

# DISRUPTIVE CONSTRUCTION TECHNOLOGY



Established - 1986

WELCOME

# STATUS QUO

## 50.5 MILLION HOUSING BACKLOG IN AFRICA

### QUESTION:

- WHY IS THE NEED FOR AFFORDABLE HOMES INCREASING YEAR BY YEAR?
- IS TRADITIONAL DELIVERY METHODS RESPONSIBLE FOR THE INCREASING BACKLOG?

“

The definition of insanity  
is doing the same thing  
over and over again, but  
expecting different results.

”

— Albert Einstein

# STATUS QUO

BRICK PRODUCTION



WALL PRODUCTION



SLOW

EXPENSIVE

WASTE

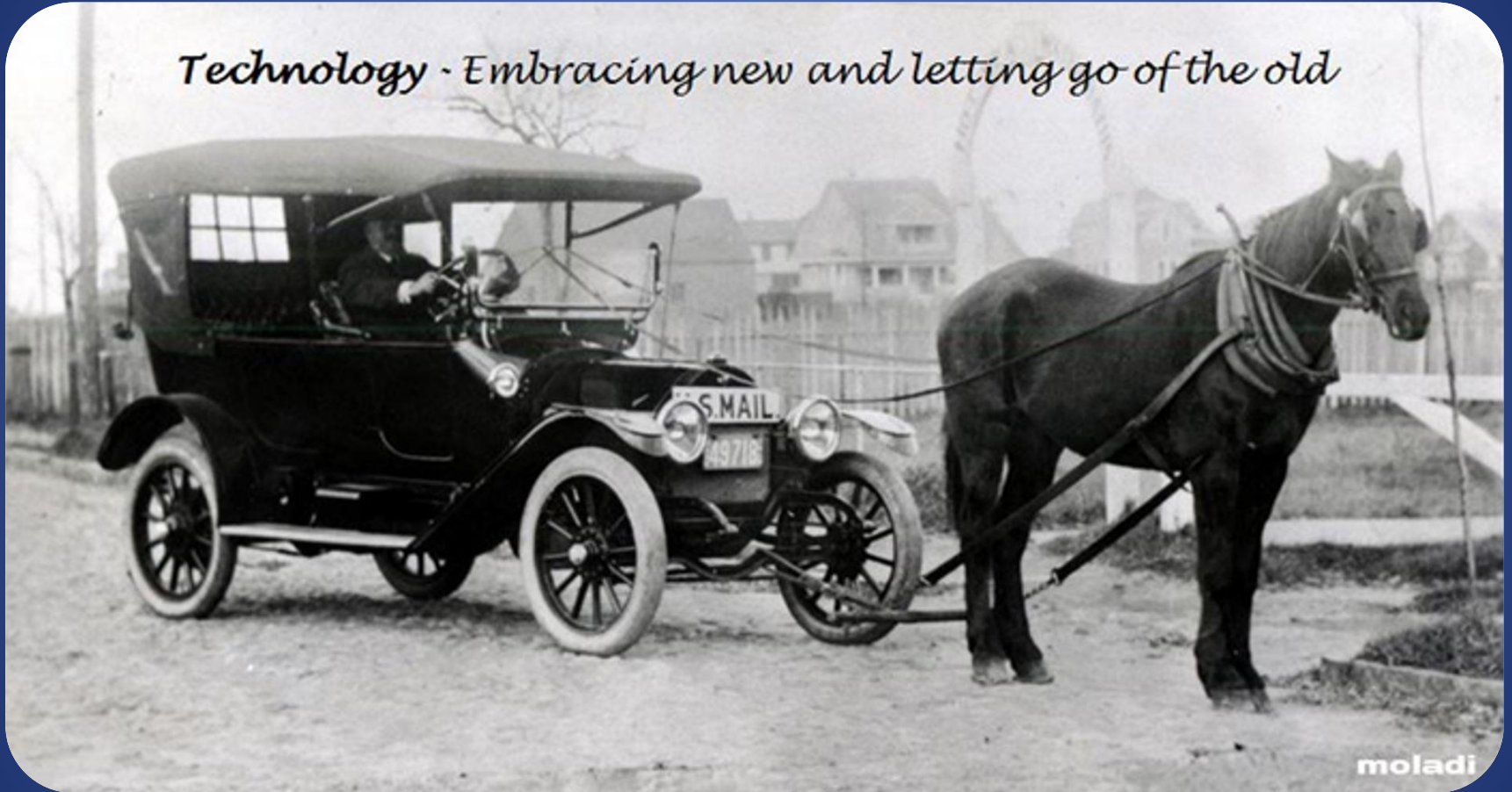
QUALITY

CARBON



# DISRUPTIVE TECHNOLOGY

*Technology - Embracing new and letting go of the old*



# MOULD A HOUSE – NOT A BRICK



SPEED REDUCES COST - QUALITY - SIMPLICITY – REDUCE CARBON FOOTPRINT



# moladi

BRICK PRODUCTION COST



WALL PRODUCTION



SPEED REDUCES COST



FASTER

LOWER  
COST

NO  
WASTE

SUPERIOR  
QUALITY

CARBON  
REDUCTION

# SIMPLICITY

WORLD  
ECONOMIC  
FORUM

