



Setting the record straight on the so-called “water crisis”

Infrastructure funding perspective

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DBSA

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Infrastructure investment basics

1. Basic economic problem is a given
2. Need to adopt a systemic approach
3. Rationality vs. ideology

Municipal infrastructure investment basics

Balanced investment in asset type:

- Local economic productive capacity
- Social security and well-being

Infrastructure investment:

Trading services:

- Water
- Sanitation
- Electricity
- Solid waste

Economic & subsidised services:

- Roads & stormwater
- Public amenities
- Community services
- Operational buildings

Other:

- Investment properties
- Etc.

Balance in nature of investment

Service access backlogs

Renewal

Growth

Consider sustainability:

- Balance sheet strength protection & enhancement
- Operating impact
- Customer affordability
- Systemic approach

Select funding mechanism:

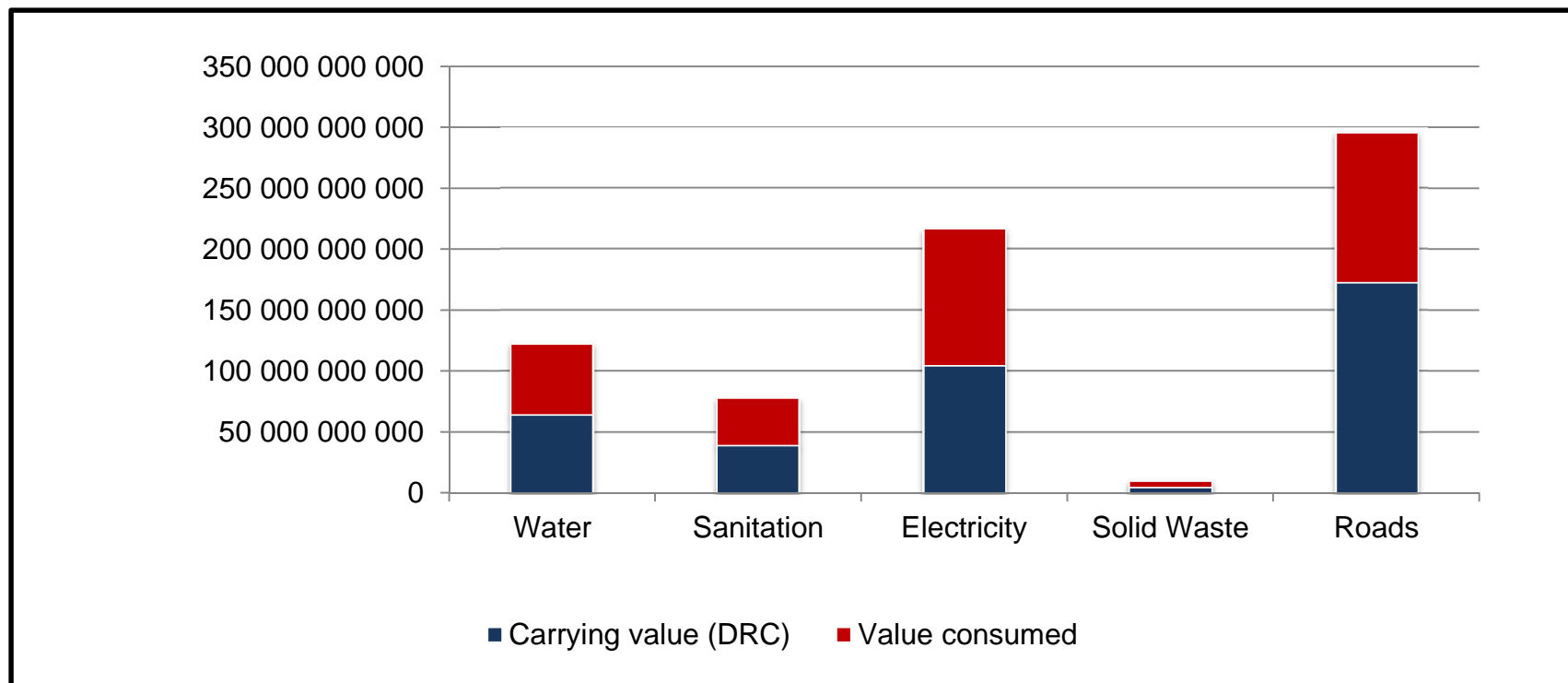
- Grants
- Loans
- Revenue
- Off-balance sheet mechanisms
- Some combination

Consider reality!



