The Challenges of Keeping Communities at the Centre of Energy Access

Oxford Energy Network Seminar

Dr Bernie Jones, MD

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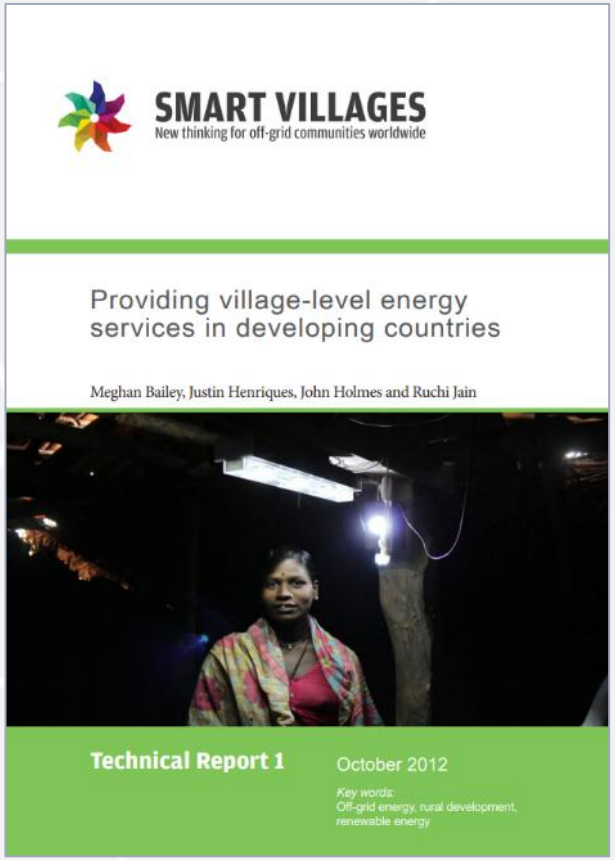
Where did we come from?

Actually, right here @ the ECI!

- 2011 Scoping Study for DG DevCo
- Jim Hall helped us find the 3 postgrads that worked on this first scoping study



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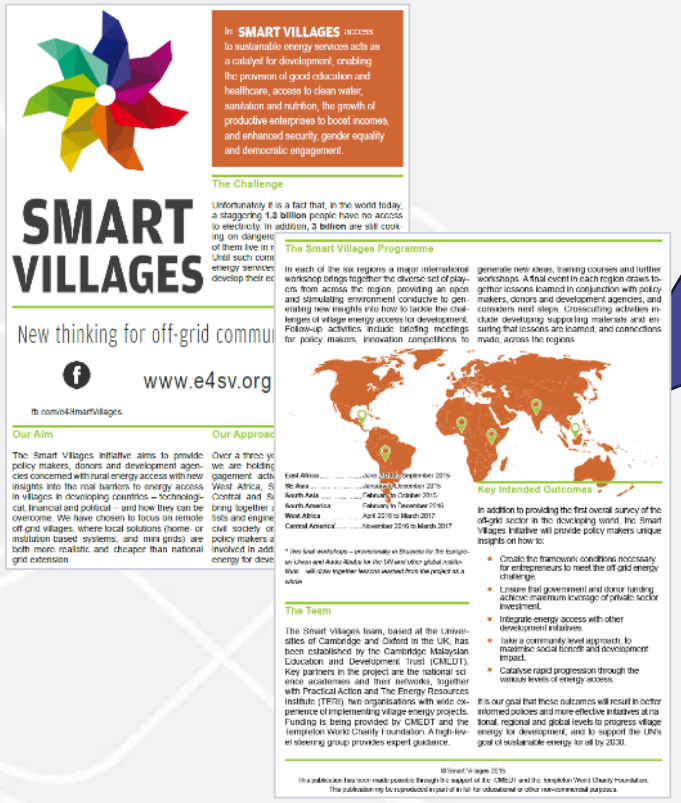

