



Capability Statement



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Kubu Consultancy (Pty) Ltd

Origin and symbolism



Kubu is the Sotho word for a hippopotamus. A hippopotamus or hippo means “river horse” in ancient Greek. The hippo or kubu is a large herbivorous animal found in Sub-Saharan Africa. The semi-aquatic hippo or kubu is as at home in water as on land. A hippo or kubu can stay

under water with minimal visible signs above water and only ears and top of head seen above the water surface. Thus the origin of the Africa-centric saying “It is just the ears of the hippopotamus” which has the Eurocentric equivalent “It is just the tip of the iceberg”. Much more than the eye can meet is below the surface! Despite a barrel shaped body and stocky legs the kubu can move surprisingly fast in water as well as on land. This coupled with a known aggressive demeanor contribute to the reputation as one of the most dangerous animals in Africa.

In true biomimicry creativity fashion these characteristics of the kubu are embodied in the business approach of Kubu Consultancy.

Core values

- **Creativity** (Developing new concepts, products and mechanisms through lateral thinking and technology coupling)
- **Innovation** (Taking inventions and creativity products to market acceptance and implementation),
- **Leadership** (Taking strategic and tactical foresight initiative, exhibiting responsibility and positively influencing others),
- **Expertise** (Own proven expertise in original fields as well as selected association with experts in other disciplines and fields)
- **Association** (Linking on a temporary as well as longer term with like-minded individuals or groups to achieve desired outcomes)



About us

Kubu Consultancy (Pty) Ltd was established in 1997 by Dr Emile Horak Pr Eng and Dr Steve Emery Pr Eng, both with international recognition in their fields of expertise as their CVs will testify. **Thus the ears of the hippo!**



Dr Emile Horak is based in Centurion, Pretoria South Africa. Dr Steve Emery is based in Perth Australia from where he operates KUBU Australia. Both pioneer directors have a strong foundation in the field of research, development and implementation through their association with the CSIR, premier research institution in South Africa. This enables them to apply the fundamentals of creative problem solving and transfer it to any other field.

The basic KUBU Consultancy skills set and experience provide the base to operate with confidence in areas such as:

- Transportation Infrastructure (roads and airfields)
- Development management
- Technology transfer and implementation.

- Education and training (technical and creativity)
- Institutional change facilitation
- Strategic management
- Policy development

The depth of personal expertise is further complimented by the often unseen Kubu body consisting of a variety of network relationships or associations with diverse disciplines of consultants, contractor bodies and client bodies. These network relationships come from successful personal careers in these fields associated with premier institutions and good inter-personal relationship and network skills. These network relationships enable KUBU Consultancy to operate as specialists with a lean core structure and utilizing the broad support with network linked organisations.

This association allows Kubu Consultancy to venture into other technical fields such as

- Telecommunication infrastructure development
- Green energy infrastructure development
- Feasibility studies
- Mining infrastructure
- Agricultural and associated infrastructure development
- Other fields or disciplines of opportunities through selected expert associations



Abbreviated CV

Dr Emile Horak

Qualifications: PhD Civil Eng (UP), MSc Transp. Eng (UC Berkeley), M Eng Civil (UP), Dip AEP (SBL, UNISA), Management of Technology (MOT) course (UCT, Business School), Fellow member SAICE.

Emile Horak was associated with the Division of Roads and Transport Technology, CSIR for 13 years as specialist in research, development and technology transfer. He specialised in the field of pavement engineering with international recognition in pavement performance, accelerated pavement testing and response analysis (materials, design, rehabilitation and behaviour). In this capacity he acted as specialist for various consulting engineering firms and for clients such as the DBSA. He has various industry awards recognising these areas of expertise and achievements.

Emile has published and presented more than 80 reports and papers at international conferences and in periodicals in fields of expertise in transportation and roads engineering and urban engineering. Emile has been the main author/co-author or chairperson of national design manuals and guidelines for road design and road building materials on National and Provincial roads (eg. TRH4 &12) and appropriate design and maintenance guidelines of roads and

stormwater facilities in developing communities as well as established residential areas (e.g. UTG 3&4 and the “Red Book” on appropriate standards).

