



ULWAZI INTERACTIVE EXPERIENCES

**SUPPORTING EDUCATION AND
TOURISM DEVELOPMENT**

**THROUGH THE POPULARISATION OF
SCIENCE AND TECHNOLOGY
AND ART AND CULTURE**

**CAPABILITY STATEMENT
JUNE 2010**

INTRODUCTION

Ulwazi was established in 2002 to develop interactive science and technology experiences, primarily through the establishment of science centres and associated public awareness of science and technology activities. More recently, it has broadened its mandate to include arts, culture and heritage and to include facilities such as heritage sites and museums. The name Ulwazi derives from isiZulu for knowledge.

From a *science and technology perspective*, there is a desperate need in Africa to strengthen education and support the public understanding of science, technology, engineering and mathematics. Interactive exhibits, experiences and programmes can play an important role in this regard, combining education with entertainment, demystifying science and making it more relevant.

From an *arts and culture perspective*, there is a need to recognise, promote and provide a balanced perspective of the country's diverse cultures and heritage. Arts and culture are not divorced from science and technology and interactive experiences can not only enhance the learning experience but also allow these interfaces to be explored.

Ulwazi offers:

- a comprehensive, integrated range of services covering planning, construction and operations (page 3).
- an approach that leads to the development of unique, customised, interactive experiences (page 4).
- the experiences and accomplishments gained from previous projects, both within and outside of Ulwazi (pages 5 -7).
- the complementary skills of its directors and other associates (pages 8 - 9).

Ulwazi prides itself on offering a professional service in an efficient and timely manner, taking a proactive and entrepreneurial approach, and giving consideration to the economic, social and environmental pillars that support sustainable development.

For further details, visit www.ulwazi-ulwazi.co.za or contact Ulwazi as follows:

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Company Information:

Epidote Properties (Pty) Ltd, trading as Ulwazi
Registration No: 2002/026015/07 VAT No: 4870205905
Bank: Standard Bank, Sandton; Branch No: 019-205; Account 02 265 714 2
Auditors: Watermark Auditors Incorporated

SERVICES

Ulwazi offers a comprehensive, integrated range of specialised consulting and management services covering the planning, construction and operations of interactive educational and tourism development experiences:

BUSINESS PLANNING AND STRATEGY

Ulwazi can assist clients with planning to define and assess the feasibility of a proposed development. Planning may be undertaken at a conceptual level to create a master plan, or with increasing levels of detail to provide a strategic plan or a business plan. Elements of a plan may include:

- **a situational analysis:** assessing the context of a development, identifying and consulting with stakeholders, confirming the need and opportunity, estimating the market, understanding the constraints and challenges.
- **a capital plan:** defining the physical components of the proposed development, evaluating site options, undertaking property negotiations, formulating preliminary themes, developing architectural plans/sketches and estimating capital costs.
- **an operating plan:** proposing programmes, defining staffing needs, evaluating organisational options, estimating operating costs/revenues, and assessing risks.
- **fund-raising:** identifying potential sources of funds, defining a fund-raising strategy, developing fund-raising materials, seeking/securing funds.

DEVELOPMENT MANAGEMENT

During construction, Ulwazi can offer to act as a development coordinator and/or project manager and/or contribute as a specialist member of a project team. Other members of the team may include an architect, interior designer, exhibit developer, quantity surveyor, engineer, and various other specialisations.

OPERATIONAL MANAGEMENT

In addition to operational planning, Ulwazi can also provide various levels of ongoing assistance during the implementation and operational stages, ranging from relatively arms-length roles (staff selection, monitoring, and review) to active participation in management under a management contract.

PLANETARIUMS AND DIGITAL DOME THEATRES

Ulwazi has signed a Memorandum of Understanding with Sky-Skan Inc, a United States based manufacturer of Definiti® digital dome theatres, projectors and associated software, to represent the company in sub-Saharan Africa. The agreement brings to the sub-continent the latest in advanced digital technology and full dome experiences, including 3D systems, which enable the creation of visually spectacular shows that generate a much greater understanding of the relationships between objects - in space, under the ocean, inside the human body or within molecules. Shows may be customised and tailored to specific local and regional needs. *Interact!* engages students with hands-on activities. For more information, visit www.skyskan.com.

