

**Innovation in Private Higher Education: the Botswana International  
University of Science and Technology**

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## **1 Purpose**

The aim of this note is to provide background to a presentation on the start-up of the Botswana International University of Science and Technology (BIUST) and what lessons it may have for the innovative use of public-private partnerships (PPPs) in higher education (HE) and in Southern Africa in particular.

## **2 Key points**

- The use of PPPs – however defined<sup>2</sup> – to expand HE capacity in developing and emerging economies is becoming widespread and the best share common methods and learn from one another.
- Botswana has harnessed the private sector dramatically to expand its HE places, particularly through liberalised market entry and the allocation of publicly funded places to private providers, and so the rationale for creating BIUST is not only to bridge human resource gaps in science and technology but to be a means, including through its intended research and development, of generating knowledge-intensive industries.
- With its relative wealth it may be thought that Botswana does not need to

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<sup>1</sup> It should be emphasised this is a project in process. I am grateful for the contributions of members of the BIUST Council, the BIUST Project Implementation Team and the IFC Transaction Advisory Team. Any errors or omissions are those of the author.

<sup>2</sup> The Botswana definition of a PPP is a 'contractual agreement between a governmental institution and a private party whereby the private sector party provides public infrastructure and/or infrastructure related services and where the provision ... is based on measurable output (end result) specifications, governed by a payment mechanism that provides payment only on delivery of services at required standards, accompanied by a transfer of financial and operational risks with consequential financial effects, and demonstrates value for money to government.' Botswana PEEPA 2005: 5-6.

procure this capacity through private finance, but the country's PPP policy and guidelines, and the BIUST project, aim to do much more than get value for money. They aim to promote innovation in education and project management, ensure timely and on-budget delivery of infrastructure, allocate risk more appropriately and get certainty of outcomes relative to normal public procurement.

- The government of Botswana and BIUST's willingness to review all PPP options for procurement of university infrastructure and services will enable it to manage the considerable risks associated with fast start-up, research intensiveness and possible provincial location better than doing it alone.
- Botswana's use of a PPP for its second university is relevant to other countries including in Southern Africa through its consistent commitment to best practice notwithstanding the up-front complexities and contract costs of PPPs. This contributes to national reputation for good governance. Its policies and procedures have a lot in common with those of South Africa and a number of other countries in the region are entering into HE PPPs.
- IFC Transaction Advisory services – and indeed other good transaction advisers – can assist in HE development projects as much as IFC's investment role, though for good governance reasons the two have to keep their distance in the one organisation.

### 3 Botswana

With a relatively unified population of 1.8m people across 600k km<sup>2</sup>, Botswana is one of the success stories of Africa (see figure 1). It is ranked consistently high in such indicators as transparency, competitiveness and country risk (famously equivalent with Japan). Good handling of wealth from diamonds and tourism has generated the means to build a modern economy, notwithstanding high incidence of HIV-AIDS.

However the country does not rate so well on technology and innovation indicators (see figure 2). It strongly wants to develop knowledge industries and has long had an exceptional commitment to education. Facing critical shortages of skilled managers and professionals, it has expanded tertiary education by public and private means from 21,000 places in 2003 to 31,000 in 2008, including through four new technical colleges and expansion of the

