

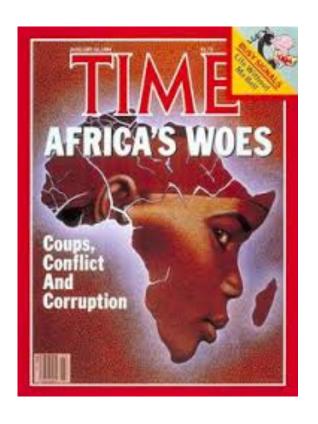
# CREATING THE SOCIAL AND ECONOMIC INFRASTRUCTURE OF THE FUTURE

Infrastructure in Southern Africa: Needs and





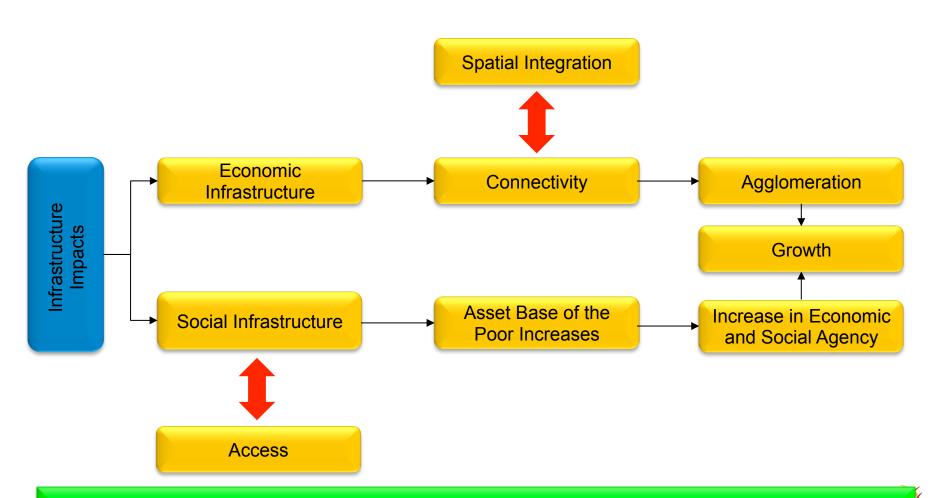
### Africa is on the Move







# Infrastructure Key to Africa's Growth

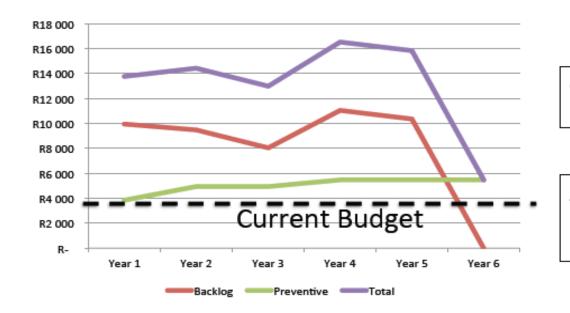


Nature and mix of economic and social infrastructure key to developmental outcomes

# Significant Maintenance Backlog

#### Example: RSA Health Sector

	High Priority items	Medium Priority items		Complete Inventory		
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Backlog	R9 933	R9 477	R8 047	R11 046	R10 346	R-
Preventive	R3 831	R4 941	R4 941	R5 480	R5 480	R5 480
Total	R13 764	R14 418	R12 988	R16 527	R15 826	R5 480
Total Asset Replacement Value			R 267 384			



Cumulative Backlog - R48 848 mil As % of ARV - 18.27%

Annual Preventive Maintenance Cost – R5 480 mil As % of ARV – 2.05%

## Significant Demand for New Infrastructure Investments

#### **Growth**

#### **GDP**

\$2tn 2013 - \$5.5tn 2050

#### **Population**

1.1bn 2013 - 2.4bn 2050

#### **Urbanisation**

38% 2013 - 60% 2050

#### **Consumer Spending**

\$1tn 2013 - \$4.7tn 2050



# Infrastructure Demand

- Rising power demand from 590 TWh (2010) to more than 3,100 TWh (2040, 6% growth p.a.), requiring current capacity to grow from 125 GW to 700 GW in 2040
- Transport volume demand, already insufficient today, is projected to increase by a factor of 6 to 8 by 2040
- Surging water demand, already insufficient today, to increase from 265 km³ in 2005 to 400-550 km³ in 2040, potentially bringing river basins to ecological brink Increasing
- ICT demand projected to rise by a factor of 20 by 2018, increasing bandwidth from around 300 Gbps1 in 2009 to more than 6000 Gbps1

