CASE STUDY

KAVANGO BLOCK BRICK

Agenda

I. WHO IS HEINRICH SCHROEDER
II. THE PROBLEM
III. THE SOLUTION
IV. THE JOURNEY
V. KEY ISSUES IN THE HOUSING ENVIRONMENT
“THE PEOPLE WHO ARE CRAZY ENOUGH TO THINK THEY CAN CHANGE THE WORLD ARE THE ONES WHO DO”

- Apple’s ”Think Different” commercial, 1997 -

WHO IS HEINRICH SCHROEDER

Henry Ford, poor and uneducated, dreamed of a horseless carriage. He went to work with the tools he possessed, without waiting for opportunity to favour him, and now evidence of his dream belts the entire earth. He has put more wheels into operation than any man who ever lived because he was not afraid to back his dreams.

Thomas Edison dreamed of a lamp that could be operated by electricity. Despite more than 10,000 failures, he stood by that dream until he made it a physical reality. Today by the switch of a button the world has light, which is taken as a given.

Heinrich Schroeder, born with dyslexia, who finds it difficult to read and write, when he speaks he must not be interrupted otherwise he loses his train of thought, a high school drop out, but, a gifted man with a brilliant mind.

Heinrich dreamed about providing affordable, quality, dignified houses to people with limited means in a kit form. A house that can be transferred from one generation to the next. Through perseverance, determination, and hard work he proved to the world that it can be done, through the design of the Kavango Block Brick.
THE PROBLEM

Cape Town South Africa

Windhoek Namibia
SA youth unemployment 3rd highest in world  
Jan 20 2014 11:42 Fin24

Youth subsidy won't stop unemployment - experts  
How to qualify for youth employment incentive  
Gordhan: Youth unemployment far too high

Cape Town - South Africa has the third highest  
unemployment rate in the world for people between  
the ages of 15 to 24, according to the World Economic  
Forum (WEF) Global Risk 2014 report.

THE SOLUTION
The holes in the K Brick:
- pipes are channelled thru holes
- no chasing is required
- structure of house no disturbed
- no cracks
- plumber and electrician cost reduce

The interlocking Feature of the K Brick:
- no artisan abilities required to build a straight wall
- no mortar is required for setting
- Block Grip is used instead of monoco
- dip and pack
- flexible

Isometric feature:
- smooth wall
- no plastering is needed
- exact calculation of amount of bricks needed
- minimise waste
- low carbon footprint

The size of the K Brick:
- one K-Brick equals 3 super bricks
- one square meter equals 15 K-Bricks equals 45 super bricks

Patent number: F2006/0966
**KAVANGO BLOCK BRICK – The End Product**

Otjimuise 10 de Laan - Windhoek

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**KBB – PRODUCT ACCEPTANCE (100 RESPONDENTS)**

OVERALL RATING (1-5) (Specific to product constructed at Wellington)

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<th>Engineering</th>
<th>Architecture</th>
<th>Energy</th>
<th>Q/Surveyor</th>
<th>Social</th>
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Respondents perception about the unit, in general:

- What the respondents liked:
  - bathroom, floor, ceiling, tiles, bedrooms, double storey, beautiful family house, windows, structure and construction. The feature that stood out: bathroom, floor, bedrooms, beautiful family house, structure and ceiling.
- What the respondents disliked:
  - kitchen is too small.

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International Innovative Housing and Sustainability Energy Effective Competition Report
ENTIRE COMMUNITIES CAN BE INVOLVED

KAVANGO BLOCK BRICK – What KBB Offers

- Dignified durable housing – It can be transferred from one generation another

- The design of the Kavango Block Brick allows the for following:
  - 40% time saving on mass housing projects – labour is one of the biggest cost items – the time used to build a house is critical
  - 15% saving in building materials due to minimal waste
  - No damage to the structure of the house due to chasing required electrical pipes and fittings – ensure durability

- Affordable

- Bondable

- Proven Social Acceptance

- Job Creation
THE JOURNEY

KAVANGO BLOCK BRICK

KAVANGO BLOCK BRICK - Deep History of Innovation and Growth


Research and Development - Patent

Commercialisation
1. Inadequate/ incorrect funding
2. Debt orientated funding structure
3. Shareholders with shallow pockets
4. Market expectation
5. Country specifics
A more nuanced approach opens up opportunities

1. Bring mortgages down-market (and make houses cheaper).
2. Grow & develop housing microfinance.
3. Finance rental housing Target subsidies carefully

36.5% of Africa’s population earn less than US$ 2.00 per day. This is the international poverty line.

New players are beginning to carve out niche markets, serving a wider population / policy makers are recognising the value of partnerships

Source: ADB Report on the middle class, 2011

THE END