“**moladi** - One of the world's most scalable, affordable and socially accepted housing systems”



EXPORTED TO 27 COUNTRIES

**moladi**



# PRODUCTION - FREIGHT



INJECTION MOULDING – PRODUCED IN SOUTH AFRICA



# CONTAINER - PACKING



# TOOL BOX



OPEN THE CONTAINER – AND START WORKING  
NO NEED TO LEAVE SITE TO PURCHASE ANYTHING



# RAFT FOUNDATION - CONCRETE



LOCAL  
COMMUNITY

EIGHT HOURS



# RAFT FORMER





# ASSEMBLY INSTRUCTIONS



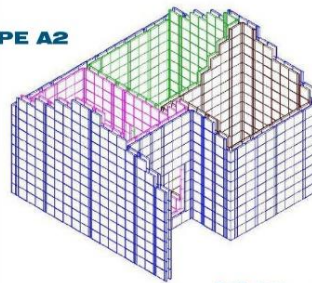
## ASSEMBLY INSTRUCTIONS

TJ25 HOUSE TYPE A2  
Strategic Business Solutions Ltd  
Dar es Salaam, Tanzania



## moladi ASSEMBLY INSTRUCTIONS

### TJ25 HOUSE TYPE A2



**Mortar** = ~8.3m<sup>3</sup>

**Formwork** = 197m<sup>2</sup>

**Labour** = To Erect - 9ppl  
= To Mix - 11ppl  
= To Fill Formwork - 7ppl  
= To Strip Formwork - 6ppl  
= Site Mixers - 4 units

Tel: +27 41 379 2600 \* Fax: +27 86 502 6930 \* Email: mail@moladi.co.za \* Web: www.moladi.co.za  
P.O. Box 6250 \* Walmer \* 6065 \* Port Elizabeth \* South Africa