# Bottleneck #1: The Funding Gap

Estimated Global Infrastructure Funding Gap 2013 – 20130 \$57 trillion - \$67 trillion







## Bottleneck #2: The Institutional Capacity Gap

- Lack of norms & standards
- Outdated standard designs
- Inappropriate technology choices drive up costs, reduce maintainability & hamper service delivery

 Delink between infrastructure planning & budget cycles

ordination leading to high

levels of delivery and cost

inefficiencies

- Inadequate construction supervision
- High levels of PA & contractor failure
- · Long project delays & cost escalations
- Inadequate management of works & final completion resulting in large number of projects in retention for years

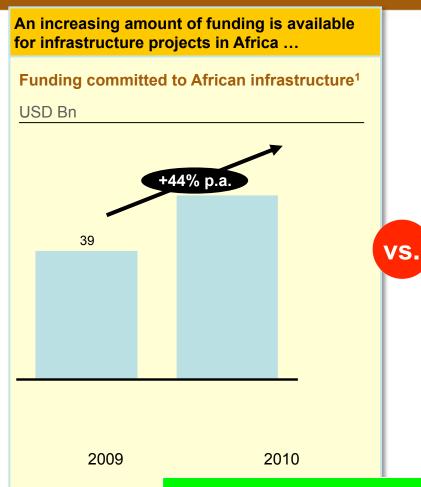
- Inadequate conditions assessment info
- Inadequate maintenance planning, budgeting & expenditure

# Planning Finance Design Construction Maintenance Infrastructure plans not aligned to wider sector service needs & trends Inadequate & outdated info No life cycle planning Supply Chain Management

- Lack of accountability within a disaggregated infrastructure delivery system across spheres & between departments resulting in a lack of co Inadequate understanding of full infrastructure life cycle costs resulting in huge variances in cost estimates and/or available budget versus need
  - Inability to develop innovative funding solutions and borrowing strategies to respond to market needs
- Lack of procurement & logistics planning
- Inadequate pre-screening of PSPs & contractors + CIDB contractor grading unreliable
- Inappropriate contracting choices
- Poor contract management 7

## Result #1: A Weak Project Pipeline

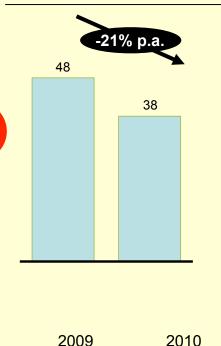
Capital is being committed but the bottleneck is a lack of bankable projects



... but most of the funding is not being disbursed due to gaps in project development and preparation and delivery

Rate of funds disbursed as a proportion of total committed funds

Percent



#### What investors say

"There is a challenge on the supply side in terms of bankable projects"

"Project development is one of the major challenges due to both lack of skills and lack of experience"

"The lack of technical capacity within government results in poorly written terms of reference"

In 2009 and 2010 alone, a total of ~USD 55Bn was available to spend on infrastructure, but was not disbursed

1 Includes multilateral, bilateral (primarily China and India), and private sources to fund infrastructure projects in Africa SOURCE: Infrastructure Consortium for Africa (ICA)

# Result #2: Ongoing Failure to Meet Delivery and Developmental Goals



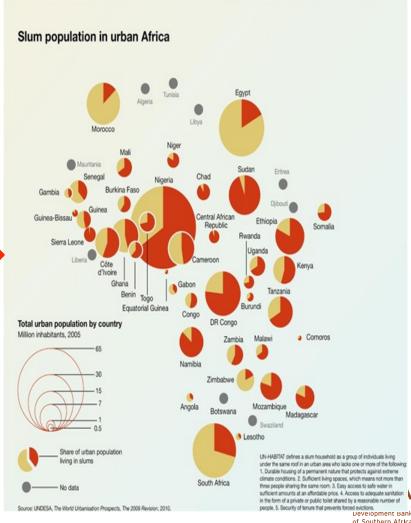
### Result #3: African Urbanisation ≠ Growth Dividend

Limited Agglomeration and High Levels of Social Exclusion

#### **High Urban Growth**

#### **Growth of African cities** City population, forecasts % increase, 2010-2025 forecast Alexandria Dor es Salaam Kinshasa Luarda Addis Ababa Abidian Dokar Lagos badan Accra Douala Nevandria Kinshasa Casabiance Cairo Durban Johannesburg Source: UN-HABITAT

