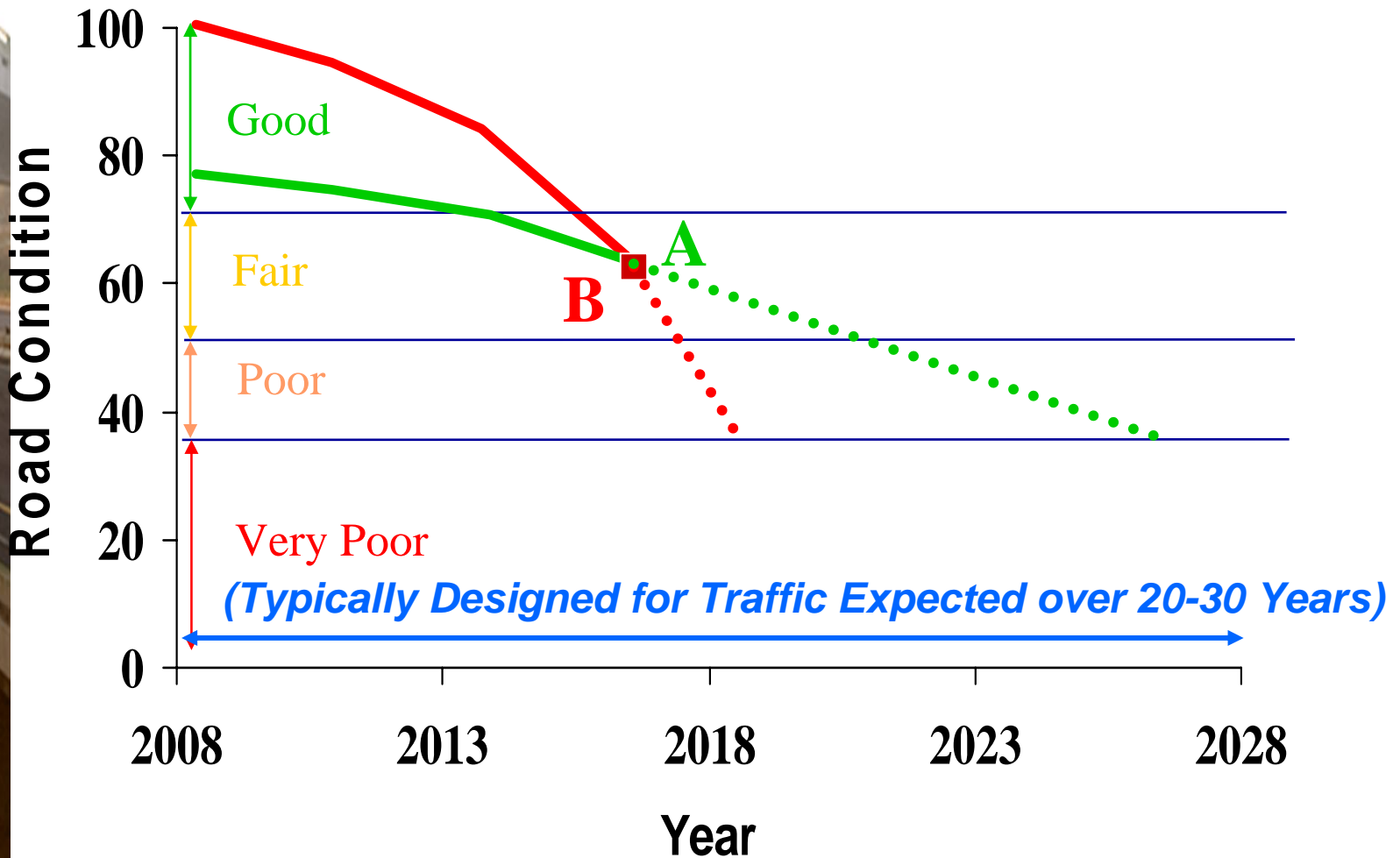




Status of Asset Management in the Roads Sector