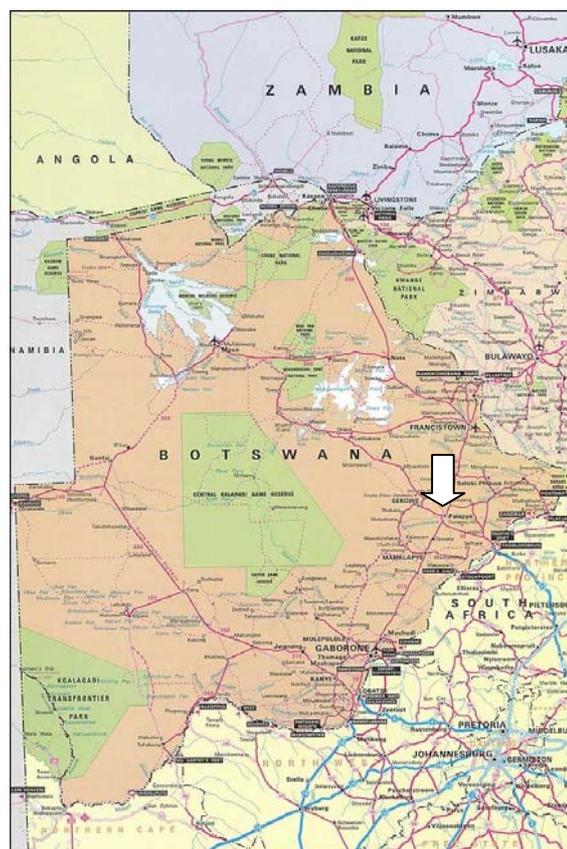


Figure 1: Botswana, showing Palapye

University of Botswana. BIUST will be a big part of further expansion. Much of the recent growth has come through market entry and expansion of private sector providers such as Limkokwing University of Creative Technology (based in Malaysia with a branch in Gaborone), NIIT (based in India, with branches in Gaborone and Francistown), ABM University College in Francistown, and Ba Isago University College (with branches in Gaborone and Francistown). While they are not able to access public funding directly, they can receive public-funded students sent to them. Access to a funded tertiary place is a right for qualified Botswana entrants, with government support scaled to the relevance of the discipline – e.g. engineering students attract a full tuition grant, business students only a full loan, and all attract an adequate living allowance<sup>3</sup>. The future of HE financing in Botswana is a crucial consideration in the evaluation of market risk which, if the PPP is for infrastructure and maintenance, a private investor would not want to share.

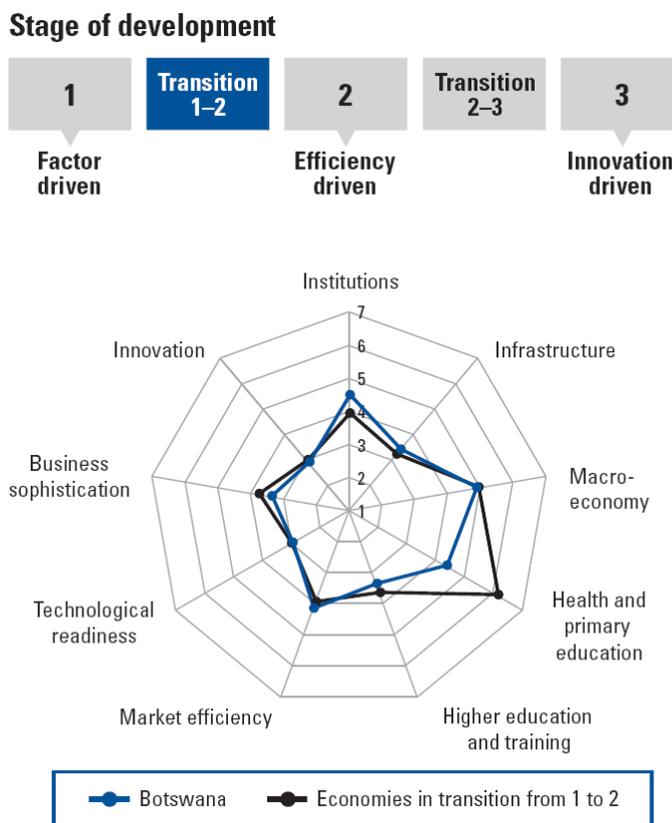


Figure 2: Botswana's Stage of Development, 2007 (WEF 2007)

#### 4 PPPs in tertiary education

The Government of Botswana has also actively used the private sector in public procurement, through a well-developed transparent tender system. However, the decision to procure the whole, or a major part, of the country's second university through a PPP was a major step as there had been limited experience in the services sector to date.

The public sector is not acutely short of capital so this was not a decisive factor in deciding to pursue private participation; rather, attractions for entering into a PPP included narrowing delays in providing essential infrastructure (though PPPs can be complex and slow in starting up), spreading investment cost over the lifetime of the project, delivering the infrastructure on time and within budget, encouraging foreign direct investment and the local citizen private sector to work together,

<sup>3</sup> Other countries in Africa are promoting private sector provision on a similar basis e.g. Lesotho.

allocating risks to those parties best able to manage and absorb them, encouraging the public sector to concentrate on outputs and benefits from the start, and ensuring infrastructure is properly maintained and the quality of property and related services is preserved for the life of the project. After all, universities are among the world's longest-living institutions and there is no reason to believe BIUST will not continue into the next century and beyond.

