

Infrastructure Dialogue

Financing Public Infrastructure

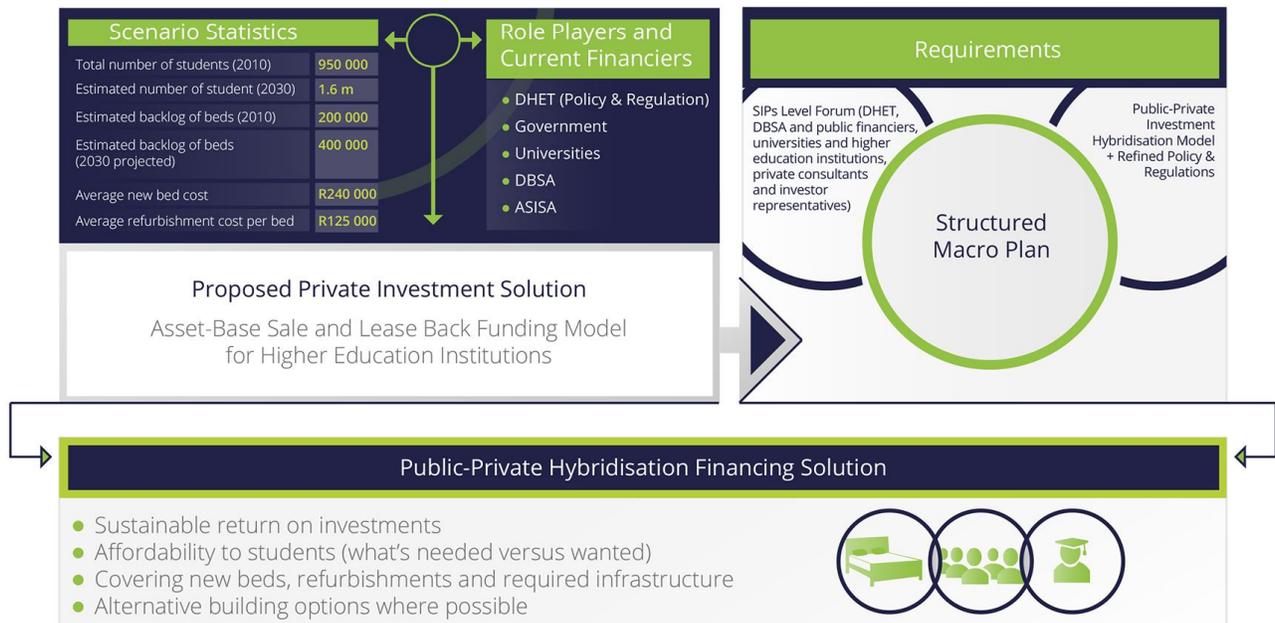
11 September 2014

FINANCING PUBLIC INFRASTRUCTURE

How can South Africa fund and finance its public infrastructure build programme given the state of the economy, unemployment and fiscal capacity?

Case Study: Student Accommodation

A hybridisation issue with a social and economic mandate



1. Overview

The question surrounding how South Africa, a country engaged in a trillion Rand infrastructure programme, will fund and finance its public infrastructure build programme given the state of the economy, unemployment and fiscal capacity, was debated from an original perspective at this Infrastructure Dialogue. Potential solutions to the big picture problem, as well as new challenges came to the fore through a focus on a case study around financing student accommodation. This case study depicts the full spectrum of bases needing to be dealt with in a financing public infrastructure in the South African context. It represents economy of scale, requires public funds

and has an active infrastructure mechanism. Based on this, issues of funding responsibility, ability and allocation together with the critical question surrounding affordability were put on the table.

The Dialogue took the format of a plenary discussion, which began with brief introductions from four panel members, setting the scene and leading the dialogue. **Geci Karuri-Sebina**, Executive Manager at South African Cities Network opened the Dialogue with a word of welcome and introduced **Richard Goode** of the Development Bank of Southern Africa (DBSA) as the facilitator of the session.