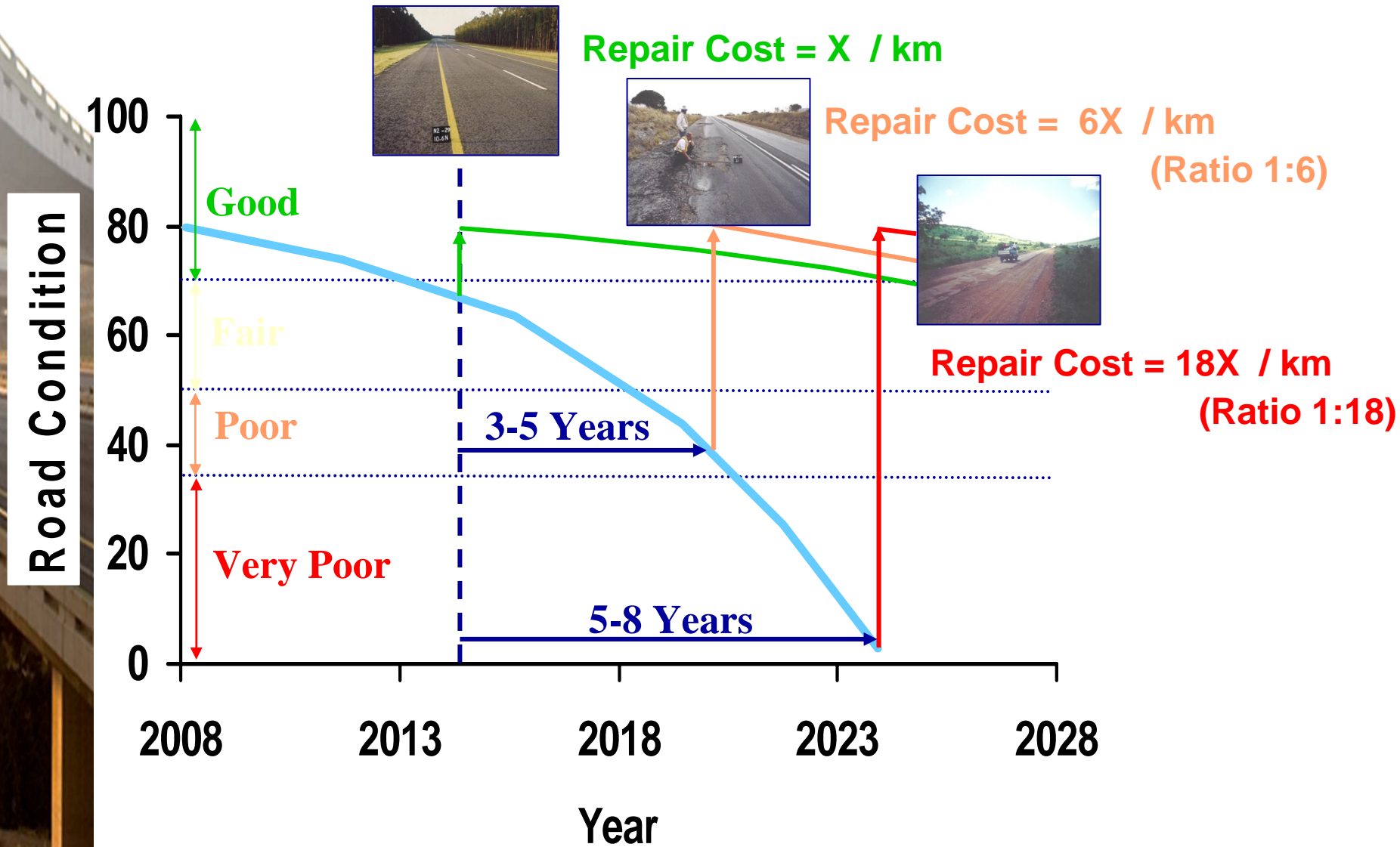
L Kannemeyer

Why Asset Management ?



