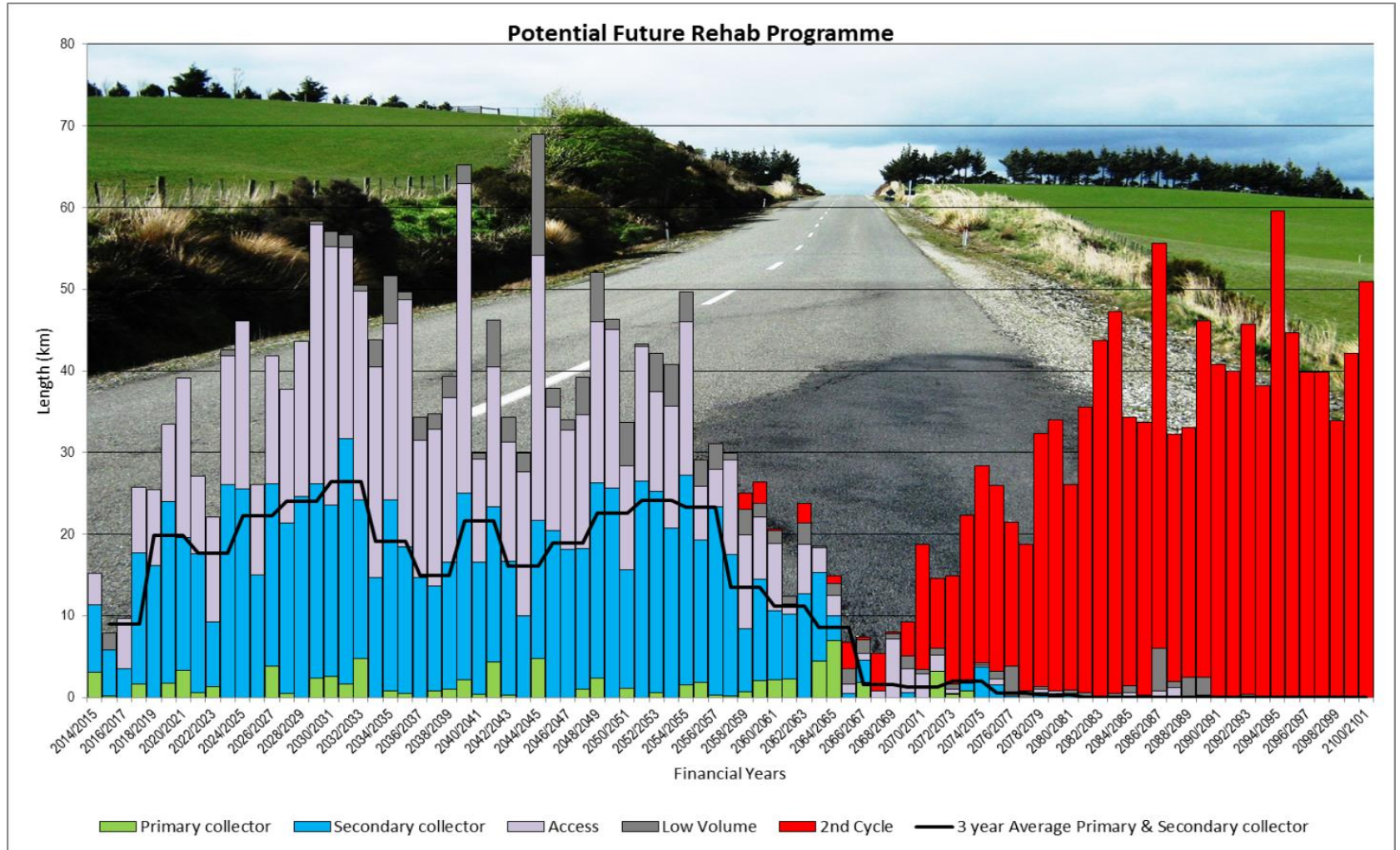
# Pavement Management System Outputs



# 10 Year Forward Work Programme (FWP)

Road	Ward	ROAD_ID	FOFFFROM	FOFFTO	length	Start Name	End Name	Year01	Year02	Year03	Year04	Year05	Year06	Year07	Year08	Year09	Year10	Year11	Year12	Year13
MAYBECK R	EDEN-	4066	0	108	108	NEW 7/9	7/9	RS							RS					
MAYBECK R	EDEN-	4066	108	214	106	7/9	ASQUITH	RS							RS					
MAYBURY S	TAMAKI-	882	0	159	159	LINE RD	17/19	SM				RS								
MAYBURY S	TAMAKI-	882	159	300	141	17/19	DALTON	SM				RS								
MAYBURY S	TAMAKI-	882	300	511	211	DALTON	64/66	SM				RS								
MAYBURY S	TAMAKI-	882	511	703	192	64/66	83/85	SM				RS								
MAYBURY S	TAMAKI-	882	703	852	149	83/85	ELSTREE	SM				RS								
MAYN AVE	AVONDA	4067	0	164	164	GIFFORD	END OF					SM			RS					
MAYORAL D	HOBSON	884	0	250	250	WELLES	COOK ST	AC										AC		
MAYORAL D	HOBSON	884	250	459	209	COOK ST	GREYS	AC												AC
MAYORAL D	HOBSON	884	459	592	133	GREYS	QUEEN	AC												