RSA municipal infrastructure: value and consumption

- Infrastructure under direct control of municipalities have a current replacement cost value of R 723 billion (excl. land) - 2009.
- Some 45% - 50% of the economic and/or service potential of the nation's municipal infrastructure portfolio has been consumed.



RSA municipal infrastructure: value and condition(cont'd)

- The CRC for water and sanitation combined is in the order of R 201 billion, or 28% of the country's total municipal infrastructure.

Service Sector	CRC	% of Total CRC	DRC	DRC/CRC	Averaged EUL (years)	Renewal Amount (pa) (Annualised Depreciation)	% Annual Depreciation
Water	122 526 320 228	16.95%	64 018 383 983	52%	50	2 450 526 405	2%
Sanitation	78 073 837 414	10.80%	39 298 596 988	50%	50	1 561 476 748	2%
Electricity	216 456 374 508	29.95%	104 387 017 081	48%	35	6 184 467 843	3%
Solid Waste	10 180 403 388	1.41%	4 505 283 095	44%	30	339 346 780	3%
Roads	295 450 722 122	40.88%	172 536 400 443	58%	35	8 441 449 203	3%
Total	722 687 657 661	100%	384 745 681 590	53%		18 977 266 979	2.6%

Status

- These assets, and the services delivered through them, should ensure social health and well-being, and support economic growth.
- But all is not well:

Issues:

- Asset wealth is eroding faster than new assets are being created.
- New assets created often contribute more towards liabilities than income.
- Net margins are under strain, and quite a number of traditionally strong municipalities are posting losses.
- Comparing actual delivery to backlog assessments in the 1990's, all service access backlogs have been eradicated. Yet this is not the case (from a fixed location point of view).
- The more successful a metropolitan or neighbouring municipality becomes at service delivery, the more backlogs tend to increase.

Obscuring factors:

- Conversely, the solvability, accumulated surplus and long term credit rating positions of many municipalities are improving.
- In addition, infrastructure tends to be forgiving in the short to medium term.

Status

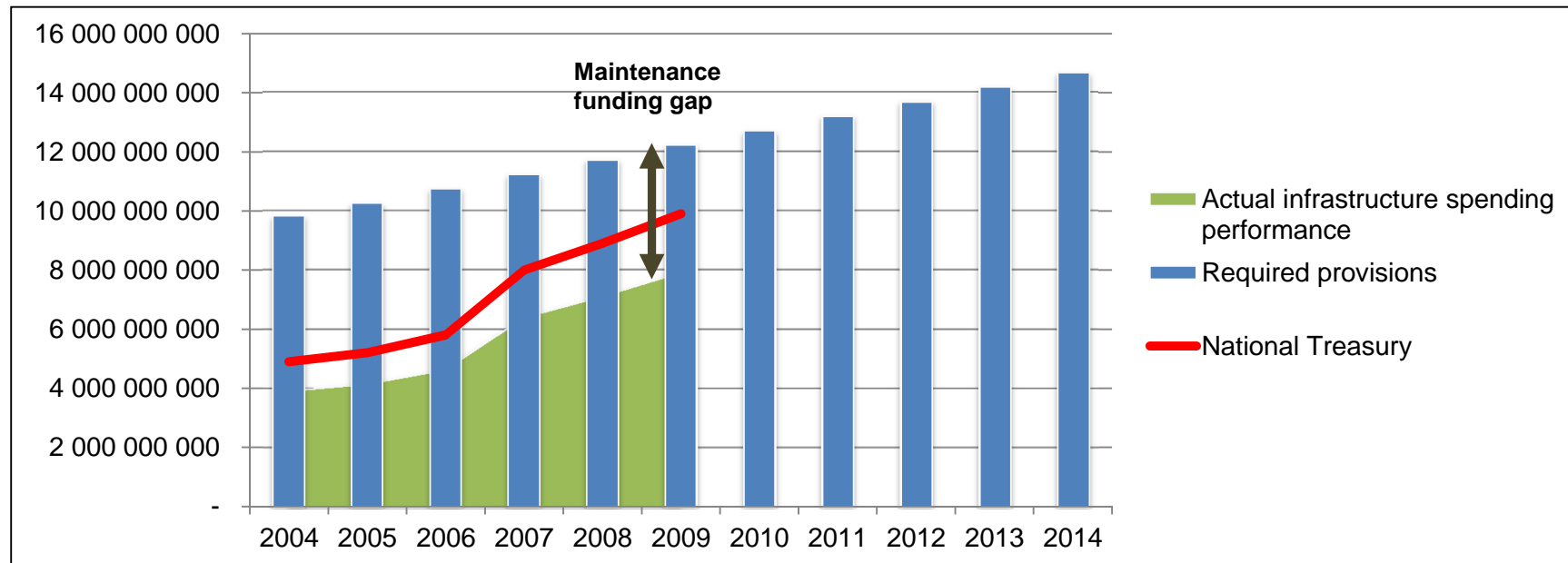
- There is both a moral and practical need to create infrastructure for the poor.
- In the order of R 29 billion per annum is invested in municipal infrastructure creation.
- Focus largely on asset creation for the poor, and on reticulation infrastructure.
- Limited investment in growth and income-generating opportunities.
- Absolute limit to positive distribution effects, resulting in constrained and then constricted economic growth.