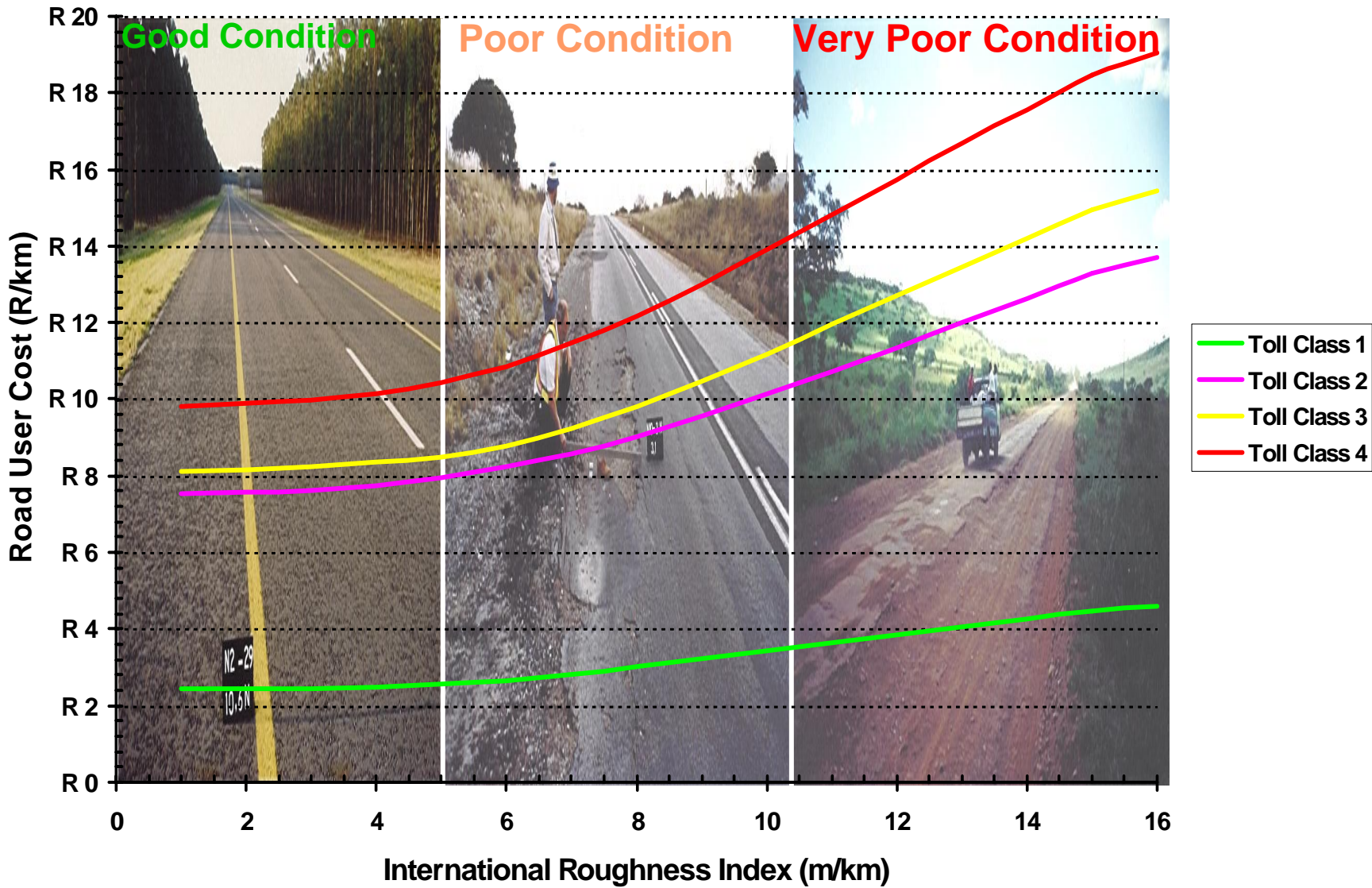
Two Roads, same condition & traffic – but only budget for one ?

