

A Visualisation & Science Centre in Africa – for Africa

A concept



*Innovation distinguishes
between leaders and
followers*

Steve Jobs, past CEO, Apple
Computers

www.naledi3d.com

The Naledi3d Factory

- Based at the Innovation Hub in Pretoria
- Pioneered the use of VR in our poorer African communities
- 15 years experience in 3D and virtual reality
- Understands the challenges & learning needs of Africa
- Understands the importance of collaboration
- In Africa, by Africa, for Africa
- NSTF Award nomination (2011)

World Summit Awards (2009):
A VR project with World Links Zimbabwe recognised as "one of the most outstanding examples of creative and innovative e-content" out of over 20 000 nominations from 154 countries)

"We dream visually, we read visually. Therefore, by using VR to show concepts and knowledge in a visual way, we can dramatically enhance the level of understanding of any subject"

Eli Gudza. World Links Zimbabwe

South Africa: Some Fast Facts

- 25% unemployment (official)
- WEF Annual Report on financial development placed South Africa LAST in a ranking of 67 countries in the quality of math and science education
- Limpopo is the poorest Province, with 48.5% living in poverty; followed by the Eastern Cape (38%)

Interactive3d-based education and training: Changing lives, empowering communities - creating wealth

The Vision

- A Visualisation Centre in South Africa with a outcomes orientated goal (at the Innovation Hub in Pretoria).
 - *Interactive Science Centre* - harnessing the power of 3D & virtual reality to transform young people's understanding of STEM
 - *Distribution of digital content to local schools, colleges and community centres*
 - *Support to local industry in skills development*
- Capacity building & technology transfer
- ultimately, the creation of smaller Regional centres in SA and a Pan-African focus



Innovation Hub, Pretoria



Visualisation centre (Singapore)



Manchester Visualisation Centre:

This global interactive research and development centre provides access to state of the art interactive 3D technologies including a virtual showroom, training room, project room, development lab, and 3D classroom infrastructure, "creating a centre of excellence in Manchester that (will) attract customers from all over Europe".

Why?

Virtual reality and *interactive3d learning object's* can communicate concepts and develop skills in many skills areas:

- Overcomes learning barriers resulting from a lack of literacy and the use of European languages in training
- Local context, local content, local languages
- *interactive3d learning object's*
 - an evolution in the e-learning paradigm
 - increase learning impacts & comprehension
 - Packages knowledge efficiently - easy to understand and to digest

Naledi3d Factory has worked with (and have relationships with) organisations in Ethiopia, Rwanda, Uganda, Mozambique, Sudan, Senegal, and Zimbabwe - as well as South Africa itself

Truly Pan-African...

A Visualisation & Science Centre in Africa – for Africa: a concept



Science & technology: Modernising without westernising



Working together:

- 3D Auditorium – hosting school visits
 - A blend of digital 3D content with physical exhibits
- Collaboration with other “physical” local science centres – e.g. Sci-Bono, University of Pretoria, SAASTA etc.
- Distribution of on-line digital content to schools in South Africa and across Africa
- Penetrate rural communities, rural schools
- Built on existing relationships to support Satellite activities in West and East Africa
- Local content that is culturally relevant - and in local (African) languages
- Potential for collaboration with:
 - Manchester Centre
 - VR education centres in Brazil (“BRICS”) (education and developmental activities)
 - Singapore



Naledi Pandor, past Minister of Science and Technology spoke in 2009 of the crucial role science must play in the development of South Africa. *“Science in general has the potential to not only facilitate economic growth, but to also eliminate of poverty and the improvement of living standards for all South Africans”.*

“We need to find more effective methods of interesting capable schoolchildren in carving out careers in science, in mathematics, in engineering, and in establishing emerging technologies... the SET sector will fail otherwise”

Together, we CAN and WILL make the difference ...

The Naledi3d Factory

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Dr Fay Chung: Past Minister of Education, Zimbabwe

“By bridging the literacy barrier through the use of 3D interactive models, Naledi3d Factory overcomes the inherent limitations of text. At the same time, language differences become much less important as text is replaced by interactive, 3D images”

“Finally, and perhaps most excitingly, Naledi3d Factory works closely with local stakeholders to develop the content that goes into its interactive simulations. This ensures that the content is always relevant and much more appropriate to the communities and cultures where it will be used.”

Peter Schiøler, CII Advisor, UNESCO, Paris

“The Naledi3d Factory is more than an excellent technical partner for UNESCO. I have personally been impressed by the company’s commitment to, in the spirit of post apartheid South Africa, seek new solutions and share know-how for the public good across the continent...”

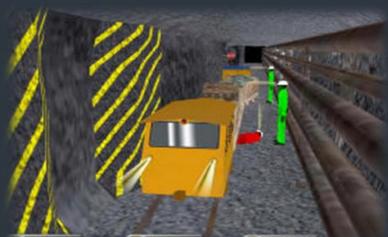
INFORM...

“...If we have programmes like this, where we use visualization, learning will be interesting and enjoyable...”

Zenzele Mofokeng – Alexandra

“VR is a powerful tool in the development of our communities”
Mutoko Farmer, Zimbabwe

It is very helpful - as an Agricultural teacher, I would want to continually use VR in my lessons”
Extension Worker, Mutoko, Zimbabwe



Mine safety – the haulage way