Status

- There is both a moral and practical need to create infrastructure for the poor.
- In the order of R 29 billion per annum is invested in municipal infrastructure creation.
- Focus largely on asset creation for the poor, and on reticulation infrastructure.
- Limited investment in growth and income-generating opportunities.
- Absolute limit to positive distribution effects, resulting in constrained and then constricted economic growth.
- Higher levels of FBS lead to increased bulk purchase accounts (upto 30% of OPEX), creating a subsidy gap between cost and equitable share coverage.
- Significant underfunding of maintenance activities leads to accelerated asset decay, and substantial system losses.
- Maintenance programmes often ineffective, and in-house maintenance activities inefficient.

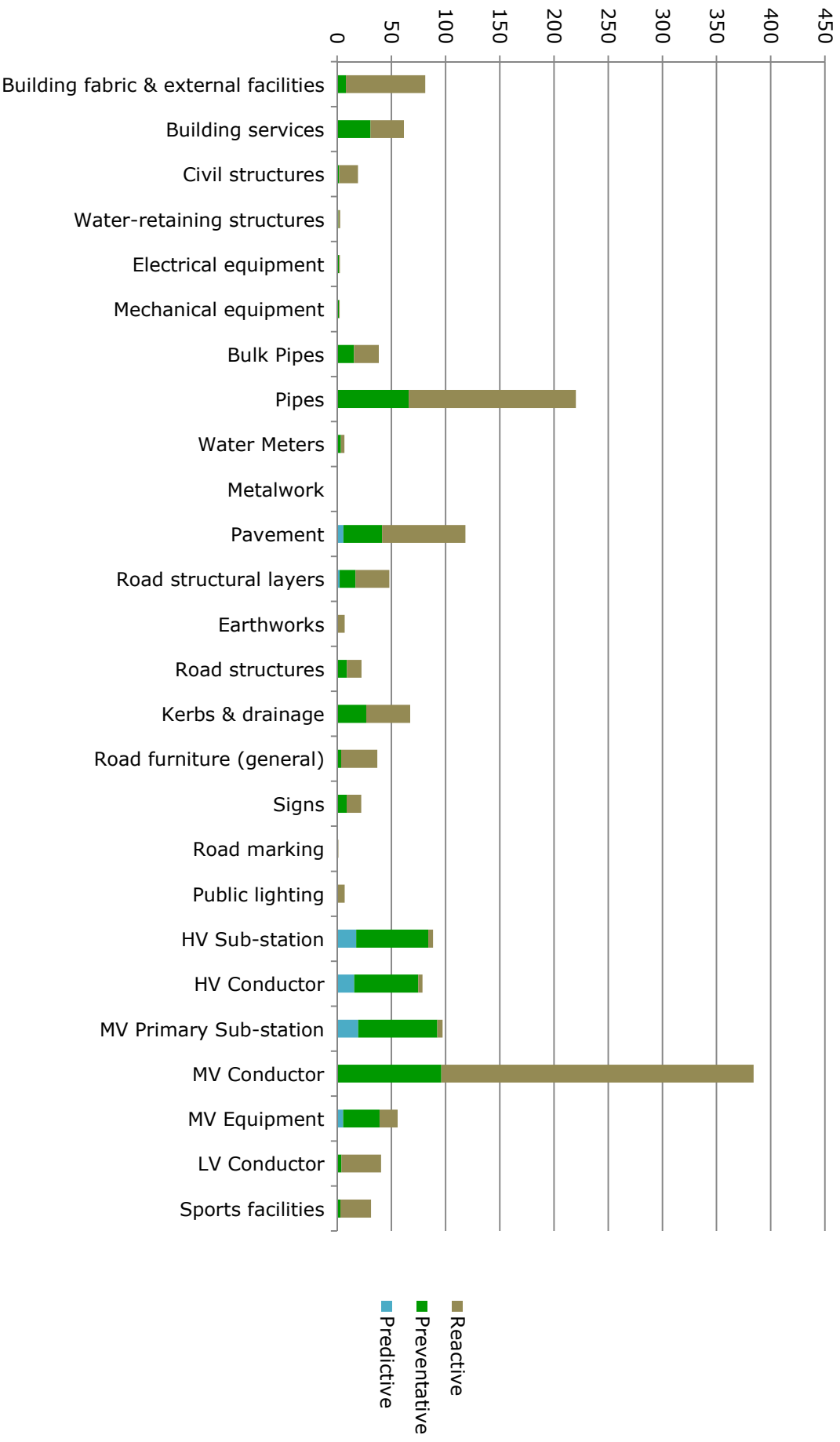
Status (cont'd)