MAYORAL D	HOBSON	884	592	761	169	QUEEN ST	WAKEFIE	AC								AC				
MAYORAL D	HOBSON	884	761	1001	240	WAKEFIE	WELLES	AC											AC	
MAYS RD	TAMAKI-	4069	0	135	135	MT SMART	ALFRED	AC												
MAYS RD	TAMAKI-	4069	135	407	272	ALFRED	CURZON	RS												AC
MAYS RD	TAMAKI-	4069	407	701	294	CURZON	CAPTAIN			AC										AC
MAYS RD	TAMAKI-	4069	701	858	157	CAPTAIN	FELIX ST	RS						AC						AC
MAYS RD	TAMAKI-	4069	858	1030	172	FELIX ST	RAILWAY	RS						ST						
MAYS RD	TAMAKI-	4069	1030	1234	204	RAILWAY	CHURCH	ST												
MARTHUR	EASTER	817	0	164	164	VALE RD	16/18	RS							RS					
MARTHUR	EASTER	817	164	303	139	16/18	END OF	RS							RS					
MCCOLL ST	HOBSON	3986	0	125	125	KHYBER	ROXBURG					SM			RS					
MCCRACKEN	TAMAKI-	3988	0	183	183	BARRACK	END OF	RS											RS	
MCCULLOCH	TAMAKI-	3989	0	198	198	STEWART	19/21			SM				RS						
MCCULLOCH	TAMAKI-	3989	198	378	180	19/21	39/41			SM				RS						
MCCULLOCH	TAMAKI-	3989	378	497	119	39/41	HOBSON			SM				RS						
MCCULLOUG	AVONDA	3990	0	96	96	MT	SMALLFIE					SM			RS					