# ASSEMBLE PLASTIC FORMWORK



TWO DAYS



# SERVICES - INSITU

TRUSS BLOCK-OUTS



DOOR FRAMES



REINFORCING

WINDOW FRAMES



PLUMBING HARNESS

REINFORCING



ELECTRICAL HARNESS

# ERECT PLASTIC FORMWORK



FOUR HOURS



# FILL FORMWORK



MORTAR - SAND CEMENT MIXTURE

TWO HOURS

# REMOVE FORMWORK NEXT DAY



**RE-USABLE**

TWO HOURS



# REMOVE FORMWORK NEXT DAY



TWO HOURS STRIP  
RE-USABLE - RE-ERECT ON NEXT FOUNDATION

# SPEED REDUCES COST



1 MOULD - 1 HOUSE  
100 MOULDS - 100 HOUSES

**1** DAY



# FIRST HOUSE 1987



36 YEARS LATER

# SUBSIDY HOUSING



42 SQM – TWO BEDROOM



# GAP HOUSING



52 SQM – TWO BEDROOM

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# TRINIDAD & TOBAGO



52 SQM – TWO BEDROOM



# CAPE TOWN



# TANZANIA





# NAMIBIA



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# BOTSWANA



BOUTIQUE HOTEL



# UGANDA - TOTALenergies



REMOTE VILLAGES - EAST AFRICA CRUDE OIL PIPELINE

# UGANDA - TOTALenergies



REMOTE VILLAGES - EAST AFRICA CRUDE OIL PIPELINE



# HAITI – EARTHQUAKE RUBBLE



RECYCLE

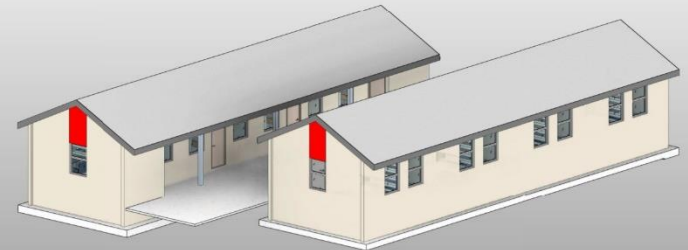
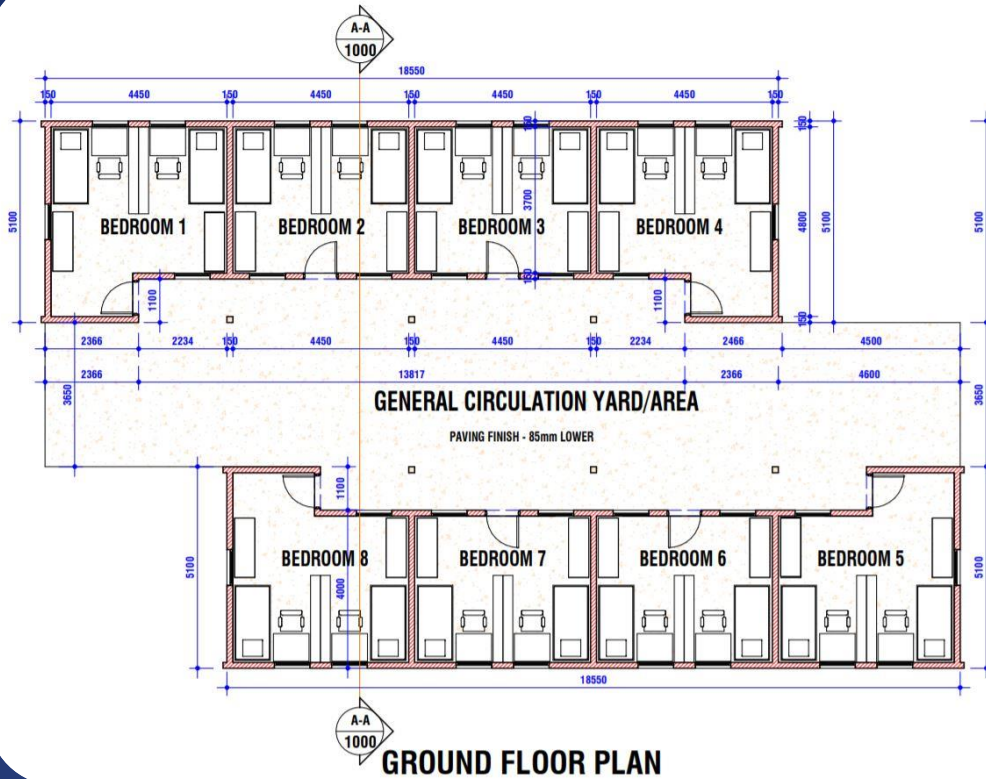
# DEMOCRATIC REPUBLIC CONGO