- Maintenance funding for 2008/09 should have been about R 12.2 – 14.6 billion.
- Actual spending was in the order of R 7.9 billion.
- The shortfall is R 4.3 – 6.7 billion - 2008 /09 only.



Status (cont'd)

Distribution of maintenance needs across asset types for a metro

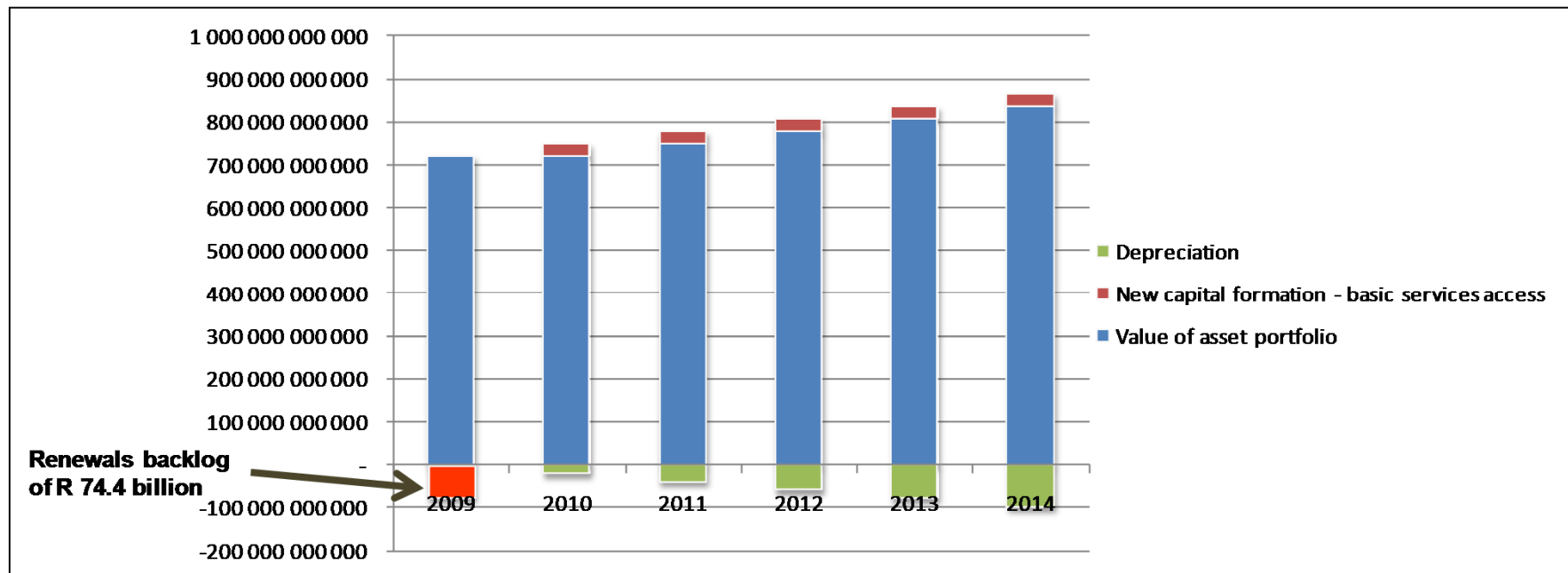
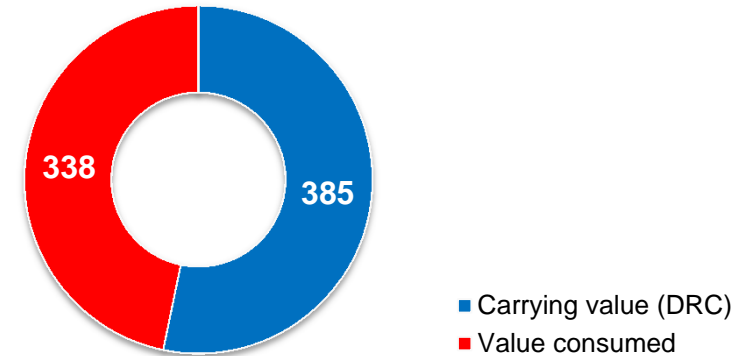