THE ULWAZI APPROACH

Ulwazi prides itself on providing customised, culturally-based and culturally-relevant, interactive experiences which:

- offer a user-friendly, hands-on stimulating experience to challenge and excite learners and visitors: about themselves, their world and the world they may create
- provide an understanding of the presence and value of science, technology, culture and heritage in all aspects of livelihood, particularly with regard to satisfying basic needs (e.g. safety and security, water, food, and clothing)
- meet the priorities of reconstruction and development (education, health and housing) and promote self actualization (arts, culture, innovation, creativity and entrepreneurship)
- link past and present; bridging indigenous and exogenous influences.

Ulwazi distinguishes itself on the basis of a process that aims to develop a unique product, including:

- community and stakeholder participation in the design, development, construction and operations
- customising each facility uniquely to the community environment/needs
- ensuring scientific, cultural and educational authenticity and integrity
- combining/integrating science/technology with culture/heritage and socio economic facets
- consciousness of monetary constraints common to developing countries, and a belief that it is possible to provide excellent educational and edu-tainment experiences with limited resources.

From a science and technology perspective, it should be noted that a study that Ulwazi carried out in 2004 for the South African Department of Science and technology provided an audit of existing science centres in South Africa and permitted visits to more than 60 centres and organisations on five other continents. Ulwazi is thus familiar the variables and trends that allow for the successful development and operations of interactive centres, programmes and other activities.

PROJECTS UNDERTAKEN BY ULWAZI

- **Galeshewe Science Centre, Kimberley (2009):** developed a business plan for a science centre and associated activities for the Sol Plaatje Municipality and National Treasury as part of the Galeshewe Urban Renewal Programme.
- **Planetarium, Cape Town (2008):** on behalf of Iziko Museums of Cape Town, Ulwazi developed a business plan for an upgrade to the Planetarium, in particular, for the installation of a full dome, immersive digital projection system.
- **Kouga Cultural Centre, Humansdorp (2008):** participating in exploring options for the further development of this facility, including installing an interactive science centre and creating a public-private partnership to manage its future operations.
- **Taung Skull World Heritage Site (2007-8):** principal consultant to the North West Department of Agriculture, Conservation and Environment for the development of a comprehensive business plan for this recently proclaimed World Heritage Site.
- **Science Centres in the Northern Cape Province (2007):** facilitated a workshop among more than 20 public and private sector stakeholders to secure stakeholder buy-in and to outline a plan for the establishment of science centres in the Northern Cape.
- **Fundza Village of Discovery (2006):** developed a business plan for the Mbombela Local Municipality for a new edu-tainment complex in Nelspruit, including an interactive science centre, heritage museum, art gallery, cultural industries business incubator, and associated commercial activities.
- **West Coast Fossil Park, Langebaanweg, Western Cape (2005-):** facilitated a workshop to establish a master plan and have continued to provide ongoing advice: for example, on the development of a Trust to expand/manage this facility as a research, education and tourism attraction.
- **Interactive Experiences, eThekweni Metro (2005-6):** provided advice for the development of a science centre to be incorporated into an extension of the Durban Natural Science Museum, and advised on other interactive components to be incorporated into a framework plan for a proposed Science/Heritage Precinct and a proposed Educational/Heritage Trail in Durban. Project development currently on hold.
- **TechnoCentre, Uitenhage, Eastern Cape (2004-2005):** participated in evaluating a business plan for a science centre and provided additional advice to implement the project as a component of re-developing Uitenhage's old railway sheds and station.
- **National Network of Science Centres for South Africa (2004):** undertook a feasibility study for the Department of Science and Technology (DST) which included an audit of existing science centres, the identification and analysis of alternative models for the proposed network, and recommendations on an ideal model. The study formed the basis for DST to publish norms and standards and a roll-out plan for the network. Cabinet has recently approved implementation of the plan.
- **Boyden Science Centre, Free State (2002-2003):** facilitated the development of a master plan and managed the construction of Phase I of the centre for the University of the Free State. Have continued to advise on subsequent phases of the project.
- **Olwazini Discovery Centre, Pietermaritzburg, KwaZulu-Natal (2001-2002):** managed the development of this unique interactive science and cultural centre for Akani Msunduzi (Pty) Ltd.