“Through this Dialogue, we deal head-on with the basic issues that are required to make the financing, management and operational structure of assets in South Africa economical, safe, affordable, enjoyable and sustainable.”
Richard Goode of the DBSA

The panel members comprised:

Ms. Brenda Swart	Director: Financial and Physical Planning in the Branch: University Education in the Department of Higher Education and Training
Mr. Bian Jooste	Co-founder and Managing Director: Dabiko Consulting
Mr. Louis Strydom	Principal: Business Development at the Development Bank of Southern Africa (DBSA)
Mr. Stephen Smith	Consultant and Policy Advisor: Association for Savings and Investment (ASISA)

2. A Focus on Student Housing

2.1 Scenario Statistics

In September 2011 the Department of Higher Education and Training (DHET) published a report on student housing, *The Report on the Ministerial Committee for the Review of the Provision of Student Housing at South African Universities*. The report highlighted the dire shortage of appropriate and affordable student accommodation, primarily pertaining to universities. Key findings summarised in the table below set the context for a detail focused Dialogue.

2010 Statistics	
Total number of students	950 000
Total number of contact students	600 000
Students in public student accommodation	Ave 20% (107 000 of the 2010 total of 550 000)
Students accommodated in private residences	27 000
Backlog figure, based on 950 000 students	200 000 beds in residences
Resident students receiving some form of financial assistance	71%

Table 1

The scenario is as follows. Enrolment numbers at universities since 1994 have doubled. Student accommodation funding relative to the CPI index, increasing student numbers, and Treasury

percentage allocation has not maintained pace. Looking at the National Development Plan for 2030, which is only 15 years away, the number of students could increase to 1.6 million. This would mean a massive 78% more students, which in turn could double the backlog.

The ideal level of student accommodation on campuses in rural communities is 80% with a 50% level in urban areas. Apart from the huge shortage of beds, the Report uncovered shocking inequality in student residences across South Africa. There have been numerous cases where the standard of student accommodation is very low, in some cases appalling. Accordingly, the need to refurbish residences requires R4.4 billion, or 35 000 beds.

On average, the unit cost of a ‘new bed’, which includes all basic infrastructure required to accommodate one student is in the region of R240 000. Although in some regions new beds could be implemented at a level as low as R160 000, the R240 000 is an average figure applied.

Student accommodation for Technical and Vocational Education and Training (TVET) colleges, previous known as FET colleges were brought into the discussion. For these institutions, the optimal ratio is for at least 50% of the student population to be housed in hostels. At present only 14 000 students of a total of 223 000 reside in

“Student housing is not purely a social issue needing to be funded from national revenue, while it is also not only commercial in needing to be funded by the market. It is a hybridisation issue with both a social and economic mandate. We need to explore the segment between these two poles.”

Stephen Smith of ASISA

public student housing and critically, this sector has no dedicated infrastructure fund, needing to rely on accommodation funding provided through bursaries.

A further institution needing to be included within the scope of this topic is UNISA, the largest correspondence university, which provides distance learning to people who are mostly employed. UNISA has a growing number of young, unemployed students who require accommodation.

2.2 Current Financing

2.2.1 Government

Public student accommodation is currently subsidised by the Government through the DHET. Universities operate autonomously and manage the procurement of their residences.

The DHET has allocated approximately R6 billion to infrastructure over a period of three years (2012 to 2015). Of this, R1.7 billion has been assigned to universities for student housing while universities have added their own portion of income to reach a total of R2.3 billion. All in all, this funding provided for 9000 new beds.

Undoubtedly the priority at hand is a focus first on historically disadvantaged campuses such as Mamelodi, Garangua, Soshanguve and Tshwane University of Technology. The majority of funding goes to seven bigger universities with a number of smaller campuses.