Status (cont'd)

- Significant cost pressures (additional activities, rampant bulk purchase increases etc).
- Subsidised service delivery.
- Insufficient investment in expanding income potential, instead the focus is on tariff increases.
- Limits to customer affordability.
- All service delivery and income generation takes place on the back of existing infrastructure.
- Infrastructure deteriorates over time and with use.
- Infrastructure maintenance and renewal is required to maintain service delivery capacity and standards of service, but these activities are underfunded.
- Investments in infrastructure capacity is require to stimulate economic growth, job creation and expansion in the revenue base of municipalities.

Status

- Renewals backlog of R 74.4 - 89.3 billion
- Regardless of the quality of maintenance, assets will deteriorate to the point where renewal is required
- At the current rate of capital formation R 97.4 billion will be required for renewals over a 5-year window

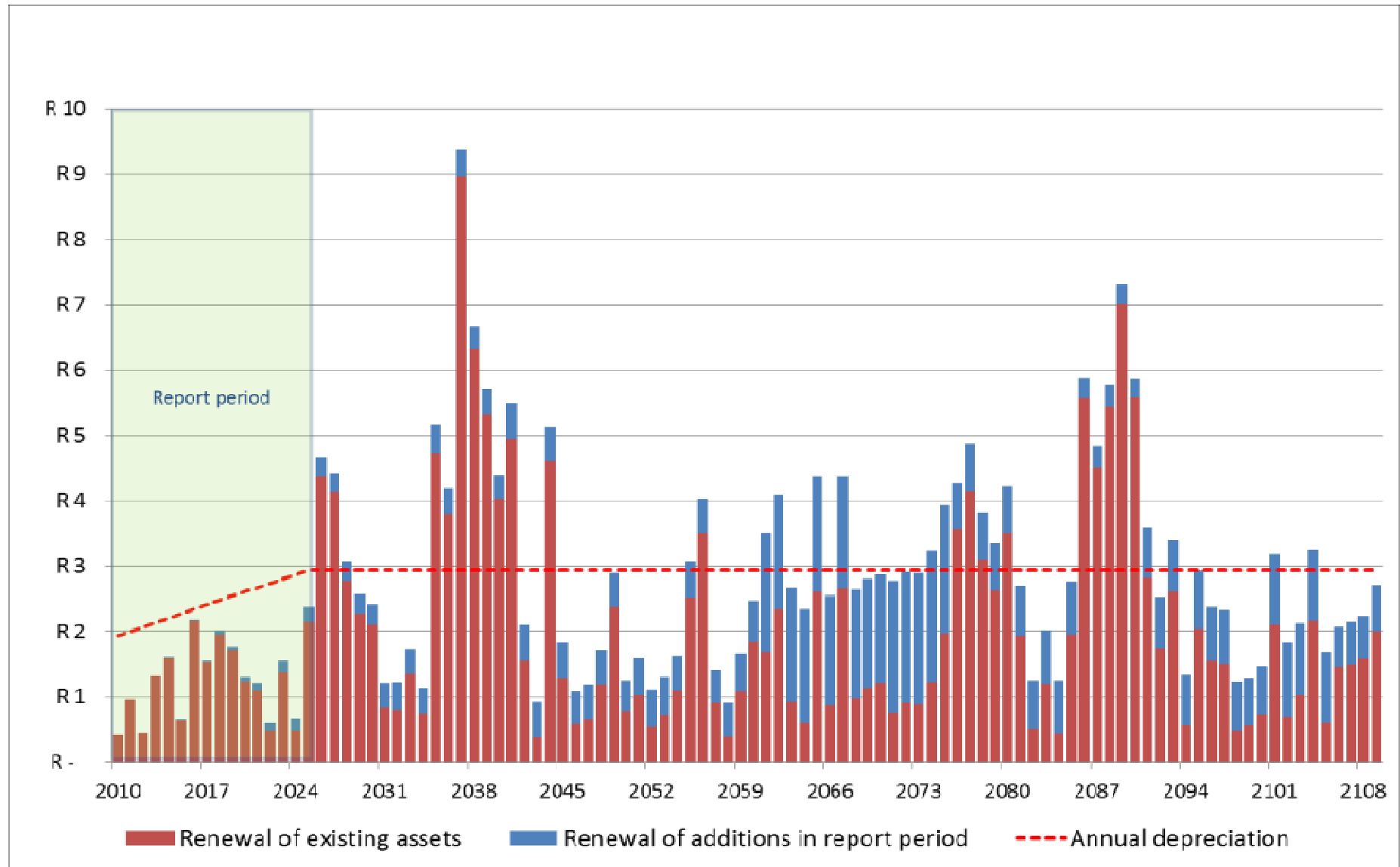


Shifts in infrastructure investment priorities

In excess of R 500 billion will be required to service backlogs, invest in economic growth and fund asset renewals in the 26 largest municipalities over the next 15 years (World Bank, 2009), as follows:

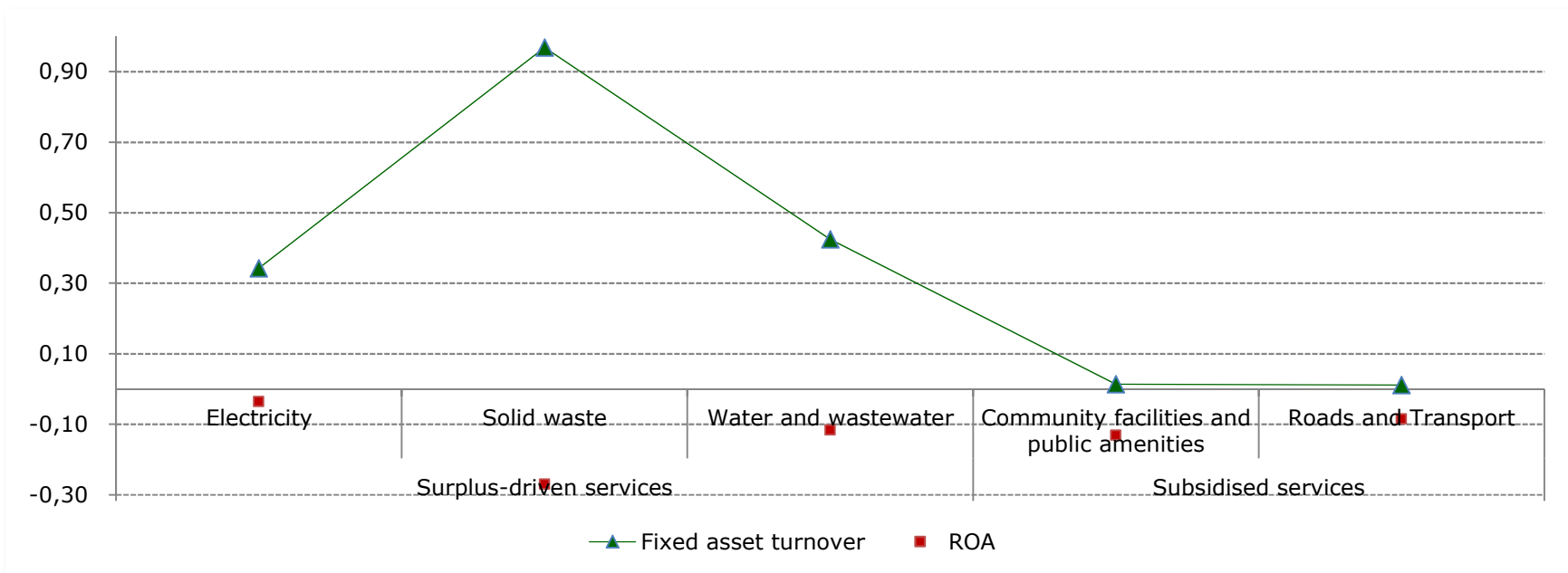
Renewals	40%
Investment for growth	40%
Service access backlogs	20%