#### **High Levels of Exclusion**





# **Proposed Solutions**

# **Best Practice** Ö **Driving Innovation**

# Solution #1: Increasing State Delivery Capacity Value Proposition of DBSA Infrastructure Delivery Division

# Implementing Agent Services

- Accelerating delivery
  - Shorten timeframes from concept to brick i.e. implementation planning, design, procurement and construction cycle times
- Value for Money
  - Setting new cost norms by delivering projects more cost-efficiently
- Sustainability
  - Life cycle costing, maintenance plans and partnerships to drive full functionality
- ▶ Development Impact
  - Job creation, localization/industrialization and contractor support

#### Programme Management Services

- Accurate and realistic project planning and costing
- Appropriate project designs
- ► Adoption of appropriate procurement options
- ► Effective management of Implementing Agents and implementation quality assurance

# Programme Co-ordination Services

- ► Up-to-date and accurate information on the spatial location and quality of infrastructure as well as the status of planned and current projects
- ► Information on infrastructure trends
- ▶ Prioritization models and scenarios of infrastructure development impacts

#### Innovative Learning Solutions

- ► Innovative infrastructure delivery learning programmes
- ► Customised Learning Solutions
- ► Cutting edge infrastructure delivery skills hub

# Solution #2: Driving Delivery Innovation

- Development & mainstreaming of norms & standards
- Introduction of advanced, collaborative design tools to optimize design outcomes
- Identifying & mainstreaming contextspecific technologies and optimum technology mixes
- Development & mainstreaming of integrated, collaborative planning tools & platforms backed by up-to-date & accurate data

- Implementation of new conditions assessment processes & systems
- Development & mainstreaming of enhanced maintenance planning & management processes & tools
- Development & mainstreaming of enhanced construction management processes (e.g. framework agreements, batching etc.), tools & leadership capabilities

- Implementation of enhanced procurement processes & benchmarks
- Introduction & mainstreaming of advanced logistics planning & management processes & systems
- Introduction of enhanced vendor management systems including more rigorous prescreening, prior performance feed-back loops & early warning systems
- Publishing of vendor performance ratings

**Planning** 

Design

Construction

Maintenance



**Supply Chain Management** 

#### **Exploration of Alternative Delivery Approaches**

Greater use of Turnkey Approaches & Delivery Agents

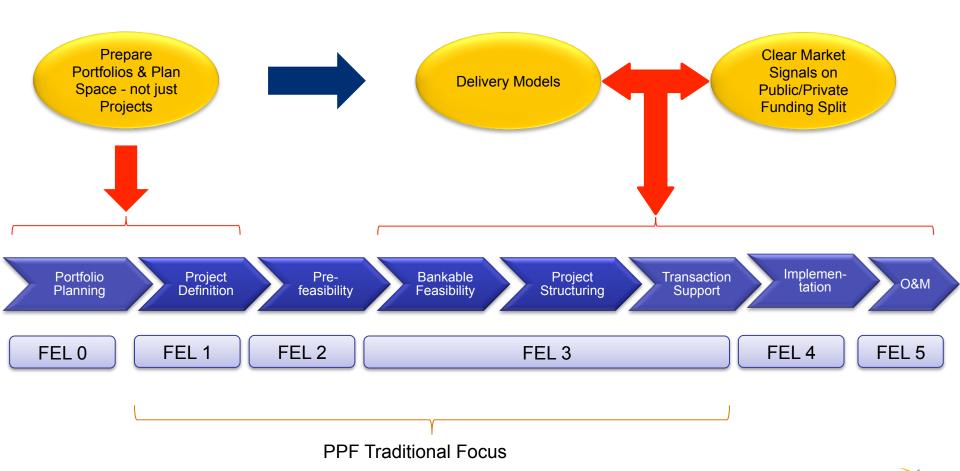
New shared service & institutional models