The DHET works closely with Higher Technical Institutes (HTIs) that do not have strong balance sheets and engages with stakeholders to acquire more funding. In order to facilitate securing of additional funding, the department supports engagement by universities with the private sector through Public Private Partnerships (PPPs).

2.2.2 Universities

In this context, students are the customers and universities apply their own fee structure to generate an income stream. On average affordable student accommodation is calculated at R24 000 per annum. At this level, the average student can afford it and it can be serviced with a loan and maintained. However any amount above this is generally not affordable for students and therefore, becomes a problem.

Charging a much lower fee is also not sustainable and indirectly limits private investment. Some universities charge exceptionally low fees, in some cases R11 000 to R14 000 per annum. Yet at some point, such low fees require subsidisation and facilities cannot be maintained. Furthermore, the underpricing creates the perception that any new developments at realistic costs seem highly expensive.

2.2.3 Development Bank of Southern Africa (DBSA)

The DBSA is involved in the financing of student housing through on-balance sheet funding. With a vision to ensure quality education, the challenge of providing adequate housing is far greater than what can be accommodated through on-balance sheet funding. The scale and urgency at which new residential developments and refurbishments need to take place requires not only adequate funding in terms of housing, but an operational function which comes at a cost in order to ensure effective implementation. It is here where the private sector needs to play a significant role.

2.2.4 Association for Savings & Investment South Africa (ASISA)

ASISA represents the majority of the country's asset managers, collective investment scheme management companies, linked investment service providers, multi-managers and life insurance companies. ASISA's 117 members are considered the custodian of the bulk of the nation's savings and investments and are among the country's biggest contributors to the national GDP. With R5 trillion of assets under management, the organisation invests in the region of R1 trillion in Government bonds, State-owned Enterprise and Municipal paper.

Together with Government, ASISA is involved in public infrastructure financing across a broader spectrum that is represented internationally at the G20 forum. From the perspective of public infrastructure financing through pension funds, the aim needs to revolve around ensuring a common standard from a prudential perspective, and better intermediation of asset-specific financing while exploring non-traditional methods.

Internationally, pension funds allocate around 1% to public infrastructure finance, and it is typically big pension funds that are active in this space. With 2200 pension funds in South

Africa, the industry is highly fragmented and enhanced intermediation of smaller funds is important. Enabling smaller pension funds to participate in this highly specialised asset class investment requires the appropriate expertise based on asset types.

The returns on these investments are income for pensioners, not shareholders. Managers of the funds are paid a set fee and do not gain unlimited profits. This solution to funding public infrastructure therefore differs greatly from that of balance sheet based investment with shareholders' money.

To date, 10 000 beds for student housing have been implemented under this initiative with Government. 8 000 beds have been rolled out in partnership with public sector funders, mainly the DBSA. The beds were implemented through refurbishment at a unit cost of approximately R125 000, totaling R1 billion, which is roughly half the amount required for a new bed.

2.3 Public Student Accommodation Policy

The Report discussed in section 2.1 showed a dire need for a student housing policy that sets a framework for public student accommodation with minimum standards. The aim of such a policy should be to standardise accommodation across all universities in South Africa where possible, and to improve internal issues such as the process of housing allocation, room sizes and regulation of room population.

A detailed policy was published for comments. As universities have different requirements, there is however no one size fits all solution. The policy outlines broad specifications with regards to matters such as room requirements, the number of students to bathroom and students to kitchen ratios and also addresses requirements in terms of disability.

As the DHET cannot regulate private sector accommodation, the existing policy focuses mainly on public accommodation with the exception that private sector accommodation can be accredited. Although there is no formal accreditation structure, some universities have informal accreditation practices in place. There are private accommodation facilities with good standards but there are also private residences with appalling and poor conditions. It is from this viewpoint that accreditation remains problematic.