Single metro 100 year renewals profile (R' billion pa)



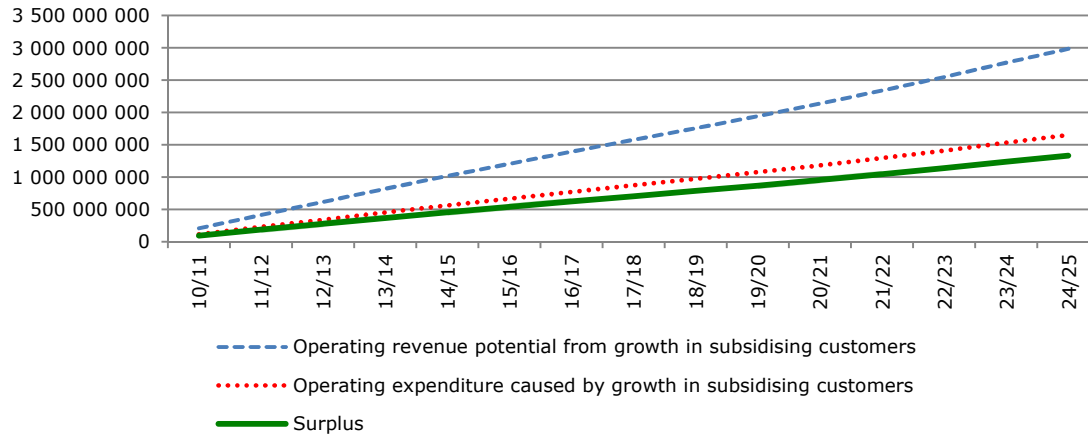
Case study: Effects of overinvestment in subsidised services

- Solvability ratio of 8.21:1 in 2009 (11.74:1 in 2008)
- Generates R 0.26 per annum for every Rand invested in non-current assets.
- Assets in the surplus-driven services generated between R 0.34 – R 0.97 for every Rand invested, whilst investment in other services yields revenue equivalent to one cent in the Rand.
- This strong financial position does not translate into either operating performance or healthy liquidity, and the municipality currently operates at a deficit of around the R 2 billion mark.
- Operating performance translated into a negative R 0.06 per Rand invested in net fixed assets.
- All services operated at a deficit, though deficits in the surplus-driven services were limited to R 1.2 billion compared to the R 3.4 billion for the remaining services that are heavily dependent on immovable production assets for service delivery.



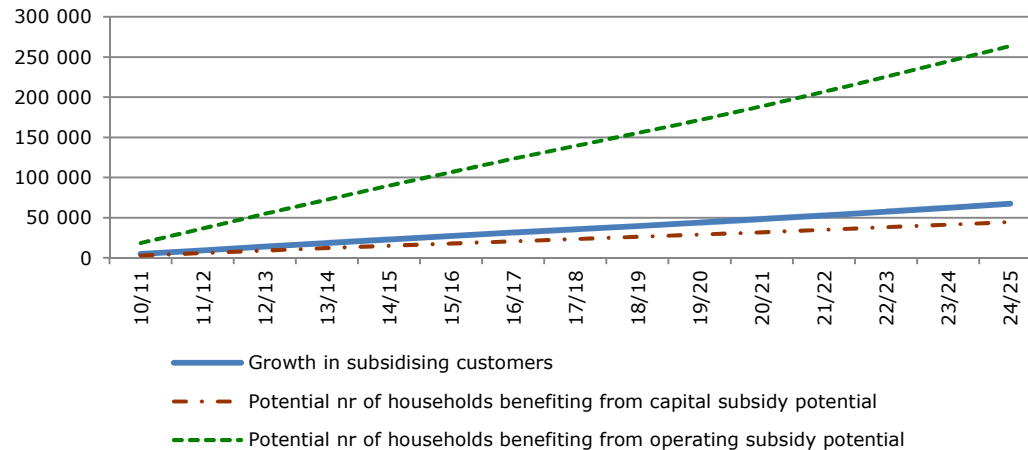
Single metro modelling: Potential benefits of economic growth