# Forecast long term needs to preserve roads

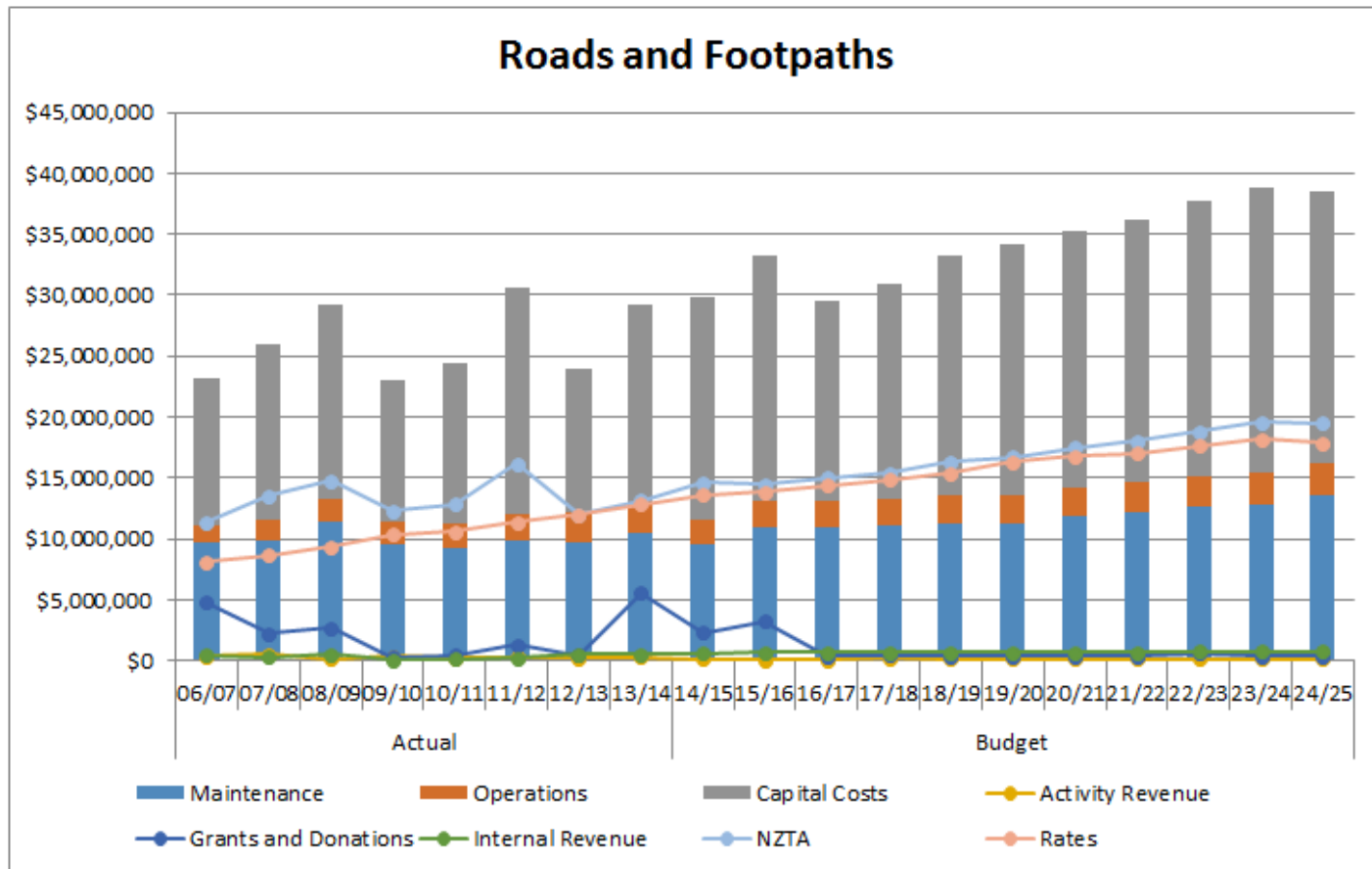


# Asset Upgrade / Expansion

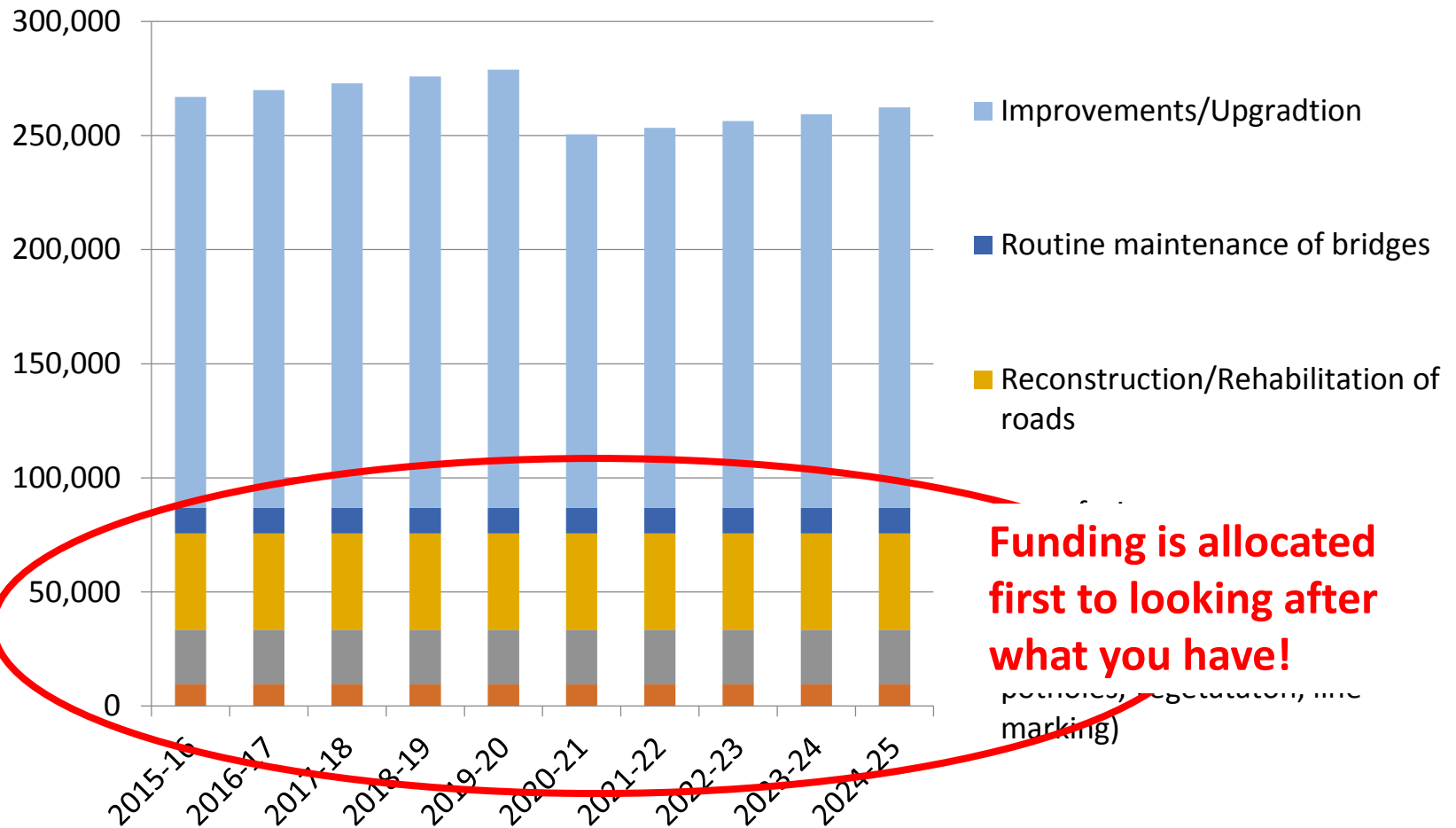
- What are your policies
  - Connecting communities with all-weather roads?
  - Replacing old wooden bridges with new concrete structures?
  - All state highways being 2 lanes?
- How will changing demographics and traffic growth impact on these targets?
- Over what time period do you want to achieve these policies?
  - Can often manage funding gap by extending timeline to achieve targets