OTHER PROJECTS IN ORGANISATIONAL DEVELOPMENT

Dan Archer also brings planning and organisational development skills from a wide variety of projects that have included:

- **UKZN Extended Learning Initiative (2010 -):** exploring a business structure for the University of KwaZulu-Natal to manage its short courses/extended learning programmes.
- **Fibrecity-Msunduzi (2010 -):** currently facilitating the development of a joint venture among University of KwaZulu-Natal Innovation, Msunduzi Municipality and H₂O Networks South Africa to pilot a fibre optic communication system in Pietermaritzburg.
- **Quantum Technology Hub (2009):** prepared a business case for this proposed partnership between the University of KwaZulu-Natal, other research institutions, government and the private sector. .
- **Msunduzi Innovation and Development Institute (2005 -):** facilitated a partnership agreement among Pietermaritzburg Chamber of Business, Msunduzi Municipality and the University of KwaZulu-Natal, leading to the creation of MIDI which is aimed at supporting local socio-economic development; have since coordinated a number of MIDI projects.
- **Doris Duke Medical Research Institute, Durban (2002 - 2004):** executive chairman of the steering committee, and played a coordinating/trouble-shooting role in for this R 40 million medical research institute located at the Nelson R Mandela School of Medicine.
- **Natal University Health (Pty) Ltd (2002 - 8):** facilitated the development of a private company to manage the research, medical service and university-private partnerships of the University of Natal's Faculty of Health Sciences; continued to serve as a director and advise on restructuring the company to become University of KwaZulu-Natal Innovation, which will now manage a broader range of university business development activities.
- **Bayworld, Port Elizabeth (2002):** participated in a review of this facility (oceanarium, dolphinarium, snake park and museum) to develop a proposed public-private partnership.
- **Biotechnology Research Innovation Centres (2002):** facilitated a national workshop to position members of AfricaBio (a biotechnology association) to secure three regional biotechnology research centres being established by the national government.
- **KwaZulu-Natal Innovation (now Embizeni) Support Centre (2001 - 2002):** co-chaired the interim management committee and provided facilitative services to establish this public-private partnership for information technology commercialisation in Durban.
- **Centre for Entrepreneurship, University of KwaZulu-Natal (2000 - 2008):** chaired the development committee, secured funding and provided development support for this cross-campus facility, which acts as a focal point for teaching, research and outreach in entrepreneurship; past Chair and Member of the Advisory Board until 2008.
- **Festival of the Sea (1998 – 1999):** conceptualised and, on behalf of Tourism Durban and the KwaZulu-Natal Tourism Authority, developed a business plan for a topical maritime festival; with business, public, recreational, educational and cultural components; initiated Easter 1999 in co-operation with the port authority, SA Navy, NGO's and others.
- **Science by the Sea, Durban (1998):** proposed and, on behalf of the Department of Arts Culture Science and Technology, directed this event enhancing public awareness of science and technology, contributing to South Africa's Year of Science and Technology.
- **South African Youth Water Prize (1998):** in collaboration with the Stockholm International Junior Water Prize, introduced this high school competition to SA, including securing initial financial and logistical support from government, water utilities, and NGO's.
- **School of Maritime Studies (1997 – 1999):** coordinated the development of this multi-disciplinary institution for the then University of Natal.
- **Tourism Development Working Group (1997 – 1998):** represented the Department of Traditional and Environmental Affairs on this inter-departmental working group to provide advice and liaison on environmentally and socially sustainable tourism development.
- **Manitoba Telephone System (1989 – 1990):** seconded to advise on restructuring/organisational changes to this 5000 employee, \$500+ million revenue Canadian telecommunications crown agency.

OTHER PROJECTS IN PROPERTY DEVELOPMENT

In addition to projects undertaken within Ulwazi, Grahame Lindop brings experiences related to property development and marketing.