Emile served on various national and international committees in the field of technology transfer and implementation. Typical associations include Chairperson of CAPSA'99, Technical Advisory Committee of the International Conference on Pavement Management Systems of the Transportation Research Board, the International Conference on Asphalt Pavements (ICAP) of the International Society of Asphalt Pavements (ISAP) and Flexible Pavements Committee of the Permanent International of Road Congresses (PIARC) as well as various national committees.

Emile spent 4 years with the Johannesburg City Council as City Engineer: Roads, stormwater and works. In this period he acted as the multi-disciplinary team co-ordinator of various strategic capital projects such as the construction of the R100 million Johannesburg Athletics Stadium, Ellispark Sport Precinct urban renewal project (R50 million) and the conversion of the old Wembley ice rink into a multi-purpose indoors sport stadium. An additional year was spent as Metropolitan Head of Service Delivery (Deputy Chief Executive Officer) of the Greater Johannesburg Transitional Metropolitan Council with the specific duty of kick-starting emergency service delivery and restoration. This R95-million project was successfully completed in record time of 6 months in an environment of political and institutional uncertainty and instability. This included ground breaking work on community empowerment through various labour-intensive construction and maintenance techniques in an empowerment fashion. Processes and procedures for service delivery thus developed, became the blue print for subsequent service delivery programmes.

In this 5 year period with Johannesburg he took a leadership role in the development of a suite of Technical Management Information Systems. This included management systems in Pavements (roads), Stormwater, Bridge , Maintenance , Footway and Verge and Geographic Information System. He took a leadership role in developing expertise in labour-intensive/enhanced construction and road maintenance techniques and associated people empowerment and job creation..

Emile served as director on the board of Murray & Roberts Civils and acted as chief executive of roads infrastructure for Murray & Roberts Contractors. Emile served on the board of Tolcon, a Black Empowerment owned roads concessionaire and toll road operator business. In these capacities he was involved in various successful and less successful tenders for BOT projects such as the N1 toll road, Maputo Development Corridor (MDC), the N3 BOT project initially and the conceptual aspects of the Platinum Route BOT (N4) and the Wild Coast BOT project proposals. Two similar conceptual projects he was involved in were the Harare to Mutare proposed toll road in Zimbabwe and the R300 ring road toll project in the western Cape. He also provided specialist advice on the Trans Kalahari II project in Botswana and the National Route N1 Warmbaths to Pietersburg toll road during this time.

Emile is a founding director of the specialist asphalt laboratory and road surveillance company, Specialised Road Technologies (SRT). SRT is a joint venture between Colas SA, Africon

Engineering International, Jeffares and Green and Bitutek (Durban) and other contractors such as LTA and Blacktop. This co-operation development was mainly negotiated by Emile involving all of the above role-players.

Emile was appointed by the DoT in 1997 to help launch their programme of Road Maintenance by Contract involving the private sector and the development of SMME contractors and entrepreneurs. This project has developed into a very successful implementation by the South African Roads Agency Ltd (SANRAL). He is actively involved in helping Local Government and Provincial Government to find new and appropriate service delivery mechanisms. These include privatisation, commercialisation and corporatization aspects. This is done with a strong Governance and Community Compact empowerment focus.

Emile recently acted as specialist consultant to Transportek, CSIR, acting as strategic change master in their Traffic Safety and Engineering Programme. This included direction giving in various aspects of traffic safety, such as the Vicroads project in Kwa-Zulu Natal, and project management of kick starting Intelligent Transport Systems (ITS) in SA.

Emile was Executive Director of the Engineering Department of the Technikon Southern Africa (TSA) from January 1998 to September 1998. In this capacity he interacted with the industry at large to promote distance education in engineering studies in the whole southern African region. Since October 1998 Emile has taken up the position of Professor and head of the Department of Civil Engineering of the University of Pretoria. He was appointed Manager of the Northern Centre of Development for Transportation Studies for the Department of Transport in May 2003. This centre is involved in capacity building and research in the transportation field. As Manager Emile co-ordinates the efforts of The Universities of RAU, WITS, UP, UNISA, Potchefstroom and Technikons of Pretoria, TWR and Vaal Triangle.