3. Challenges & Requirements

3.1 Backlog Crisis

In order to address the backlog of 200 000 beds while keeping pace with escalating demand for public student accommodation requires a substantial investment of R147 billion over the long-term. In addition, maintenance and refurbishment of residences, ensuring that they are fit for use and fit for purpose are currently cost at R2.5 billion and R4.4 billion respectively.

3.2 Fundability and Affordability

When it comes to student accommodation implementation, there are fundable transactions and affordable transactions. Funding availability and affordability of accommodation solutions are the two key issues.

“We need funding for student accommodation but we also need it effectively delivered. From the funding side, we can work on a relative amount of money that is required. The challenge is to move students into appropriate accommodation and we have to look at creative ways to realise this.”

Louis Strydom of the DBSA

Government and Treasury cannot provide adequate funding. In contrast to the power producer programme where Treasury actively back Eskom, the student housing programme can never be financed the same way, and with the many social needs inherited by generations of inequality, student housing is but one of the myriad of challenges facing national and provincial government.

On the other hand, universities struggle to find solutions amidst various demands. These institutions juggle the increasing need for beds, more affordable student housing, lower student fees, and the need to invest in academic and administrative infrastructure to remain locally and internationally recognised. Fueling complexity, the Higher Education Act applies limitations with respect to the degree to which universities may borrow funds. They are only allowed to incur long-term liabilities of up to 5% of turnover from their prior two financial years.

Each university has a unique micro-cosmos and volume of students. The challenge is therefore to provide appropriate on-campus accommodation to the majority of these students. Financing student accommodation requirements necessitates investment from the private sector, whether owned private facilities through PPPs or other structured private investment schemes.

Affordability is the key driver of a solution to student accommodation challenges. The efficacy of such funding models depends strongly on this. What is required is to keep the unitary cost per student as low as possible, which can be achieved by applying debt over a relatively long period. Certainly, the interest rate will rise, but the unitary cost amortised over a longer period will come down. Interestingly, when considering solutions for affordable student housing, alternative building design and new technologies could play a significant role.

“There are good PPPs but there are also PPPs that are not working well. For example, a PPP on campus charging much more than what students can afford is not sustainable and is causing uproar among students. The affordability to students needs to be taken into account. Whatever agreement is entered into has to look at affordability.”

Brenda Swart of the DHET

From a DBSA perspective, given reasonable certainty within an expenditure framework where budgets are available and allocated appropriately, a certain amount of risk is acceptable. Longer-term financing will bring down the cost, making investment opportunities attractive. However shorter-term options need to form part of the mix.

For private investors, the key driver behind investment decisions lies in return on investment and cash flow. Investors require exact volumes and a comprehensive financing structure. Existing structures do not provide adequate solutions and new ways need to be found to attract such investment. What is also required is a shift from focusing on ownership to usage, purely because it is not necessary to own assets in order to properly utilise and manage assets.

“Complexity can destroy value. Workable solutions need to be kept simple with sustainable returns on investment. However it is necessary to think outside the box and find innovative solutions. We also need to focus on what is needed versus what is wanted in managing the cost.”
Bian Jooste of Dabiko Consulting

3.3 Operational and Funding Capacity

Implementation capacity at universities varies from region to region, and although public funding could be available, operational capacity could be a critical constraint. The DHET could assist universities by allocating private or approved agencies and service providers to build on their behalf. The private sector could play its part through enhancing building capacity. It should also be considered that Treasury could manage the PPP process.

For future sustainability, the DHET needs to ensure that its policy addresses the balance between quality and standards versus price and affordability, versus the ability for private financiers to make a reasonable return while managing risk. This will enable and attract large-scale private investment, improving funding capacity.

3.4 Centralised Procurement

An interesting proposal to consider centralised procurement to drive cost down, was put forward during the plenary discussion. Coupled with this, programmes could be developed for funding where investors can participate. With standardised funding instruments, providing adequate liquidity (where bonds of more than R1 million are held by a range of institutions), investment opportunities become attractive.