Current projects:

- **Ikwezi Crossing, Soweto (2009 -):** presently finalising a viability study for the development of a shopping centre.
- **Walkerville Residential Estate (2010 -)** leading a development team to establish the viability of a residential estate in Midvaal Municipality, south of Johannesburg.
- **Moruleng Central Business District, North West Province (2006 -):** leading a development team for the Bakgatla Ba Kgafela Traditional Council, to create a central business district including an office administration complex, residential apartments, civic centre, hospital, a sports complex and an eco estate and housing for mine workers. In 2008 - 2009, coordinated the development of a 20 000 seat soccer stadium at Moruleng for use as a practice facility for the FIFA 2009 Confederations Cup and the 2010 FIFA World Cup. In 2009 – 2010, managed the development of Phase 1 (1 800m²) of office accommodation for tribal administration, and finalised the planning for a second phase (3 600 m²).

Previous projects:

- **HSBC Nairobi, Kenya (2010):** sourced office accommodation for a new East African Regional Office.
- **HSBC Johannesburg (2009-2010):** negotiated head office lease for an entire building of 7 734 m² in Stock Exchange precinct, Johannesburg
- **Holiday Inn Soweto (2006 - 7):** project managed the construction of Soweto's first four star hotel
- **L'Avenir Vineyards, Stellenbosch (2007-2009):** coordinated the development of a commercial node at the entrance to this French-owned wine estate.
- **Soweto Golf Club (2005 - 2006):** coordinated the re-design, relocation and reconstruction of Soweto's only golf club for the Johannesburg Development Agency.
- **Walter Sisulu Square of Dedication, Kliptown (2004 - 2007):** assisted with the re-location of traders to new premises and handled leasing of shops, tourist facilities and hotel in this R400 million Johannesburg Development Agency/Blue IQ project.
- **The Crossing Shopping Centre, Mafikeng (2005 - 2007):** coordinated the leasing of this R 90 million shopping centre.
- **39 West Street, Houghton (2006):** negotiated the sale of this prime office building for a leading executive search company.
- **Oxford Manor, Illovo (2006):** negotiated the lease for 1 150 m² of office space for a major law firm.
- **Ten Melvill, Illovo (2004 - 2005):** managed the development of an 18 unit upmarket apartment block in Melvill Road, Johannesburg
- **Gold Reef City Casino and Entertainment Centre, Johannesburg (1999 - 2000):** managed the development of this R 850 million hotel, casino and entertainment complex.
- **Matekula Country Retreat, Mpumalanga (1997 - 2000):** managed the development of this leading trout farm fishing destination in Mpumalanga and initiated marketing campaign.
- **Thornybush Game Lodge, Mpumalanga (1997 - 1998):** manage the redevelopment of this lodge near Kruger Park.
- **Apex Property Fund and Main Street Property Fund (1992 - 1993):** managed two rights issues which raised more than R 88 million and R 126 million respectively; and managed marketing/investor relations' campaigns.
- **Kyalami Business Park and Silverlakes Golf Estate, Pretoria (1991 – 1992):** coordinated marketing campaigns.

PROFESSOR DAN ARCHER

Dan Archer holds Australian citizenship and has had more than 40 years experience working in both developed and developing economies in Europe, North America, Australia and Africa. He has now lived in South Africa for about 20 years. While trained as a geologist and initially working in the exploration/mining industry, Dan's experience has since been distributed equally among the education, business and government sectors. His more senior positions included:

- BP Chair of Environmental Policy and Management (INR, University of Natal)
- Director Sustainable Development (Manitoba Industry Trade and Tourism)
- Assistant to the President (Manitoba Telephone System)
- Executive Director - Technology (Manitoba Industry Trade and Technology)
- Senior Policy Advisor (Manitoba Research Council).

Dan often found himself initiating, coordinating, facilitating and managing new projects and programmes, bringing together stakeholders from different backgrounds and working at the interface between sectors, including the development of public private partnerships. These experiences have provided him with skills in:

- business development, administration and management
- change management, public participation and development facilitation
- communications and fundraising
- policy analysis, advice and development; and programme development
- strategic and business planning.

These skills have been successfully applied to a diverse range of fields, including:

- science, technology and engineering
- environmental management and sustainable development
- entrepreneurship and leadership development
- natural resource management, marine and maritime studies
- medicine and health, and
- tourism development.