COST OF MAINTENANCE DELAY – AGENCY

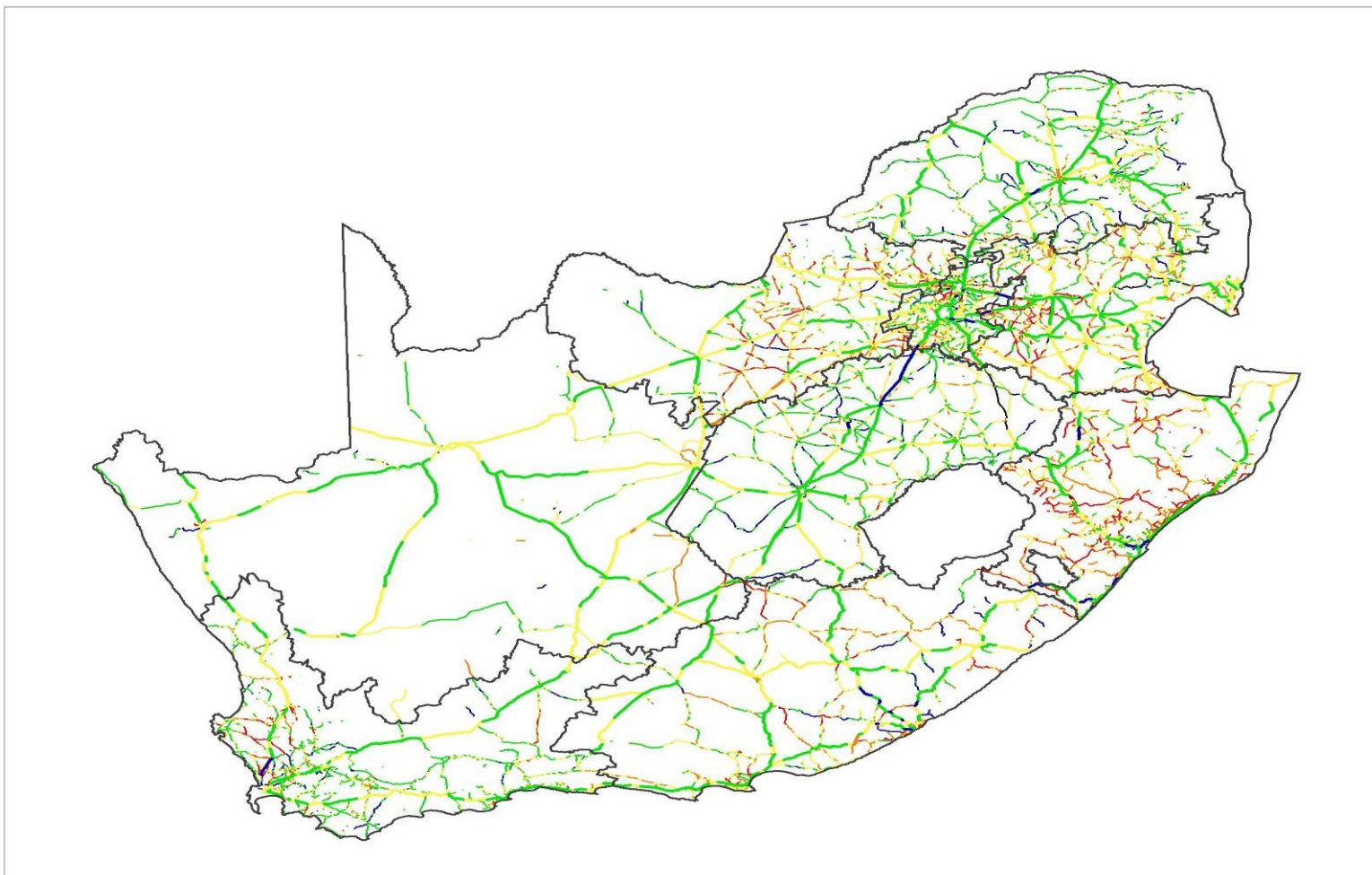


Please Note: Typical Costs for 11.4m Wide Road in Flat Terrain

COST OF MAINTENANCE DELAY - ROAD USER (2009R)