The 2004 Task Force that undertook prefeasibility and the Interim University Council did examine international experience first hand, but with the exception of the university start-up project leader (now Permanent Secretary of Education<sup>4</sup>), the international examples visited were of successful science and technology institutions rather than successful PPPs.<sup>5</sup> This was one reason why the Government of Botswana appointed IFC to advise on the prospective transaction, assisted by Learning Cities International, Conybeare Morrison International, Ascon Africa and others. It is relevant to note that this work came from the IFC Transaction Advisory team who, under modern governance arrangements, keep an appropriate distance from the investment arm of the IFC.

Work is still under way, with preferred PPP option chosen and feasibility study and value assessment under consideration. The government's procurement plan, including what activities and areas of infrastructure should be bundled into the partnership, has not been announced, but it has been prepared to consider a very wide range of options for the design, construction, operation and maintenance of facilities and infrastructure, academic programs and services, ancillary services and non-academic activities such as technology park, hotels and destination resort related to the university and its campus.

## 5 BIUST

The rationale for BIUST will echo with other emerging economies: economic growth and sustainable development; overcoming acute skill shortages including engineers and technologists; reducing the unreasonable costs of providing tertiary education for over 7000 students in 2007 studying internationally; addressing demand for skills and innovation for advanced industries including through technology transfer; internationalising the economy and aspiring to be an international education hub;

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<sup>4</sup> See Hobona 2007

<sup>5</sup> Just as a wide spectrum of choice faced the Government of Botswana, so, around the world, there is a wide range of examples. Some are for procurement of whole systems, though mainly of school systems (e.g. Partnerships UK ([http://clients.squareeye.com/uploads/ppp/documents/PFI\\_The\\_State\\_of\\_theMarket.pdf](http://clients.squareeye.com/uploads/ppp/documents/PFI_The_State_of_theMarket.pdf)), and New South Wales Australia ([http://www.infrastructure.org.au/research/pdf/casestudies/IPA\\_CaseStudy\\_NSWSchoolsPPP\\_Project1.pdf](http://www.infrastructure.org.au/research/pdf/casestudies/IPA_CaseStudy_NSWSchoolsPPP_Project1.pdf)) and rarely for whole university systems (but see Pakistan's intentions and it has gone to the private market to procure a set of science and technology universities (<http://www.moe.gov.pk/PPPBooklet-DraftMarch2004%20final.pdf>); others are for the infrastructure of the university, either founding campuses or additional campuses (e.g. UAE University at El Ain, incidentally the 'Middle East PPP Deal of the Year 2007' (<http://www.projectfinancemagazine.com/default.asp?page=7&PubID=4&ISS=24610&SID=703152>); or major mixed developments with non-university activities interwoven (e.g. NUS University Town in Singapore ([http://www.nus.edu.sg/oed/utown/abt\\_concept.htm](http://www.nus.edu.sg/oed/utown/abt_concept.htm)), and Southbank Institute of Technology in Brisbane ([http://www.tafe.qld.gov.au/about\\_us/news/2007110827.html](http://www.tafe.qld.gov.au/about_us/news/2007110827.html))). See LaRocque 2007 for examples across a wide definition of PPPs.

promoting social inclusion and equity through being an accessible and workplace-relevant institution and, once Palapye, a provincial town, was decided as the site for at least part of the university, fostering decentralisation and regional development.

The second university was foreshadowed in national development plans; the 2004 Task Force gave it scope and estimated project cost of the then equivalent of USD 1.5 bn. Legislation was passed in 2005 to create the university, and the Interim Council and implementation team were established. Both are active, a Vice-Chancellor has been appointed and soon the first set of Deans and Directors. Many future faculty are completing their preparation at universities internationally.

The university is focused on science and technology appropriate to Botswana's conditions, with initial discipline clusters considered in engineering (e.g. mining, environmental, water), science (e.g. biotechnology), management and technology. It will seek to 'break the mould' in its workplace orientation, community and international engagement, links between research and teaching, and unique Botswana setting and respect for culture. Research foci identified by stakeholders include design, biotechnology, clean air, climate change, energy efficiency, environment, food quality and security, GIS, indigenous knowledge systems, mineral beneficiation and resource mapping. On a large site of 2,500 ha at Palapye as the main possibility, a founding campus for 256 student equivalents to open early 2010 will quickly grow through later phases to the 6,000 and then 10,000 student marks.

