

SOLAR HOME AND BUSINESS SYSTEMS

THE FUTURE OF RURAL ELECTRIFICATION



**AFRICA AT NIGHT:
AN UNTAPPED MARKET**

SHS vs. On-Grid

ON-GRID

- is highly expensive (\$ 1,200 to \$ 4,000 per household connected),
- is a logistical nightmare and very slow to implement,
- is not adapted to households' low energy consumption.
 - Average electricity consumption in Sub-Saharan Africa: 150 kWh per capita p.a.
- Grid access is not always synonymous with the provision of generated power
- Too much focus on generation requirements, resulting in underinvestment in transmission and distribution
- In some countries, private households are charged fees for grid connection: In Kenya, charges are around \$ 400

SOLAR

- is less expensive than the grid (can be less than \$ 500 to connect a household),
- is fast and flexible, easily installed by one person with one hammer,
- can be rolled out faster than any on-grid project,
- is adapted to low consumption patterns and flexible in case of temporary payment issues.
- Once reimbursed, offers long-term and free power source to the households
- In case of low solar radiation, large SHS have enough capacity for 2-3 days of autonomy
- Availability of solar home systems is always better than the grid



SOLAR HOME SYSTEMS (SHS) ARE GROWING MUCH FASTER THAN GRID CONNECTIONS

Large SHS are in a pole position to gain market share (rural & urban)

KEROSENE & GENERATORS

- Unhealthy
- Polluting
- Ineffective
- Expensive
- Noisy
- No warranty nor easy maintenance
- Dangerous



MICRO-/MINI-GRID

- Compelling gap-filler between grid and off-grid
- Works well on paper

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BUT

- Complex calibration
- Slow roll-out
- No ownership for clients
- Inflexible customization
- Profitability?



ON-GRID

- First-best in developed countries

BUT

- Expensive (\$1,200-\$4,000 per household)
- Logistical nightmare
- Unreliable
- Underinvestment in transmission
- Missing generation capacity

&



**IN
COMPETITION
WITH**

LARGE SHS (OFF-GRID)

- 100% of electricity needs
- Large set of DC appliances
- Perfect substitute for the grid
- Cheaper than equivalent fossil fuels alternatives
- Highly scalable and fast roll-out
- PAYGO financing and ownership after 3 years
- 46.000 households today



LARGE SHS WILL COMPETE HEAD-ON WITH ON-/MINI-GRID SOLUTIONS AND GEN-SETS

ON-GRID

- Bank Account
- Fixed line phones



OFF-GRID

- Mobile Money
- Mobile Phone



**PARADIGM CHANGE: OFF-GRID
IS LEAPFROGGING ON-GRID**



Real electrification – Mobisol 1.0: Better than the grid

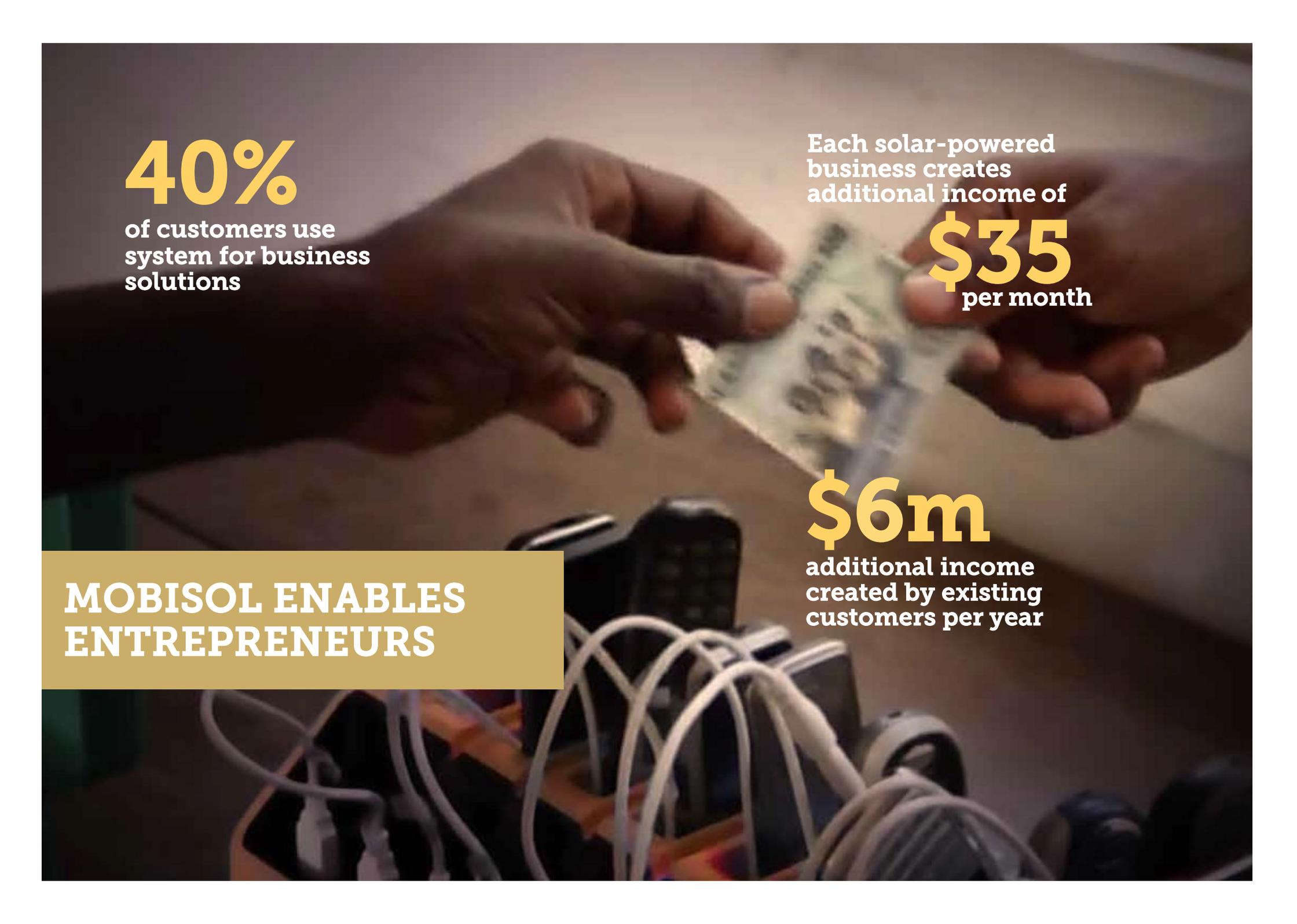
TODAY



TOMORROW

+





40%

of customers use
system for business
solutions

Each solar-powered
business creates
additional income of

\$35
per month

\$6m

additional income
created by existing
customers per year

**MOBISOL ENABLES
ENTREPRENEURS**

**MOBISOL 200 W SYSTEM =
ONE VILLAGE CINEMA**





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