# Financial Forecast Examples



# How the LTFP Stacks Up

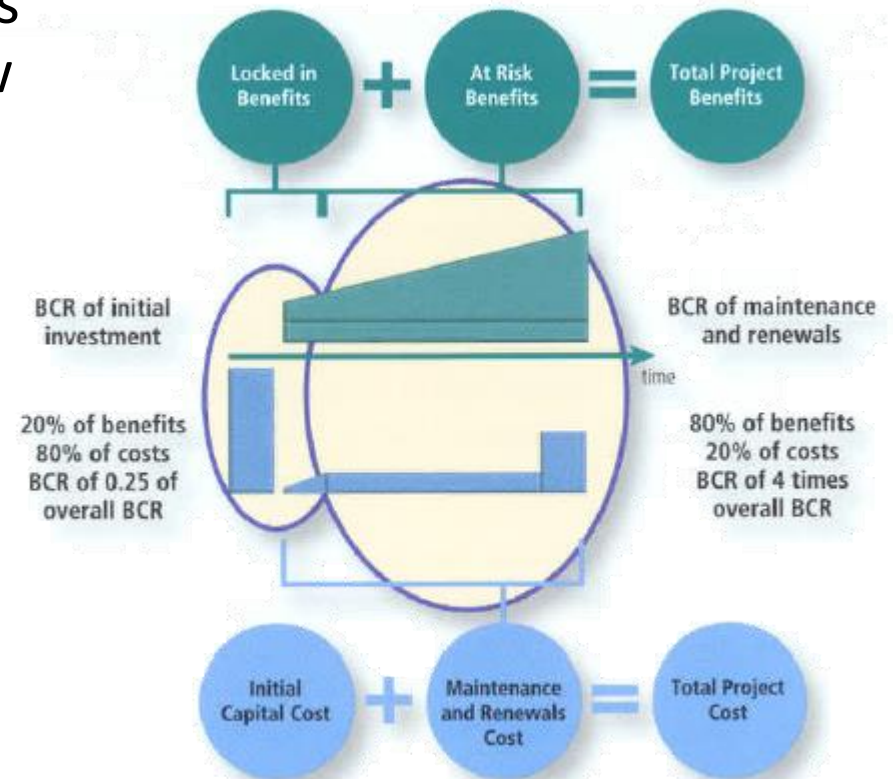


**Funding is allocated first to looking after what you have!**

... (vegetation, fire marking)

# Why Existing Assets First?

- BCR for looking after what you have is likely to be 10-20 times greater BCR than building new works



International Infrastructure Management Manual (2011)

# If You Can't Afford to Look After What You Already Have

- Options available
  - Justify the need for greater expenditure
    - Asset Management Plan should show the impact of different funding levels
  - Stop building new liabilities
    - This is just making the situation worse
  - Reduce the level of service for some group of assets
    - Accept rougher roads
    - Accept bridges with load restrictions
    - Revert low volume rural roads to gravel