## **6 BIUST's IFC transaction advisory project**

The IFC terms of reference were to undertake a comprehensive feasibility study and assist in the procurement of the private sector partner to deliver the second University, specifically, to assist the government to:

- Determine the most optimal project delivery option that will transfer risks to the party most suitable to handle the risk, is affordable and will provide Government with optimal value for money.
- Develop a master plan that provides an indicative physical site design and infrastructure facilities for the university, as well as a concept plan for academic/ educational services.
- Undertake a feasibility study for the construction of the university facilities, to determine the maintenance and lifecycle costs as well as the facilities management requirements of the Project. This covered identification of key risks associated with the project and recommendations for risk mitigation strategies in line with international and regional best practice.
- Procure a private sector service provider(s) to deliver the infrastructure component of the project through the PPP procurement mechanism. During this final phase, the IFC is preparing the PPP agreements, marketing the transaction to interested investors and supporting the government in the bid process, including the selection of a preferred bidder, pre-bid conference, and negotiations to bring the transaction to financial closure.

To allow the government very quickly to decide which PPP options it should focus

on, the IFC together with the technical experts undertook a high-level analysis to assist the government determine which PPP options are likely to be most feasible for the project. This work covered the full spectrum of possibilities, from traditional government procurement through design and construct projects at one extreme, to arranging for one provider of all academic programs, university management, campus construction and maintenance at the other extreme. Intermediate options vary the extent of private provision of core and ancillary university activities and infrastructure(see figure 3).

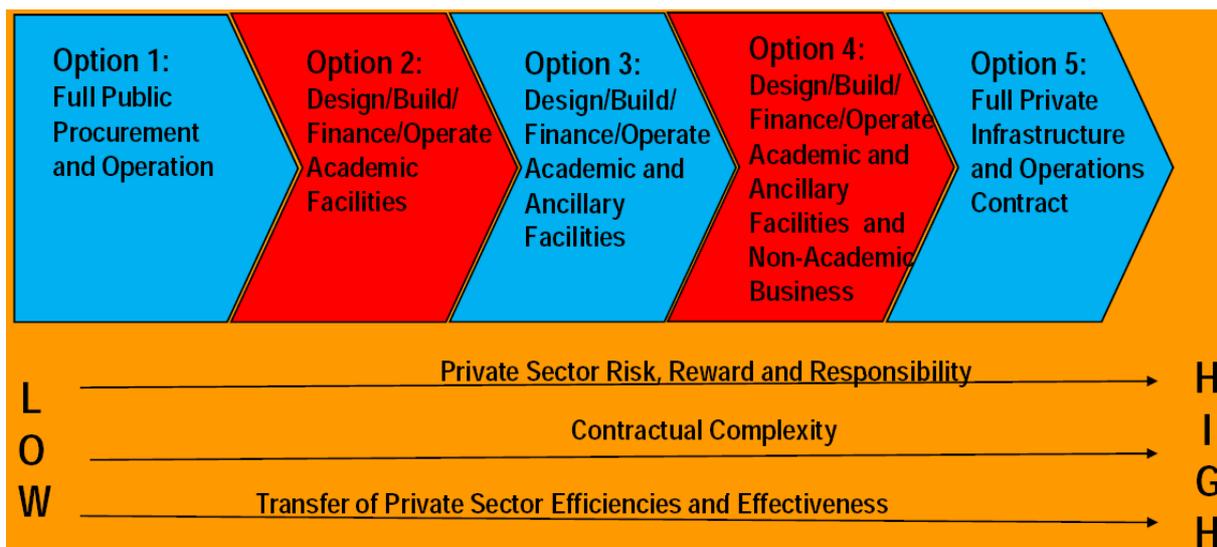


Figure 3: BIUST procurement options

The Government is strongly supportive of the new institution and is now considering entering into a PPP if it is convinced it would be viable under Botswana's draft policy and procedures, namely, that it is affordable, appropriately apportions risk, and provides value for money. These measures are critical in determining whether or not to go ahead and are standard PPP practice.

- Affordability is measured by whether and by how much the public sector comparator and the PPP comparator, both adjusted for risk, are within the limit determined by the government (see figure 4, which is conceptual).
- Risks (shown in bright green) were identified in workshops with stakeholders, evaluated, and apportioned to or retained by public or private parties.
- Value for money is measured by the extent to which the risk-adjusted public sector comparator is greater than the risk-adjusted PPP option (preliminary value for money) and greater than the eventual private sector proposal (actual value for money).

