The Namibian Case

- Limited public investment in housing and municipal service infrastructure – shortage of serviced land
- Namibia the 4th country in the world with high prices of housing due to high input costs and limited supply of housing stock – average 600 housing units produced annually
- Long process of land delivery – minimum 3 years
- National housing backlog - over 115,000 housing units and 3800 annual growth rate
- 73% of Namibians do not have access to credit facilities offered by the financial service sector and consequently cannot afford to buy urban land and housing.
Initiative of His Excellency, Dr. Hifikepunye Pohamba, President of the Republic of Namibia conceived in 2013

Ministerial Committee: chaired by H.E. President Pohamba. Comprised of the Minister of Regional and Local Government, Housing and Rural Development, the Minister of Finance, Presidential Affairs Minister and Attorney General and the Director General of the National Planning Commission

Technical Committee: chaired by the CEO of NHE produced the Blueprint on MHDP which was approved by Cabinet of the Republic of Namibia in July 2013.

MHDP officially launched by HE President Pohamba on 26 November 2013

Key Strategic Goals/Objectives

The blueprint defines the main strategic goal of the program that of causing the construction of 185 000 housing units by the year 2030 underpinned by three objectives:

- provide access to affordable housing to the Namibian people;
- economic empowerment through ownership of a tradable asset (a house) that can be used as security for further wealth and asset generation at households level; and
- creating jobs and stimulating economic growth
- Land redistribution to the needy
Program Components

1. Land servicing sub-program;
2. Construction of credit-linked housing sub-program;
3. Informal settlements upgrading sub-program;
4. Social/subsidy housing sub-program;
5. People Housing Processes (Community driven housing development sub-program);
6. Rural Housing and sanitation sub-program;
7. Strengthening the legislative, regulatory and policy environment and capacity building sub-program

Program Output and Investment

- **Total number of houses to be built:** 185,000
- **Total Investment:** N$ 45 billion
- **Annual Investment:** N$ 2.5 billion
- **Land Servicing Cost per plot:** N$ 75,000
- **Housing Construction Cost:** N$ 280,000
- **Informal Settlements Upgrading:** 50,000 households
- **Number of housing units to be built in the first two years:** 10,058
- **Number of plots to be serviced in the first two years:** 6,457
- **Timeframe:** 17 years in line with Vision 2030
FUNDING MODEL

- Government grants and subsidies – 45%
- Public Private Partnerships
- Debt Financing by local and foreign financial institutions
- Savings of households involved in SDFN housing schemes

Conventional Building Technologies

- Brick and mortar
- Heavily dependent on cement
- In Namibia, brick and mortar has become entrenched as a reliable, durable and robust building technology
- Downside: expensive due to increasing prices of cement & other inputs
- Downside: time-consuming, minimum 3 months to complete a house
ALTERNATIVE BUILDING TECHNOLOGIES (ABT)

- ABTs are supposed to address the weaknesses of conventional brick and mortar, especially cost and time
- Many ABTs have been proposed
- NHE decided to test these technologies by allocating plots for show/demo houses – Alternative Building Technology Village
- Ten houses have so far been completed.
- Before the establishment of the Village, the Imison building technology was tested on 5 plots in Walvisbay in 2011.

IMISON BUILDING TECHNOLOGY

- The IMISON walling system comprises mainly of a series of interlocking wall panels, made from Neopor. IMISON wall panels are manufactured in licensed manufacturing plants across the globe.

- Panels contain an in-situ light gauge steel or concrete substructure wall panel that can be installed onto any type of foundation or floor slab.

- Once erected, the IMISON wall panels are sprayed on both sides with a high density, fiber-cement technology, called Fibrecote.