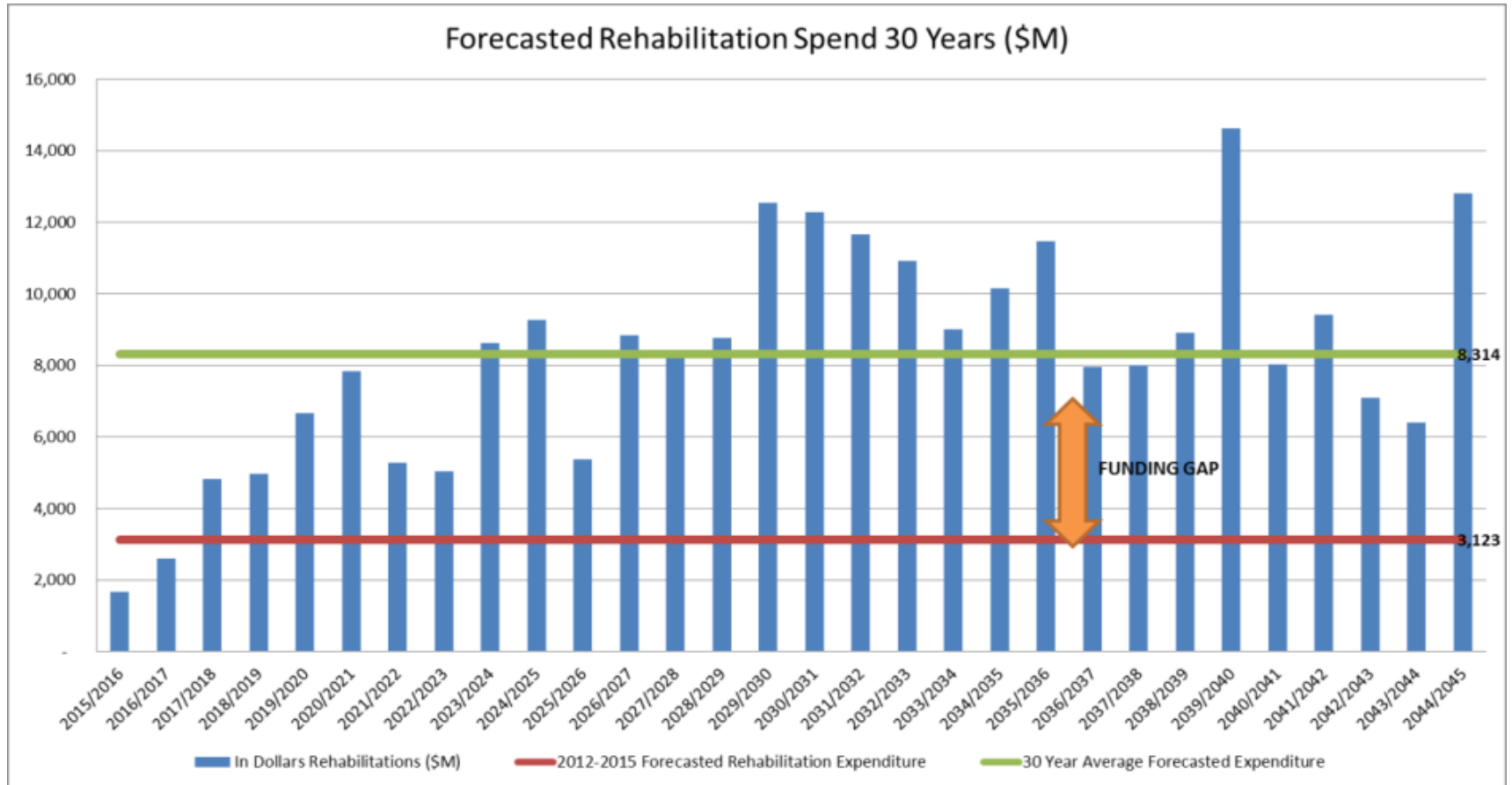
# Example From India

Roads Total	Not Yet Commenced	In Tender Prep	Under Construction	Finished Construction	In 5 year Mtce Period	Out of 5 year Mtce Period
122,598	13,690	40,408	23,300	44,741	24,931	19,809

Cat 1	12,125					
			4,255	under maintenance contract		
				<b>7,870 not currently funded</b>		
Cat 2	7,684					
			0	under maintenance contract		
				<b>7,684 not currently funded</b>		

- Currently not able to afford appropriate maintenance on 16,000 out of 19,000 km of roads recently constructed
- In next five years another 69,000 km of roads will be needing maintenance
- At the same time the roads built at the initial stages are falling apart through lack of maintenance expenditure and require reconstruction
- It is a losing battle unless more funds are allocated to maintaining what has already being built.