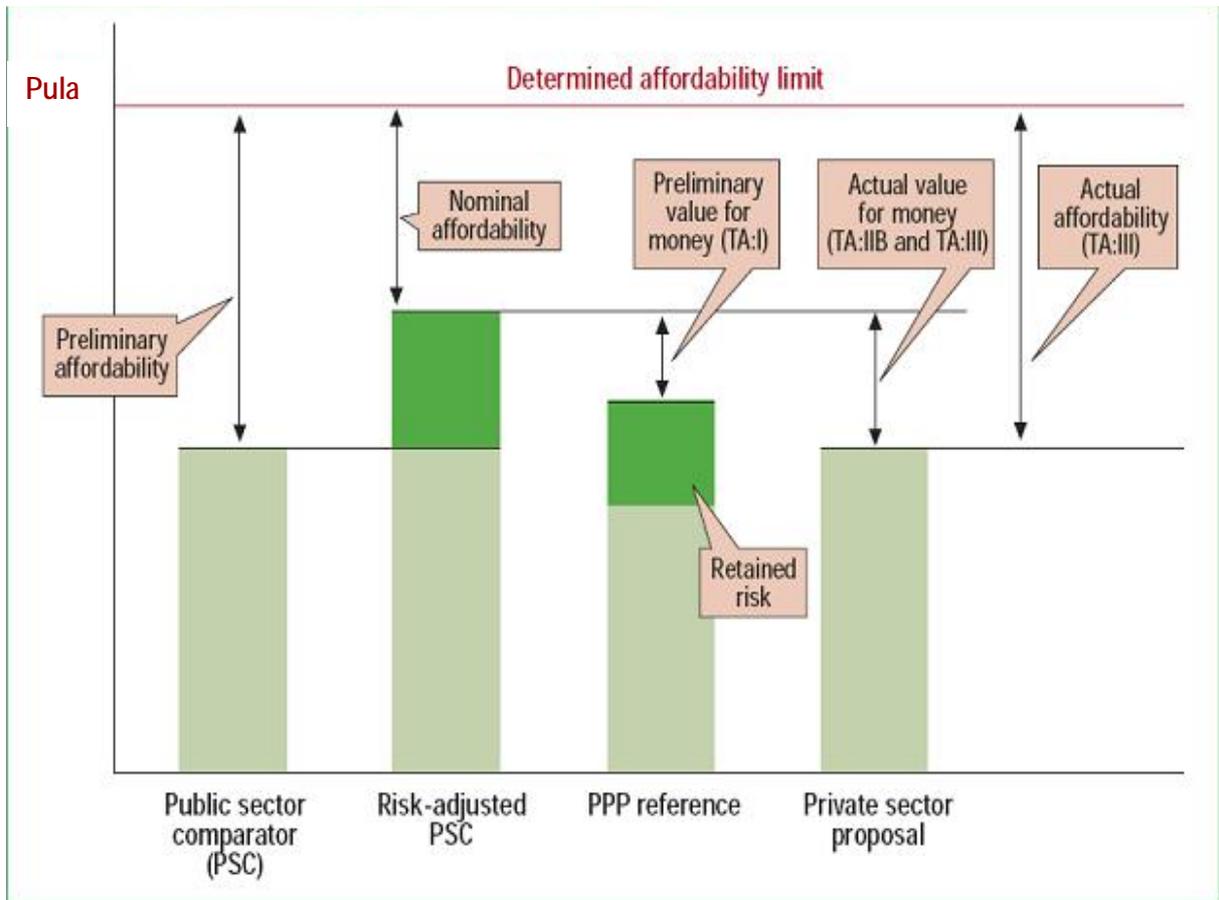


Figure 4: Value Assessment Concepts: Affordability and Value for Money (after South African guidelines)

BIUST has been moving on an exceptionally fast track: responses to invitations to interested firms or consortia closed 24 March 2008 (see figure 5) There is a strong starting line-up of firms and consortia. To start university operations even sooner, the first phase, the founding campus, is on its way to parallel design and construct project to be let over the next months, the facilities when complete to be taken over by the continuing PPP if that is chosen, much as, say, a highway PPP might pick up earlier road construction.