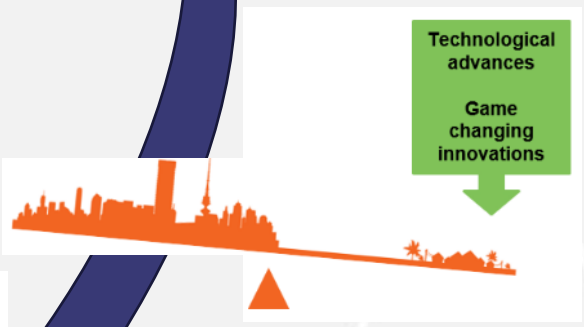

47% of world's population and 70% of the world's poor live in rural villages

SMART CITIES ⟷ SMART VILLAGES

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"Smart Villages" Model

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“Smart Villages” Model

- **1-dimensional development**
  - Integrated, multi-SDG initiatives are more cost effective, sustainable and higher impact
- **Long-term sustainability**
  - Projects need to be planned with and embedded in the community
  - Need to address (wide range of) community priorities
  - Need a social and economic plan for long-term sustainability
- **Data & Impact**
  - Data should be shared, not hoarded as valuable IP
  - Impact metrics should be meaningful and long-term
- **Technology catalysed**
  - Technology is a means to an end, not an end itself
- **Entrepreneurship**
  - Where possible (!) projects should foster new skills and economic activity to generate added value in the community

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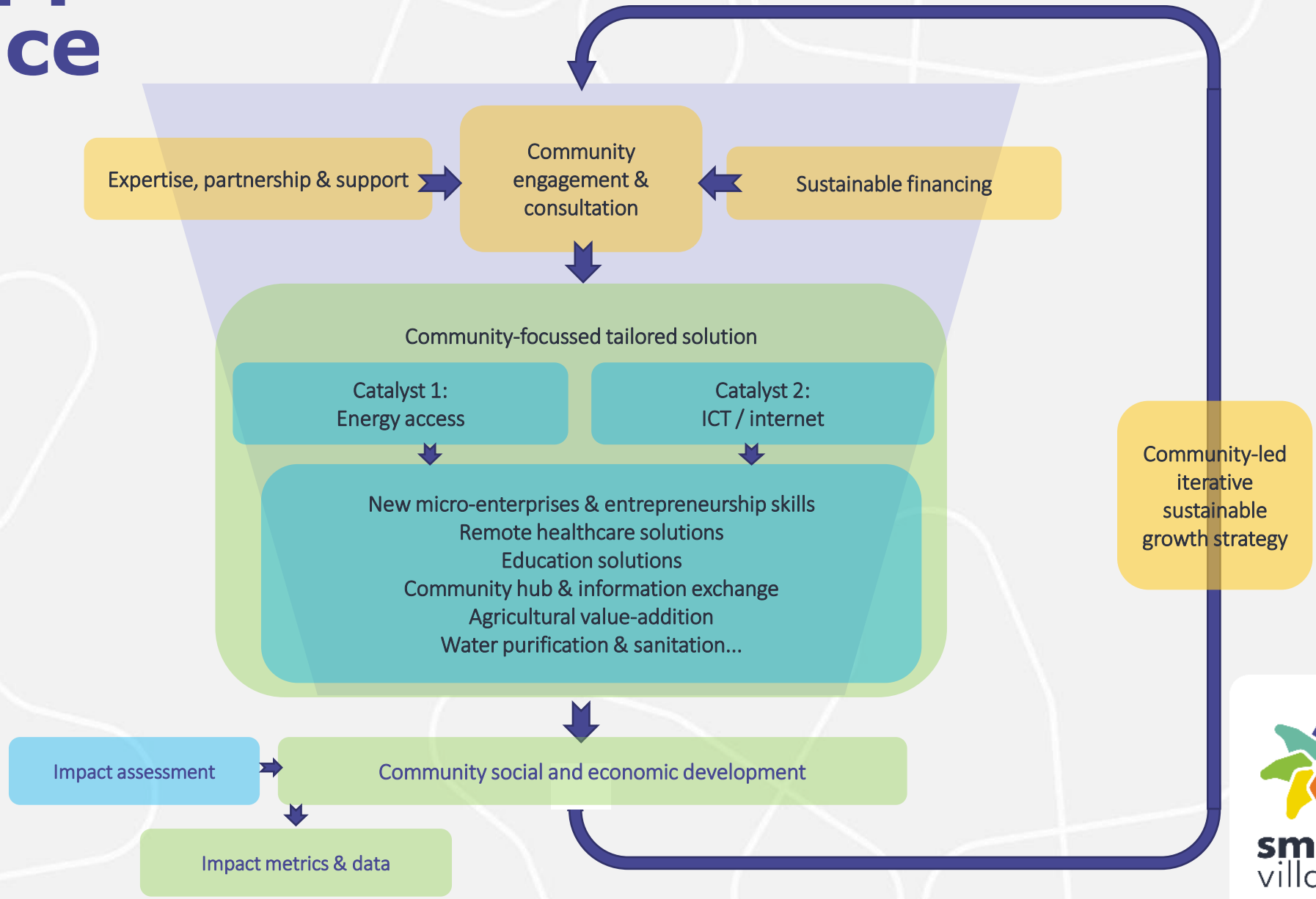
Our work