In the last 20 years, Professor Archer has developed more than 15 organisations distributed among the tertiary education sector, the public sector, the private sector and as public-private partnerships. This work has involved assessing and facilitating the establishment of appropriate organisational structures, developing the associated instruments of governance and management, establishing business plans and budgets, and building capacity to operate these institutions. In addition, he has been involved in numerous other projects: undertaking analyses/assessments, facilitating planning, and fulfilling the role of project manager.

Dan holds an MBA (Cape Town), and a BSc (Hons) and a PhD (Manchester), and has received additional training in negotiating, report writing, presentations and leadership. He is currently:

- Principal of Meeting of Minds cc (1997 -): a consultancy that specialises in institutional development, focusing on multi-disciplinary, inter-institutional and inter-sectoral initiatives
- Director of Epidote Properties (Pty) Ltd. t/a Ulwazi (2003 -): involved in establishing interactive experiences in support of education and tourism development.

Since 1996, he has also maintained an adjunct relationship to the University of Natal/KwaZulu-Natal, where he continues to assist with the development of new initiatives. Dan has at various times participated in Rotary leadership activities, as vice-chair of a church board, in fundraising for scouts, as vice-chair of a community centre, and on a museum programme committee.

GRAHAME LINDOP

Grahame Lindop was born in the United Kingdom and came to South Africa in 1957. He was educated at Michaelhouse in KwaZulu-Natal and, thereafter, he studied law at the Universities of the Witwatersrand and Edinburgh. He joined the Anglo American Corporation of South Africa as a management trainee in 1967.

Grahame was transferred to the company's Property Division in 1969 as a member of the initial team to develop the Carlton Centre. He subsequently moved to Durban for four years where he gained experience in development, sales and marketing, before returning to Johannesburg in 1974 to head up the company's property leasing division.

Following the company's merger with Townsview Estates, he held various senior positions before being appointed Director of Leasing in 1987. In 1993 he established and became Managing Director of Anglo American Property Trading (AMTRAD), a specialised commercial property development company. The company subsequently established subsidiaries in the leisure and infrastructure sectors of the property industry. In 1999, Amtrad formed Amtrad Africa Developments (A.A.D.) a joint venture with empowerment company, Africa Construction.

Following the disposal by Anglo American of its property interests, Grahame acquired the business opportunities and the trading name, Amtrad, with effect from 1 February 2002. Under Grahame's control, Amtrad has focussed on being a development facilitator, initiating and co-ordinating projects, and as a consultancy giving advice and assistance on sales and marketing.

In 2002, Grahame helped to establish Ulwazi, as a company specialising in the development of interactive educational experiences. Today it is a leading consultancy in the field of science education outside the classroom.

Grahame has considerable experience in most aspects of property development, as well as considerable negotiating and fundraising skills. Over the past thirty years, he has been associated with many major developments, latterly including Gold Reef City Casino, Walter Sisulu Square of Dedication in Kiptown, Soweto and the first four star hotel in Soweto. He is currently leading a development team for the Bakgatla Ba Kgafela Tribe which is creating a Central Business District, housing and an eco estate on the fringe of the Pilanesberg National Park.

He is currently a director of:

- Epidote Properties (Pty) Ltd t/a Ulwazi: establishing interactive educational experiences
- Amtrad Properties (Pty) Ltd: property development, marketing, sales and leasing.
- Freimac (Pty) Ltd t/a McCreedy Friedlander: a property consultancy.
- Santula Leisure Development (Pty) Ltd: a leisure and eco-tourism developer.
- Moruleng Property Development (Pty) Ltd: a property development company.

He is also an Associate of Chartwell Housing Finance Solutions (Pty) Limited, a company established to enable a growing number of people in Africa to bridge the affordability gap and step onto the home ownership ladder.

Grahame has also played a leadership and fundraising role in a range of social and cultural interests, including the Market Theatre, Johannesburg, of which he was chairman for nine years until 1997 and the United World Colleges Scholarship Trust of South Africa, of which he was chairman for fourteen years until 2002. He also served on the Stadium Committee of Gauteng Cricket for 10 years until 2003, and is a patron of the French Institute of South Africa.

He is currently a board member of the National Arts Festival which is responsible for the Grahamstown Festival.