## 7 Discussion

This procurement is still in train but if it proceeds down the PPP track it will represent a significant innovation and a large university PPP contract by world standard, if not at the exceptional scale of KAUST in Saudi Arabia<sup>6</sup>.

<sup>6</sup> King Abdullah University of Science and Technology, see <http://www.kaust.edu.sa/about/default.aspx>

What is innovative? For one, the government and the university have been willing to look at all options (everything private, nothing private), what might be in or out of the package (academic programs, academic services, ancillary services, non-academic ventures and also design, construct, finance, operate and maintain), and what might be the mode of procurement (e.g. major concession, design-build-operate-maintain, build-own-operate-transfer, build-own-operate). Of course the university itself is intended to be a generator and transmitter of innovation in Botswana and internationally.

Private participation is not being sought to make up capital shortages, but to bring innovation in finance, project management, design, construction and service provision. For jurisdictions where capital is short, HE infrastructure PPPs can be a powerful means of attracting investment, provided particularly that market risk is held substantially and assured by the public sector and that its sovereign risk is manageable. Of course where the partnership goes beyond infrastructure and facility maintenance and includes the delivery of university programs, a market risk sharing arrangement can and should be devised.

Compliance with PPP guidelines, even if some are in draft form, is very important for transparency and investor confidence through the early phases of contract formation that can test the patience of all stakeholders. Experience elsewhere tells us the siren songs of project developers offering fast but non-compliant project delivery in exchange for exclusive and opaque franchises are best resisted.

In many jurisdictions the fast pace of growth has tied up contractors and local economic empowerment can be difficult to achieve when everyone has full order books. Nevertheless that is very important and one of the reasons for seeking private partnerships.

Universities that are pledged to deep engagement with the private and community sectors, particularly in developing regions, should consider designing, promoting and becoming venture developers for non-academic enterprises such as technology parks, hotels and commercial developments that might be associated with the university.



**GOVERNMENT OF BOTSWANA**  
PUBLIC-PRIVATE PARTNERSHIP  
BOTSWANA INTERNATIONAL UNIVERSITY  
OF SCIENCE & TECHNOLOGY

**Invitation for Expressions of Interest**

The Government of Botswana invites private sector parties to submit expressions of interest for participation in a Public-Private Partnership for the design, construction, capital financing, and facility management of a new university: the Botswana International University for Science and Technology ("BIUST"). BIUST will be located in Palapye, 320 kilometers from the capital Gaborone. It is expected to reach a maximum enrollment of approximately 10,000 students by 2016, and serve as a regional center of excellence for tertiary science, and technology education and research.

The Government expects that consortia will be formed to respond to the anticipated tender, and that these consortia would likely comprise a mix of international, regional and local companies; lenders and investors with expertise in design, construction, facilities management, and education.

Interested parties are requested to submit a written Expression of Interest (EOI), to both emails listed below, which must include: (i) a profile of their company/group; (ii) a description of their financial position; (iii) a listing of relevant present and past projects; and, (iv) the name and details for the contact person at the company. In return, responding parties will receive additional preliminary information and notification of relevant events as scheduled. The deadline for submission is March 24, 2008.

IFC, a member of the World Bank Group, is advising the Government of Botswana on structuring of the Project and the selection of the private investor.

<p><b>Government of Botswana</b></p> <p>Mrs. Badumetse D. Hobona BIUST Project Coordinator Ministry of Education Tel: +267 316 0707 Email: bhobona@gov.bw</p>	<p><b>IFC</b></p> <p>Mr. Emmanuel B. Nyirinkundi Advisory Services Department Johannesburg, South Africa Tel: +27 11 731 3068 Email: biustppp@ifc.org</p>
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 **International Finance Corporation**  
World Bank Group

Figure 5: BIUST PPP Expressions of Interest

The transaction advisory role of IFC has been pivotal, not only in helping the government and BIUST define the options, evaluate them, shape up a recommended project and undertake feasibility and value assessment, but in contributing to resolution of a myriad of issues that come with university planning and start-up. The clients have been very active and engaged.

For an entity like BIUST to manage its procurement and operations alone, degrees of difficulty rise exponentially if the university is to be (a) big (b) research-oriented (c) international standard (d) needed fast and (e) located at least in part by a provincial town. Accordingly the government of Botswana has been wise to consider risk sharing with private partners for this exceptional development project.

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