How economic growth benefits the poor - the creation of subsidy potential



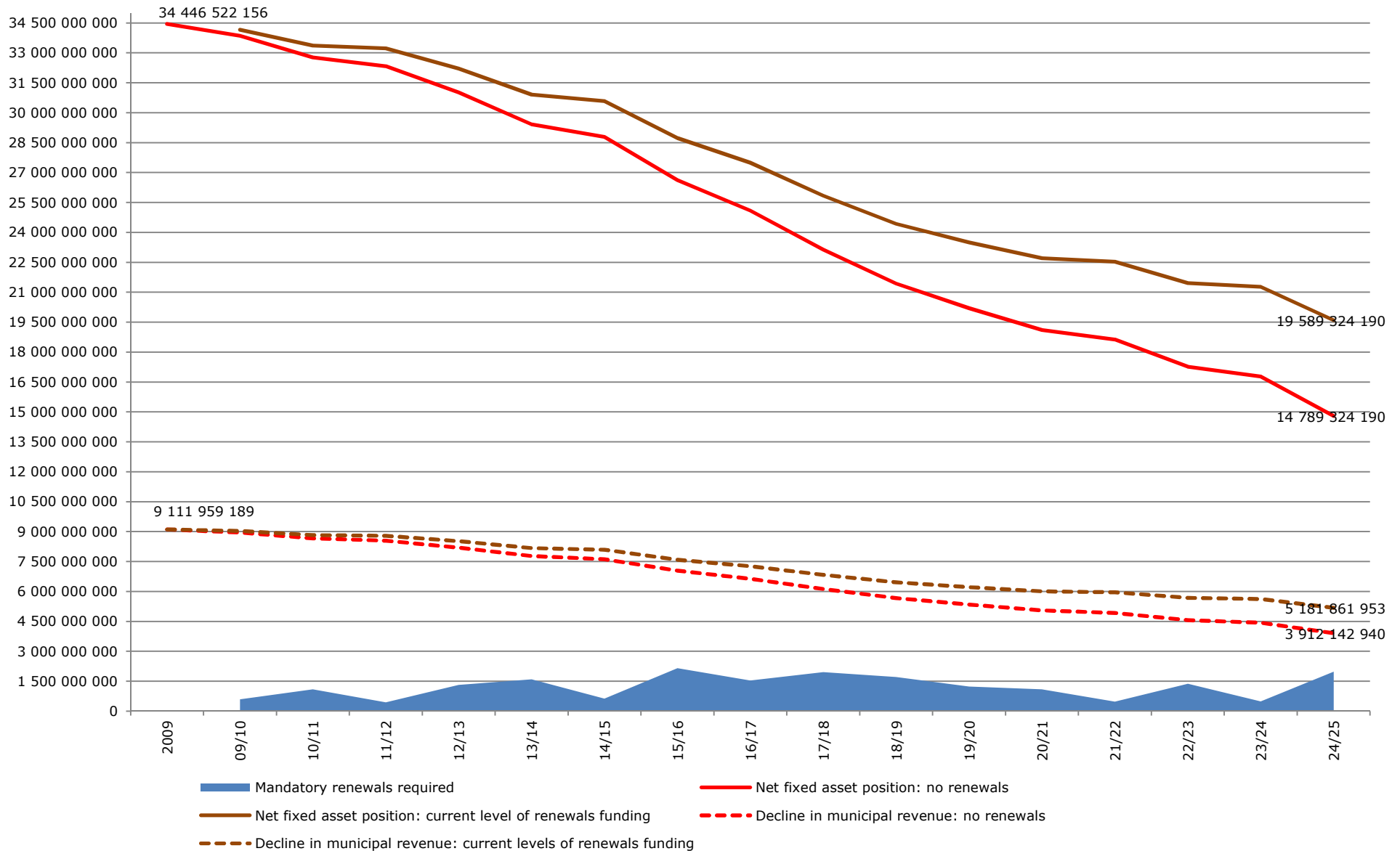
Surpluses in the order of R 707 million per annum (average per annum over assessment period)

Potential nr of households benefiting from growth



Close to 50 000 comprehensive capital subsidies or over 250 000 operating subsidies

Single metro case study: revenue consequences of not addressing renewals



Conclusions

1. Investment in infrastructure is a precondition for sustained economic growth and the creation of distribution benefits.
2. There are significant challenges and funding constraints, but from an investment point of view *not* a crisis YET.
3. Continuing along the current investment path will however lead to crisis.
4. The need exists to balance investment, take care of the basics and to adopt a systemic approach.
5. Investment in bulk water and sanitation bulk capacity needs to improve, as well as investment in infrastructure renewal.