However, there are a number of issues with this proposal:

- Universities act autonomously and manage their own procurement independently. These institutions are somewhat uneasy about Government interference and centralising procurement would require ample discussion and changing of perceptions, which will take time.
- Centralising procurement would require new legislation at various levels, which will have a significant impact on the management of a number of related activities.
- The administration cost of centralised procurement to the DHET will be very high.
- The localisation of procurement will become a complex issue in terms of the tender process.

One of the problems with the current university procurement system is that the institutions themselves do not consistently adhere to their own regulations. This increases cost by up to 6%. As a result, addressing this problem could unlock cost optimisation for universities.

3.5 New Building Designs

New residences being built follow largely traditional designs. Bringing down the total cost of ownership over time requires new designs with a focus on alternative building, energy efficiency and lower maintenance cost.

The DHET increasingly emphasises energy efficiency in the process of allocating infrastructure grants. However as there are no regulations or guidelines for incorporating alternative technologies into the procurement process, the DHET has been reluctant to approve such proposals to date, particularly due to uncertainty in terms of risk.

Interestingly there is a workable example of student residencies based on a new design and built with alternative technologies. Enabled through private investment, one of the South African universities embarked on this project and the solution is proving to be self-sustainable. Students are charged R28 000 per annum, which in turn provides an approximate 85% return to the investor.

In South Africa, SANS10400 provides us with the minimum standard for alternative and energy efficient buildings. The NHBRC (National Home Builder Registration Council) has a comprehensive manual for alternative building and test centres in rural areas and through the PICC (Presidential Infrastructure Coordinating Commission), regulations for student housing on alternative building are being compiled. This activity will enable increased use of alternative technologies going forward. However alternative building does not always save on cost.

Looking at sub-systems, water and sewerage lines could be implemented using more affordable material than conventional cement and engineering systems. It might require replacement after seven years instead of 20 or 30, however the unitary cost will come down.

The Formula 1 Hotels also provides a workable example of packaged housing in an integrated energy efficient design where risks are minimised. This type of model could be evaluated, packaged and made available for developers to easily implement and roll-out units. It could also be industrialised for large-scale production, to which there is a push from the Industrial Development Corporation.

3.6 New Buildings versus Refurbishments

In considering the unit cost of new buildings versus refurbishments, the latter should get preference purely because it could halve the investment required. Where accommodation needs to be integrated with other services, structures already in place should be utilised and worked from.

This approach could also stimulate the recycling of assets. For example where pension fund financing has been applied to refurbish 8 000 beds and returns have realised, investors could be approached to reinvest their returns in additional refurbishments. This recycling of assets could speed up the process of providing student housing.

Yet it needs to be considered that refurbishment needs to be supplemented by investment into new beds. This is important because the current backlog lies in a shortage of beds and stock levels for refurbishment is becoming increasingly scarce. In addition, acquiring properties located far from universities is not feasible.

3.7 Building Standardisation

Standardisation of buildings is worthwhile from the perspective of enabling cost saving. However, it needs to be noted that universities all have their own particular design schemes and specific requirements. In metros where there are a number of universities, residences could be standardised and built in central locations, providing accommodation to students from surrounding universities.

Although standardisation could imply more beds in the same buildings, according to safety regulations and for management purposes, it is noteworthy that the ideal number of beds in a residence is in the region of 80.

3.8 Transportation

Where student accommodation is provided outside university campuses, transportation becomes a necessary service. This could form part of the student accommodation package. It should however be kept simple and economical. Investors do not want to deal with transportation issues and risks and solutions should therefore be packaged, structured and managed in such a way that investor money is not exposed to such risks.

Finding workable solutions amidst the various aspects of infrastructure requirements, role players should link up at SIPs level for integrated planning and proper structure development. The potential to address a number of requirements through single financing solutions is far greater than what is currently explored.