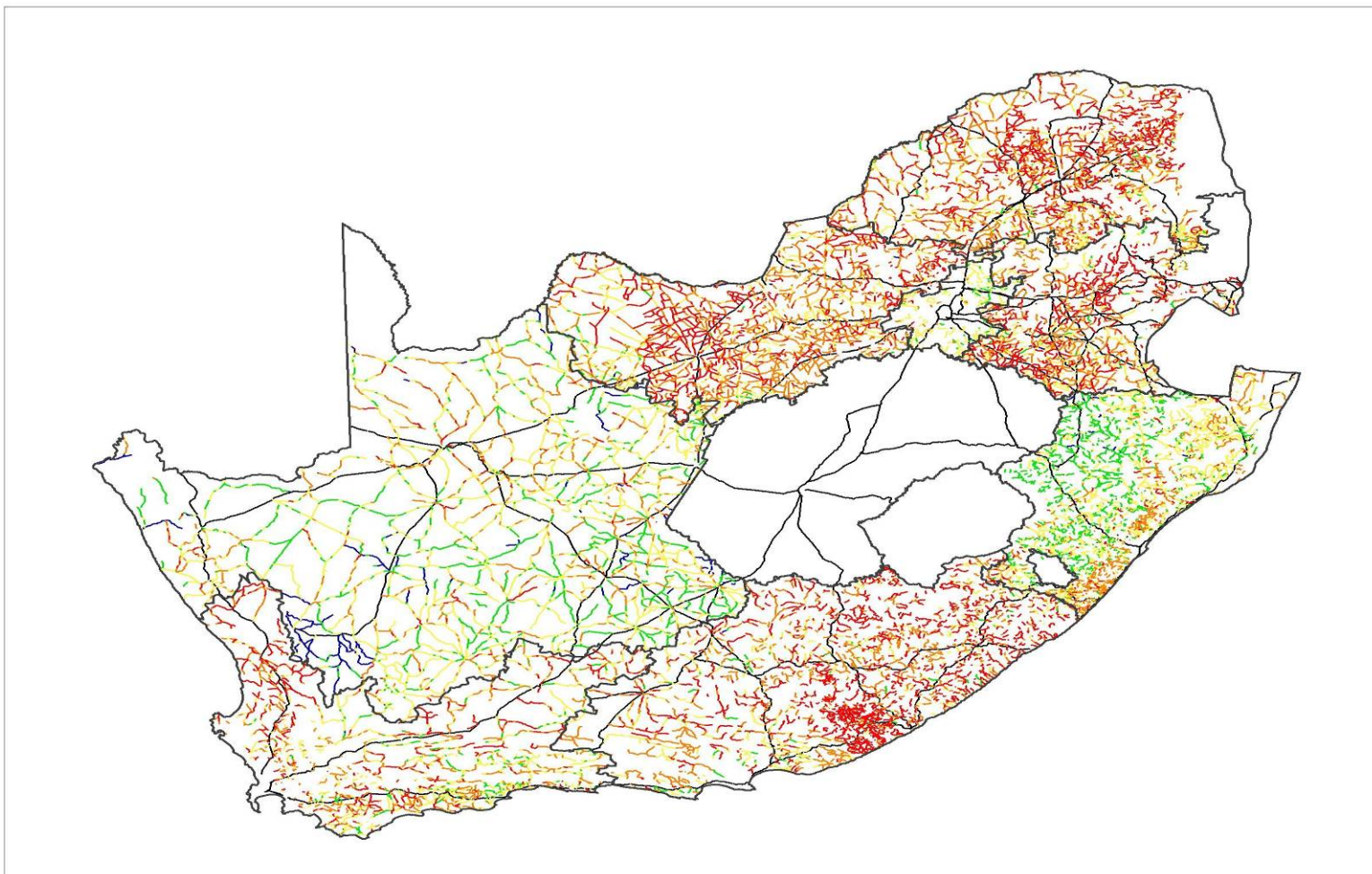


Paved – Provincial + SANRAL



Type	Year	V-Good	Good	Fair	Poor	V-Poor
Length	2004-08	5,303	24,220	21,570	8,399	3,766
%	2004-08	8.38%	38.29%	34.10%	13.28%	5.95%