2500 BED DORMITORIES



# DEMOCRATIC REPUBLIC CONGO



# DEMOCRATIC REPUBLIC CONGO





# ABLUTION BLOCK



# ABLUTION BLOCK





# TANZANIA



COURTHOUSES - 1600 SQUARE METER

# UGANDA PROJECT



**moladi**

2500 DOUBLE STOREY WALKUP

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# DOUBLE STOREY CLASSROOMS



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# SCHOOL - CLASSROOMS





# SCHOOL - CLASSROOMS



# CLINICS





# HOUSING CRITERIA

SOCIAL ACCEPTANCE



AFFORDABLE



DURABLE



CREATE EMPLOYMENT

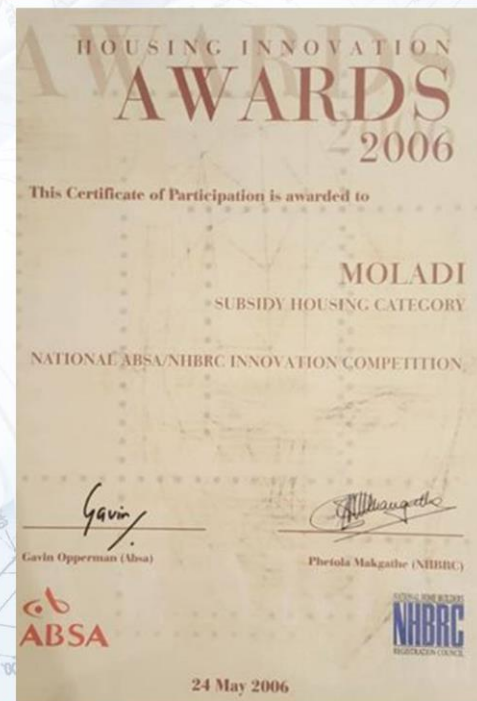


LOCAL CONTENT



# AWARDS – APPROVALS

## HOUSING INNOVATION AWARDS



EXPORTED TO 26 COUNTRIES



# 100 mm **moladi** WALL

## SBT Superior Building Technology

- MONOLITHIC REINFORCED
- 6 X STRONGER THAN
- BRICK & MORTAR
- WATER PROOF
- SUPERIOR THERMAL PROPERTIES
- EARTHQUAKE PROOF
- HURRICANE PROOF
- WILL NOT CALLAPSE DURING FLOODING
- REDUCES CO2 EMISSIONS



BRICK WALL DEMOLISHED

# CHAMPION TEAM

## Sustainable Integrated *Human Settlements*

### TEAMwork

- National
- Provincial
- Municipal

### Implementing SPV

- Special Purpose Vehicle
- Land to Stand
- Schools

### Professional TEAM

- Architects
- Town Planners
- Engineers
- Project Managers

### Training

- SMME
- Contractors
- Entrepreneurship
- Agriculture

### Suppliers

- Bulk
- Establish industrialists

### Finance

- Project
- End user

### Energy

- Alternative
- Green
- Recycle

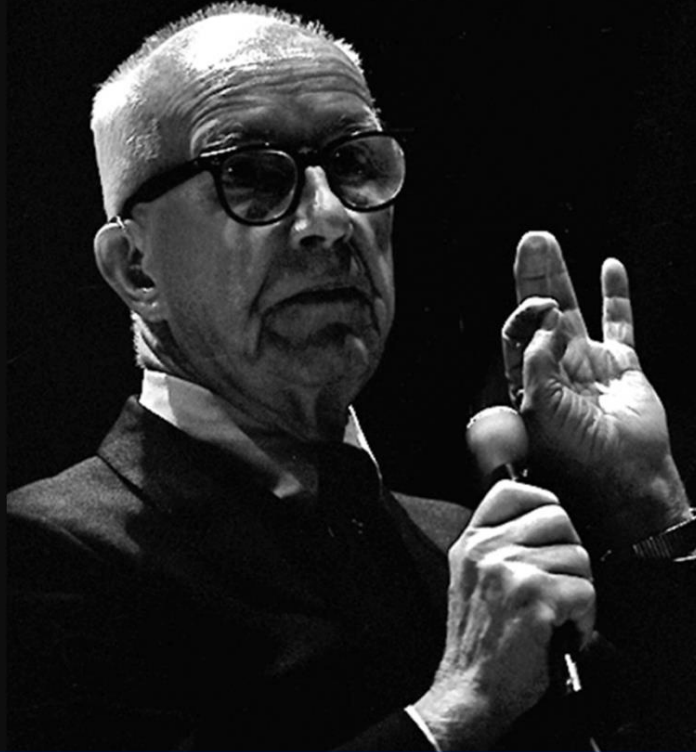


#EmpoweringPeople to help themselves

Spearheading **TEAM**work



# **moladi** - A NEW MODEL



**You never change things by  
fighting the existing reality.  
To change something, build a  
new model that makes the  
existing model obsolete.**

*- Buckminster Fuller*

**THANK YOU**

**FIGHT POVERTY  
UNEMPLOYMENT  
AND CRIME  
THROUGH HOUSING**



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