3.9 Attracting Private Investment

Financiers need a certain amount of certainty and as such, require a regulatory framework and contractual certainty to ensure that potential risks are mitigated. With this in mind, the DHET should assist universities by working with the private sector in developing regulatory frameworks for PPPs.

Infrastructure considerations surrounding private investment attraction should include land, new developments, refurbishments, maintenance and related services to student accommodation. It should address affordability and focus on what is needed. Where there is a shortfall of funding due to poor budgeting or any other unforeseen circumstances, the financial model needs to have

a risk plan in place. Furthermore, transparency is imperative. Details of costs and margins as well as income and estimated returns should be clearly visible.

4. Proposed Private Sector Investment Solution

From the private sector side, asset based investment solutions are proposed. Through extensive research and analysis, investment models and funding channels are being developed with the aim to provide affordable accommodation according to policy standards.

To date an *asset-base sale and lease back funding model for higher education institutions* (summarised in Table 2), covering all funding requirements with multiple benefits to both public and private sectors, has been tested and modelled on a few universities. The results in all cases demonstrate that several hundred million Rands could become available to universities, allowing them to better equip themselves to offer improved education and training. For investors this robust model offers stable investment opportunities in value-based assets, which render multiple streams of income.

Asset-Base Sale and Lease Back Funding Model for Higher Education Institutions			
What?	Financing new residences and infrastructure	Maintenance Plan (over a 10 year period) catering for changing needs of students, ensuring sound operation and market competitiveness	Long-term refurbishment programmes of existing stock, ensuring fit for purpose
How?	Residences (assets) are purchased from universities, unlocking capital for universities to utilise for academic needs		
Impact on the system?	<ul style="list-style-type: none"> • Universities relinquish ownership of assets • Universities maintain full control and use of properties • No interference with place and policy of student residences at campus level • Use and improvement of assets can be dictated by the financing models • Risk is transferred to investors • Sale and lease back of properties often sell for a premium 		

Table 2

This financing solution outweighs government funding, and coupled with any existing private sector investment, can fulfill the inherent demand for student housing. The benefits for private investors, universities and students alike are far-reaching.

Investors gain ...	Universities gain ...	Students gain ...
<ul style="list-style-type: none"> • Access to a Blue-Chip asset-class investment that can deliver returns of between 8% and 12% over a five-year period. • Opportunity to participate in the “ideal” venture, i.e. 	<ul style="list-style-type: none"> • Access to immediate funds while retaining control and use of property according to policy standards. 	<ul style="list-style-type: none"> • Access to quality student accommodation on campus, which provides an appropriate environment that is conducive to learning

<p>uncorrelated property investments with returns that are backed by strong yields, stable tenants and low operating costs.</p> <ul style="list-style-type: none"> • Additional income streams, i.e. Rental Income, Capital Appreciation, Increase in Rents, Development of Profits 		
--	--	--

Table 3

Critically, the model brings the private sector actively into Financing Public Infrastructure, alleviating the burden on government while addressing a dire social need.

5. Conclusion

The current problem with regard to the provision of quality student accommodation in South Africa does not circle around a lack of money but rather, the lack of proper structures and standards.

As such, a systematic approach is required and in order to identify, plan and pursue workable solutions, it is critical to note that there are no one-size-fits all solution. Guidelines need to be generated, communicated, understood and applied, and universities should be allowed to tailor solutions to fit their specific environments and requirements.

In assessing options for solutions, a private-public hybrid model should be considered. Government has done a lot of work in drawing up policies and packaging programmes and where needed this could be refined. However finding solutions and workable structures to address the backlog in the provision of such infrastructure requires greater participation from all parties and integrated planning.

A forum at SIPs level through which to bring together the DHET, DBSA and other public financiers, universities and other higher education institutions as well as private consultants and private sector investors, is needed for the development of required structures. A macro plan that highlights the needs and requirements over time, as well as funding linked to solutions and investment instruments is imperative.

A pooling of effort is required for creative thinking and to develop workable and sustainable solutions.