Gravel – Provincial



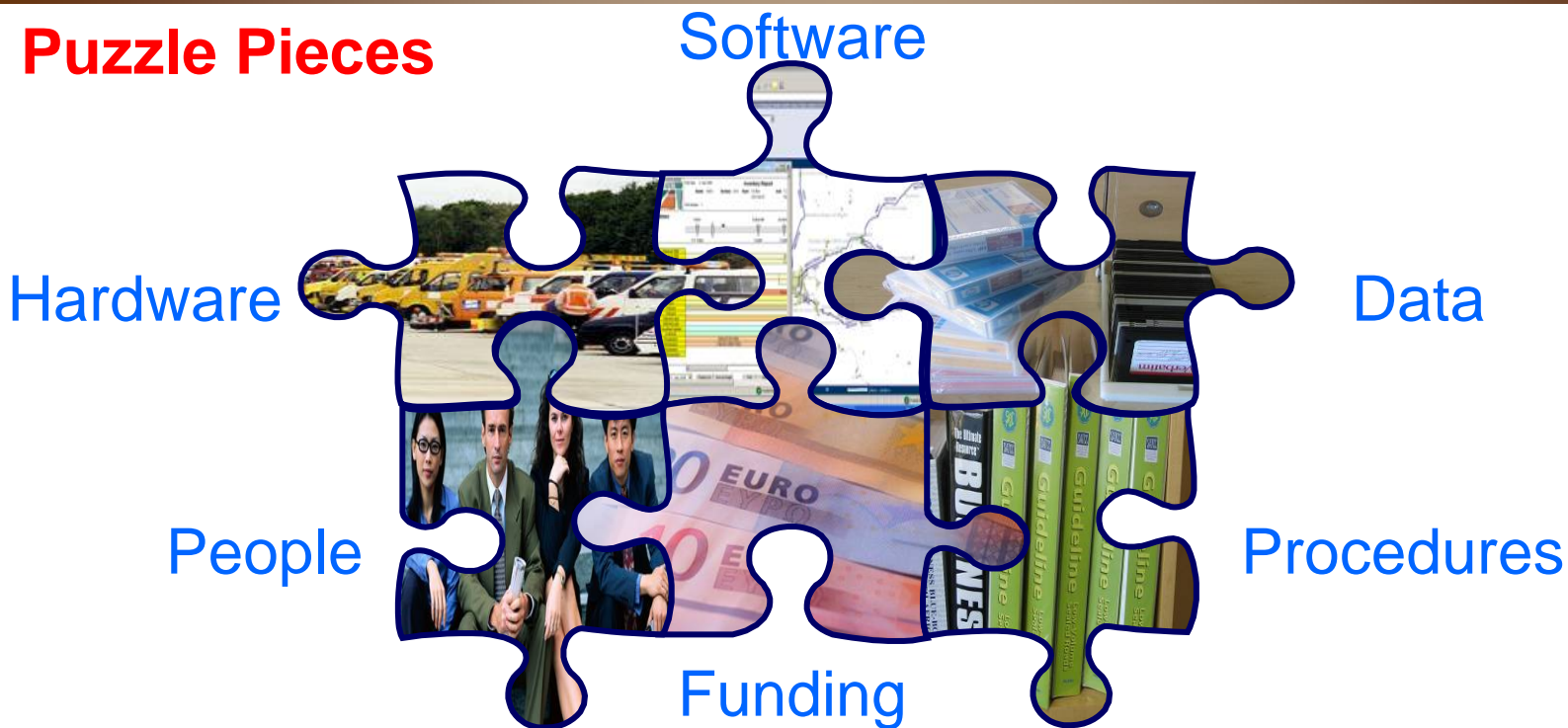
Type	Year	V-Good	Good	Fair	Poor	V-Poor
Length	2004-08	1,981	13,863	35,344	33,219	19,327
%	2004-08	1.91%	13.36%	34.07%	32.02%	18.63%

Option 1 - Employee Mr Bones



... but eish! – he was not big on roads

Option 2 - Asset Management System



- **Hardware** – Road Survey Equipment + IT Infrastructure
- **Software** – Data Analysis and Storage Tools
- **Data** – Knowing what you have and its performance trend
- **People** - People make decisions, the rest are just to support the process
- **Procedures** – Ensure quality of your data
- **Funding** – Without it nothing will happen !!!