>30 projects since 2017

- Offgrid Community Energy Systems
- Access to Water, Health & Education
- Village Enterprise Incubation
- Agri Value-Addition
- Environment & Resilience

Our approach in practice



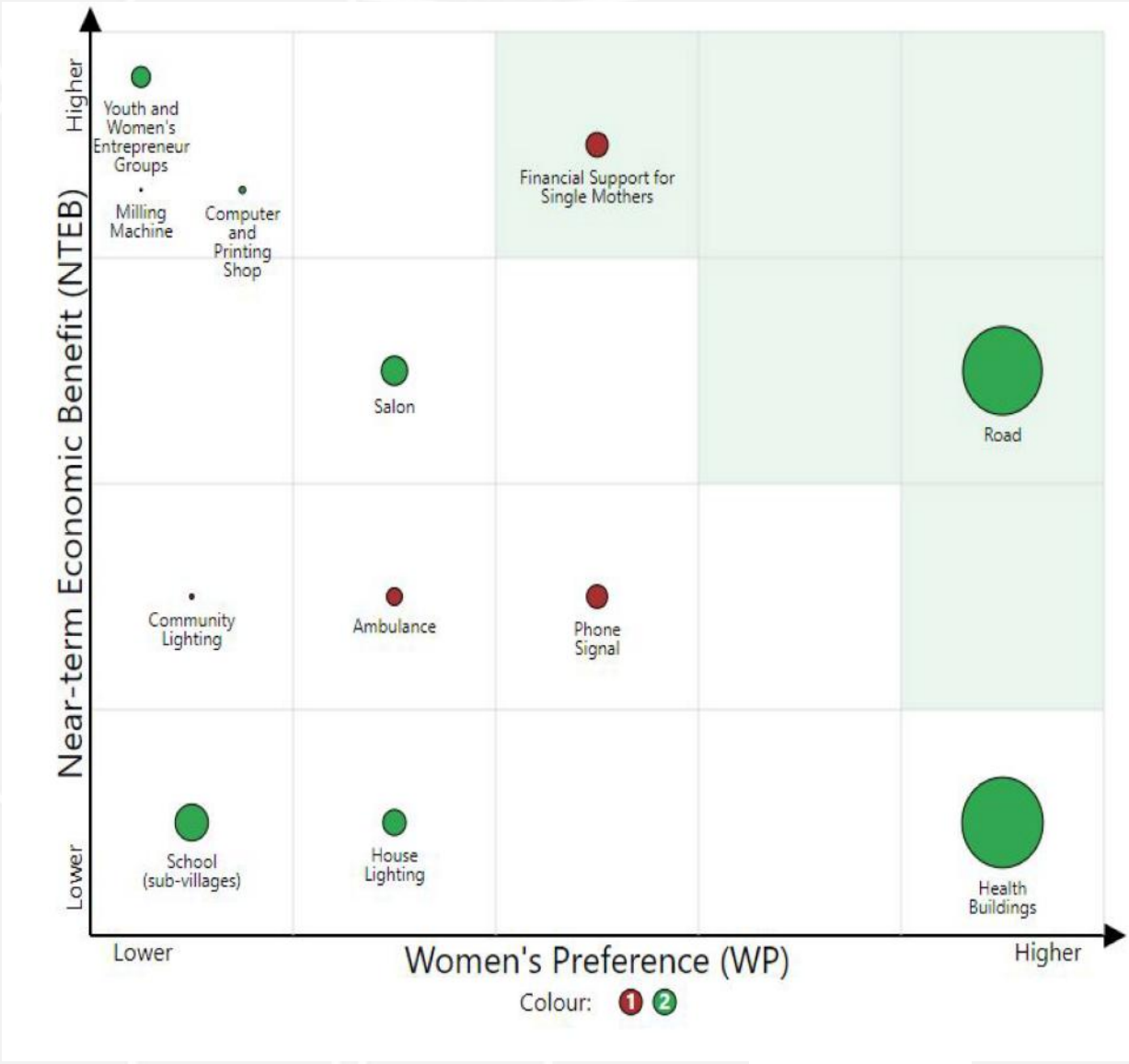
How we approach things (1)