- The combination of Neopor, the in-situ reinforced substructure and Fibrecote acts as a composite member.
IMISON HOUSES IN WALVISBAY

- FIRST ALTERNATIVE BUILDING TECHNOLOGY (ABT) HOUSES IMPLEMENTED BY NHE
- 5 HOUSES BUILT IN WALVISBAY IN 2011
- BASIC CONSTRUCTION COST IN 2011 = N$ 2 864/M²
- CONVENTIONAL BUILDING TECHNOLOGY IN 2011 WAS N$ 2 735/M² FOR NHE IN-HOUSE CONSTRUCTION
- THUS ABT WAS MORE EXPENSIVE THAN CONVENTIONAL
- STANDARD BANK HAS BONDED ALL 5 IMISON HOUSES
- MARKET HAS RESPONDED POSITIVELY
- EXPERIENCE SO FAR:
  - NO MAJOR COMPLAINTS
  - HAIRLINE CRACKS ARE APPEARING, NEED TO BE FIXED BY TECHNOLOGY PROMOTER

ALTERNATIVE BUILDING TECHNOLOGY VILLAGE IN WINDHOEK
ALTERNATIVE BUILDING TECHNOLOGY VILLAGE IN WINDHOEK

- NHE MADE PLOTS AVAILABLE IN THE GOREANGAB TOWNSHIP OF WINDHOEK
- TWO NHE HOUSE TYPES WERE USED AS TEMPLATES: CORE 6 (42 M²) AND GULL (64 M²)
- ABT PROMOTERS WERE INVITED TO SET UP SHOW/DEMO HOUSES AT OWN COST
- UPON COMPLETION, NHE REFUNDED THE PROMOTERS FOR THE CONSTRUCTION COST
- NHE NOW HAS THE OPTION TO SELL OR RENT OUT THE PROPERTIES

ASLA – CONCRETE FRAME
Light-weight energy panels are manufactured from cement, EPS (expanded polystyrene and gases), filler ash and additives. The product ranges in 10 panels varying in size, structural integrity and thickness. These variations allow for flexibility in use of the panel depending on the specific location in the building where the product is required. The panels are skinned with a fire proof calcium Silicate skin.

- Typical dimensions of a panel are 610mm wide x 2270mm high.
- Typical thicknesses are 60mm, 90mm, 120mm, 150mm, -180mm.
- Density of Panel = 650kg/m³
- Concrete compression strength minimum 5MPa.
# SAFLAND (Pty) Ltd

## LEPA PANEL WALLS

![Image of LEPA panel walls]

## COST

<table>
<thead>
<tr>
<th>TECHNOLOGY</th>
<th>COST, N$/M²</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIMBER STUD FRAME</td>
<td>3 488.00</td>
</tr>
<tr>
<td>WML LIGHT STEEL FRAME</td>
<td>3 800.10</td>
</tr>
<tr>
<td></td>
<td>3 972.00</td>
</tr>
<tr>
<td>WISPECO LIGHT STEEL FRAME</td>
<td>5 542.00</td>
</tr>
<tr>
<td></td>
<td>5 247.10</td>
</tr>
<tr>
<td>SAFLAND LEPA PANELS</td>
<td>6 133.20</td>
</tr>
<tr>
<td></td>
<td>5 471.50</td>
</tr>
<tr>
<td>ASLA CONCRETE FRAME</td>
<td>5 714.30</td>
</tr>
<tr>
<td></td>
<td>6 306.50</td>
</tr>
<tr>
<td>CONVENTIONAL – MASS HOUSING</td>
<td>5 600.00</td>
</tr>
</tbody>
</table>
CONCLUSION

- IN GENERAL, THE ABTs DO NOT OFFER CHEAPER SOLUTIONS
- IN SOME INSTANCES, ABTs ARE EVEN MORE EXPENSIVE THAN CONVENTIONAL BUILDING TECHNOLOGIES
- SOME ABTs DO OFFER TIME SAVINGS, BUT THESE DO NOT TRANSLATE TO CONSTRUCTION COST REDUCTIONS
- MOST OF THE INPUTS OF ABTs ARE IMPORTED, THEREBY MAKING THEM LESS COMPETITIVE
- THE SOCIAL ACCEPTANCE HAS NOT BEEN FORMALLY TESTED YET, BUT SO FAR THERE ARE NO MAJOR OBJECTIONS AGAINST ABTs