Action Item #1: Available Condition Data

Authority	Paved		Gravel		Total		
	Length	Data	Length	Data	Length	Data	% Data
SANRAL	16,170	16,170	0	0	16,170	16,170	100
Provinces - 9	48,176	47,088	136,640	103,733	184,816	150,820	82
Metros - 9	51,682	40,737	14,461	1,789	66,143	42,527	64
Municipalities	37,691	10,866	302,158	2,124	339,849	12,990	4
Total	153,719	114,861	453,259	107,646	606,978	222,507	
% Data	75		24		37		

If the extent and condition of your network is not known, how do you make sound road investment decisions.

Action Item #1: Asset Management

- Need to ensure that all authorities perform visual condition assessments of their road pavements (1-2 years) and bridges (3 to 5 years).
- On roads with higher traffic levels we also need to perform additional automated condition surveys:
 - **Roughness** – how bumpy is the road – speed, wear, etc
 - **Rut Depth** – how much water pond on surface – safety
 - **Macro Texture** – assist vehicle tire to drain water – safety, noise
 - **Surface Deflection** – to establish the structural strength and remaining life of a pavement
- **Traffic Data** – Required for economic analysis and prioritization.



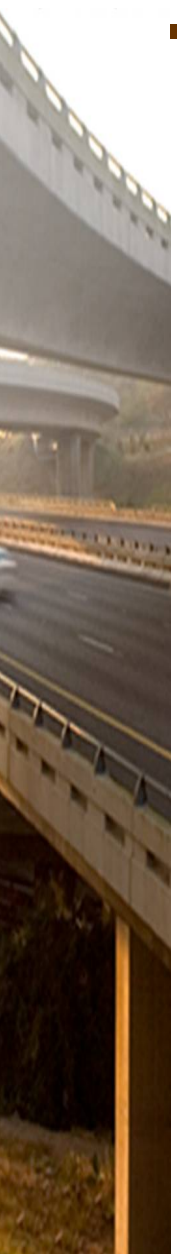
Action Item #2: Preventative Maintenance

- Need to ensure that portion of budget is allocated for Preventative Maintenance:
 - Routine Maintenance – Cleaning Drains, Crack Seal and Pothole Repair
 - Periodic Maintenance – Reseals and Thin Overlays to get our paved road network waterproof again !!!



Action Item #3: Sustainable Budgets

- With current budget allocation levels the condition of network cannot be sustained (Without funding nothing will happen).
 - Need to Increase Budgets – Formula developed based on climate and condition, currently being refined for National Treasury.
 - Need to ensure allocated budgets ends up on roads and not somewhere else
 - Need to ensure that budgets are allocated for preventative maintenance (routine and periodic)
 - Need to ensure budgets are allocated for condition and traffic assessments



Action Item #4: Technical Skills

- Need to ensure appropriate technical skills are available at all government levels.
 - For proper Asset Management and project identification.
 - Ensure appropriate design standards are applied.
 - Ensure Quality of Work
 - Sharing of resources over more than one municipality
- Need to streamline government procurement procedures.
 - Standardised Tender Documents
 - Standardised Tender Evaluation and Award Procedures

What Next ...

- Roads Construction and Maintenance Summit – End May 2010
 - Asset Management
 - Preventative Maintenance
- Norms and Standards
 - Task Team currently developing enforceable norms and standards for budget allocation procedures.
- Funding
 - Budget Need Quantified
 - Funding Options – Fiscal and Non-Fiscal
- Update Guidelines / Procedure Manuals
 - TMH 9, TMH12, TRH 22, ... Asset Management Guide