Emile was founding director of the specialist consultancy company, KUBU Consultancy (Pty) Ltd. KUBU is a specialist consultancy firm and has been in joint venture appointments on a number of successful major projects:

- The R165 million rehabilitation and toll road project on the N4/2 for SANRAL as part of the MNK joint venture
- The investigation into the productivity improvement and potential privatisation options for Gautrans concerning their routine road maintenance activities in joint venture with DEC.
- Specialist investigation into the cause of the premature cracking of the asphalt surfacing on the R61 (Port Edward to Shelley Beach) in Kwa-Zulu Natal for NCE and BCP on a SANRAL project.
- Emile is also acting as specialist consultant via his own firm, Emile Horak and associates. In this capacity has been acting as specialist consultant to NCE on a number of projects such as:
 - Special maintenance of the Upington and Kimberley airports and subsequent apron design at Upington
 - The special maintenance of the N12-16
 - The rehabilitation design of the N17 (Davel to Ermelo) for SANRAL.

- Two major road upgrade projects in the Eastern Cape for the eastern Cape Provincial Roads and Public Works department
- Three Rapid Exit Taxiway designs on the R03/L21 runway of Johannesburg International Airport.
- Development of a procedures document for the upgrading of gravel streets to paved standards for the Johannesburg Roads Agency.
- Appointment in Joint Ventures by SANRAL for the rehabilitation of the N12019 (Tom Jones to Daveyton) Gauteng as well as the N2-14 (Keiskama to Green River) near King Williamstown in the Eastern Cape

Dr Stephen Emery

Qualifications

B.Eng(Hons)(Uni. NSW), MBA(Uni. WA), PhD(Rand), FIEAust, CPEng, FSAICE, FSAT, PrEng, FAICD, MAGS, MAAPT.

Stephen Emery has worked as a civil engineer for 39 years in consulting, the public sector, as a private sector executive and as an academic.

Stephen is involved in airport and road engineering, with interests in technical expert, road and runway design and maintenance, pavement testing, airline economics, aircraft performance and airport operations. He has done post-doctoral research on airline forecasting at University of Western Australia and lectured on airline economics at Murdoch University. He is an Honorary Professor at the University of Witwatersrand in the fields of roads and development. He is and has been active in road industry committees, conferences such as CAPSA, and specification committees.

He is a registered Professional Engineer in South Africa and a CPEng Chartered Engineer at the highest level (NPER-3) in Australia. He has been involved in management, design and construction projects in a number of countries in Africa, Australia, Middle East and Asia. Stephen has published and presented over 90 papers at international conferences and journals. He is the lead author of an industry standard book on road surfacings.

In Australia initially, Stephen spent 6 years with Australian Department of Transport involved in commercialisation and privatisation of public airport operations at airports across Australia. After leaving AusDoT, he was directly associated with one airport through to its privatisation, subsequent development and expansion to international airport status. In South Africa, he spent a total of 8 years in pavement, materials and bitumen surfacing research at NITRR/Transportek, CSIR. He then held the SABITA Chair in Asphalt Pavement Engineering at the University of Stellenbosch. Subsequently, he worked as the Group Technical Director for Colas Southern Africa Pty Ltd, which is the largest group of asphalt and emulsion companies in Africa. His responsibilities covered materials, laboratories, quality, plant, design, R&D and technical marketing. He then formed Kubu in 1997, and is now based in Perth as a Director of Kubu Australia.



Kubu Australia (Pty) Ltd

29 Benbullen Road, Kalamunda
Perth 6076,
AUSTRALIA

Tel: +61 8 9293 0863 Cell: +61 414 978 668

Fax: +61 8 9293 0871

E-mail: emery@iafrica.com

Company Number ABN 44 086 417 254

Kubu Consultancy (Pty) Ltd

68 Molopo Ave, Doringkloof,
Centurion 0157,
SOUTH AFRICA

Tel +27 12 667 3889 Cell: +27 83 228 1694

Fax +27 12 667 4141

e-mail: emileh@global.co.za

SA VAT Registration 459 017 6766

Company Registration Number 971532907