Community-led

- Work with local partners
- Work with communities
- Skills/capacity transfer
- Maintain our relationship
- Service value test

Service Value Test

- **Find <u>priorities</u>**
- **Map these against criteria like NTEB, EOD, WP**



How we approach things (2)

- Co-design an integrated suite of technologies
- Innovate new ones when un-available
- Appropriate technology design/repurposing
- Build a sustainable operating/business model
- Continue to support communities & partners
- Skills/capacity transfer
- Impact evaluation

Some examples

Projects to localize battery production & repair in Africa

Project to novel more affordable power distribution systems for communities

Project to improve inverter performance for peak loads

Projects to research novel productive uses and incubate community entrepreneurship

Projects on efficient water access & productive use

Projects to research novel local mounting methods for PV

Project on household/farm biogas and productive uses

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Chase the low-hanging fruit.
Go for more profitable/accessible communities.
Underspecify systems.
Use a "standard" design.
Don't do anything "messy".
Speed is more important than impact.
Grant funding ever-shrinking.
"Impact" investing.
No funding for the "middle".

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"Our idea" rather than "the community's idea".
1-dimensional utility.
Lower adoption.
Lower impact.

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A lot of money wasted on what investors and people in the industrialised world like.
Trend to jettison expensive "physical" parts of business models = less choice.
Disprefer local solutions/companies.

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Scale-drivers (profit, speed) are often bad for the community!

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The people talking to regulators etc are very different to those talking to developers!

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Aversion to formal "subsidy", which benefits the community.
Creation of very complex/costly alternatives which benefit the developers or 3rd parties.

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Community engagement takes time.
No follow-up & no long term impact data.

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Quant easier than qual – but at a cost.

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Things that still aren't done (well)…

- "Productive use"
- Working with local partners
- Priority/needs analysis
- Local solutions
- Capacity-building and local supply chains
- Long-term follow-up and support

Some successes:

Smart Agri-Centres

Multi-metric impact
Local supply-chain
Complex
Costly
Partnership
Pilot-ism vs regulation
Impact audit?
Long-term follow-up
Where are the #'s?
Trust
Iteration
Catalytic for others

What would SV like to see in the sector?

- (Really) put communities at the centre
- Reverse trend in grant funding
- Funding tails for impact
- More holistic thinking in government
- Put more £££ in the solution than in the broker
- A broad and easy-to-access subsidy regime
- More open access in data
- Remove barriers/bottlenecks in regulation
- More long-term thinking

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In the meantime, we're local, originally Oxford conceived and have a broad network and set of skills/interests. We'd be delighted to collaborate!

THANK YOU