# Financial Forecast Examples

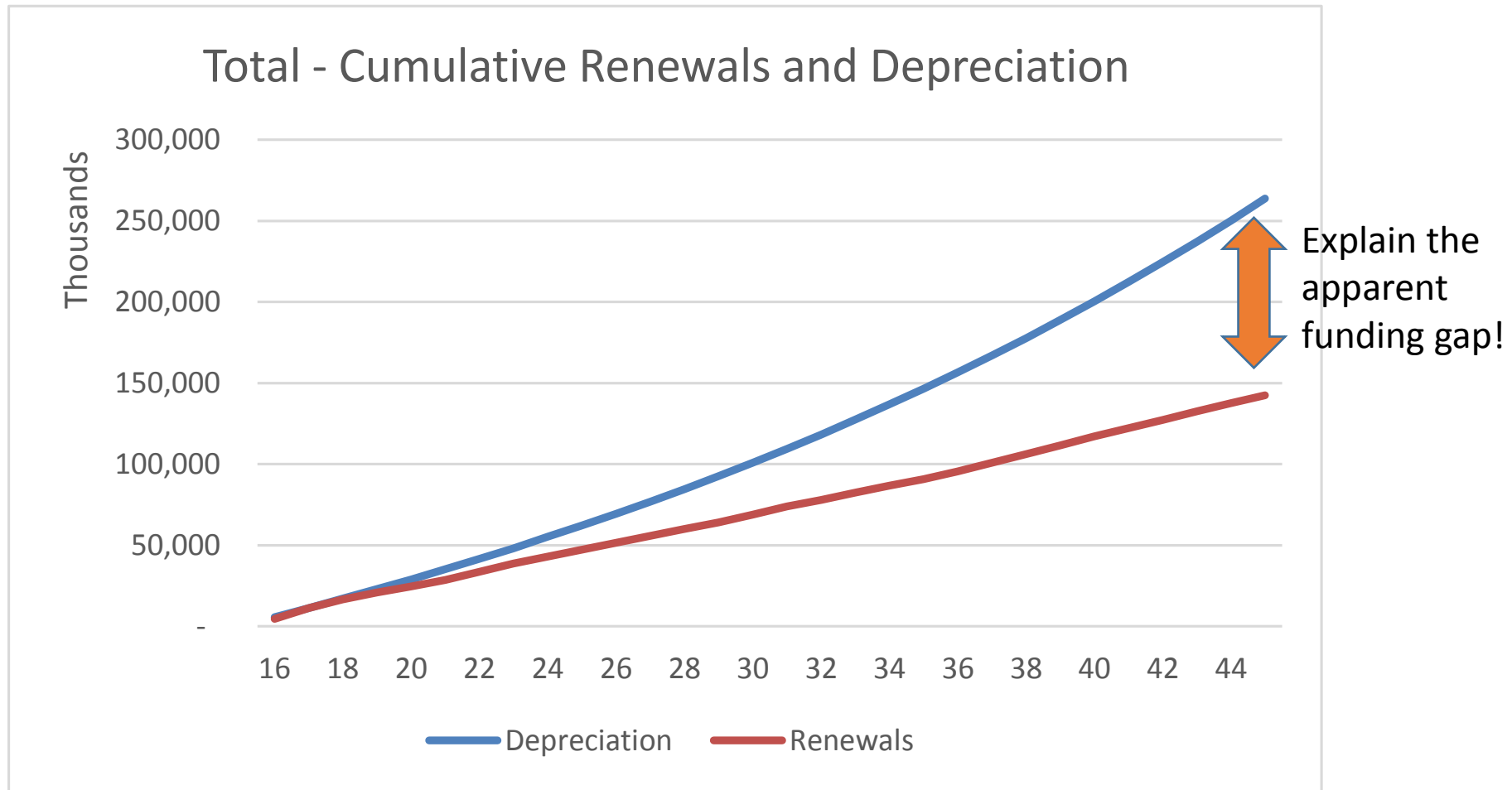


# Ways to Close the Funding Gap

- Improve your RAM competency
  - Make sure every dollar is spent wisely
- Revenue
  - Tolls
  - Fuel taxes
  - Road user charges (heavy vehicles in particular)
- Alternative procurement models
  - Public-private-partnerships
  - Transfer of risk
  - Moves discretionary budget items to fixed contractual payments
- Alternative maintenance & renewal contracts
  - Performance based contracts may deliver 10-20% cost efficiencies
- Lower the desired level of service or accept a higher risk of not delivering it



# Testing long term financial sustainability





# Principles of Effective Financial Management

- Recognize the depreciation of the road asset
- Adequate expenditure categorization
- Long-term financial plans
- Allocation of costs to assets
- Cost-effective financing
- Ability to report financial performance

# Thank you

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