New maintenance models

Greater use of new forms of public/private partnerships



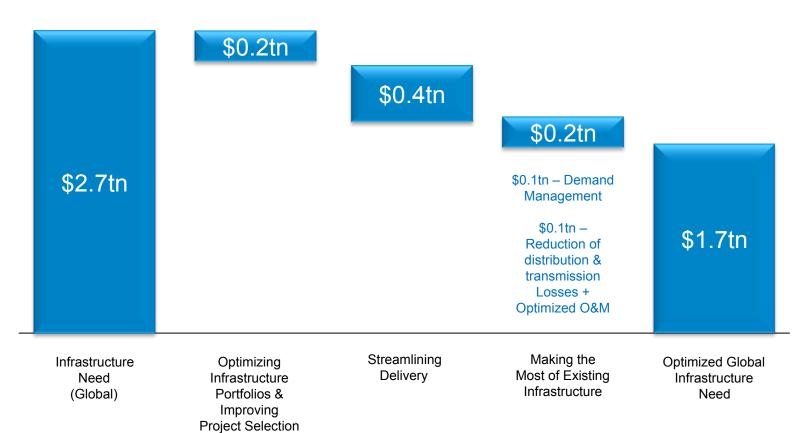
# Solution #3: Focus on Early Stage Prep





# Solution #4: Optimize Infrastructure Productivity

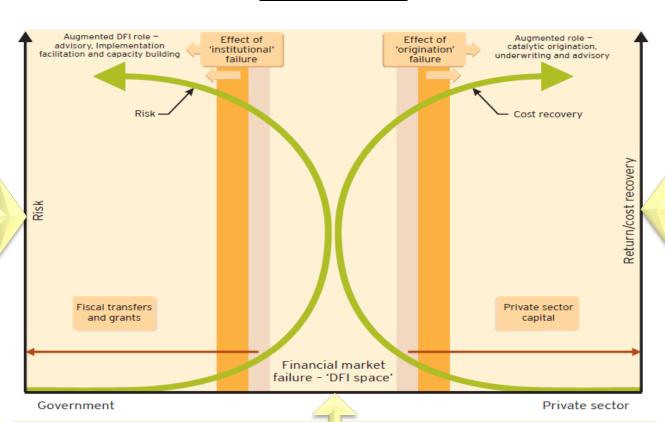
MGI: Infrastructure Productivity Report 2013



## Solution #5: Innovative Funding Solutions

#### The Role of DFIs

Growing
Infrastructure
needs but
shrinking
fiscal space
requires
more nonstate
solutions



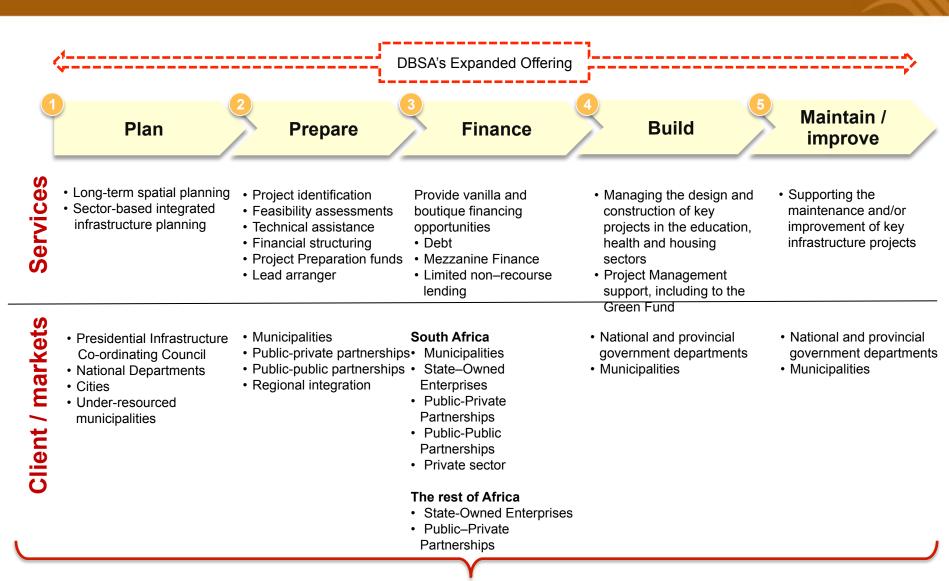
Using short-term debt to fund long-term infrastructure distorts state payment cycles and impacts affordability

DFIs must act as market makers, crowding-in private players (MLAs, syndication etc.) and originating new innovative funding solutions e.g. blended finance instruments, social impact bonds etc.





# Summary: Creating the Social and Economic Infrastructure of the Future Requires Combined Finance and Implementation Solutions



# IDD: Building a Better World. Today



# **THANK YOU**