



**SMART VILLAGES**  
New thinking for off-grid communities worldwide



Date 27 March 2017

# **THE SMART VILLAGES INITIATIVE**

Presenter: Dr John Holmes



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**1.1bn**

PEOPLE LIVE WITHOUT  
ACCESS TO ENERGY

**3bn**

COOK ON UNCLEAN STOVES  
LEADING TO

**4.3m**

DEATHS PER  
YEAR



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## SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD



SUSTAINABLE  
ENERGY FOR ALL

**7** AFFORDABLE AND  
CLEAN ENERGY



## Ensure access to affordable, reliable, sustainable and modern energy for all

By 2030:

- Ensure universal access to affordable, reliable and modern energy services
- Increase substantially the share of renewable energy in the global energy mix
- Double the rate of improvement in energy efficiency

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## ENERGY ACCESS AS ENABLER OF MOST SDGS

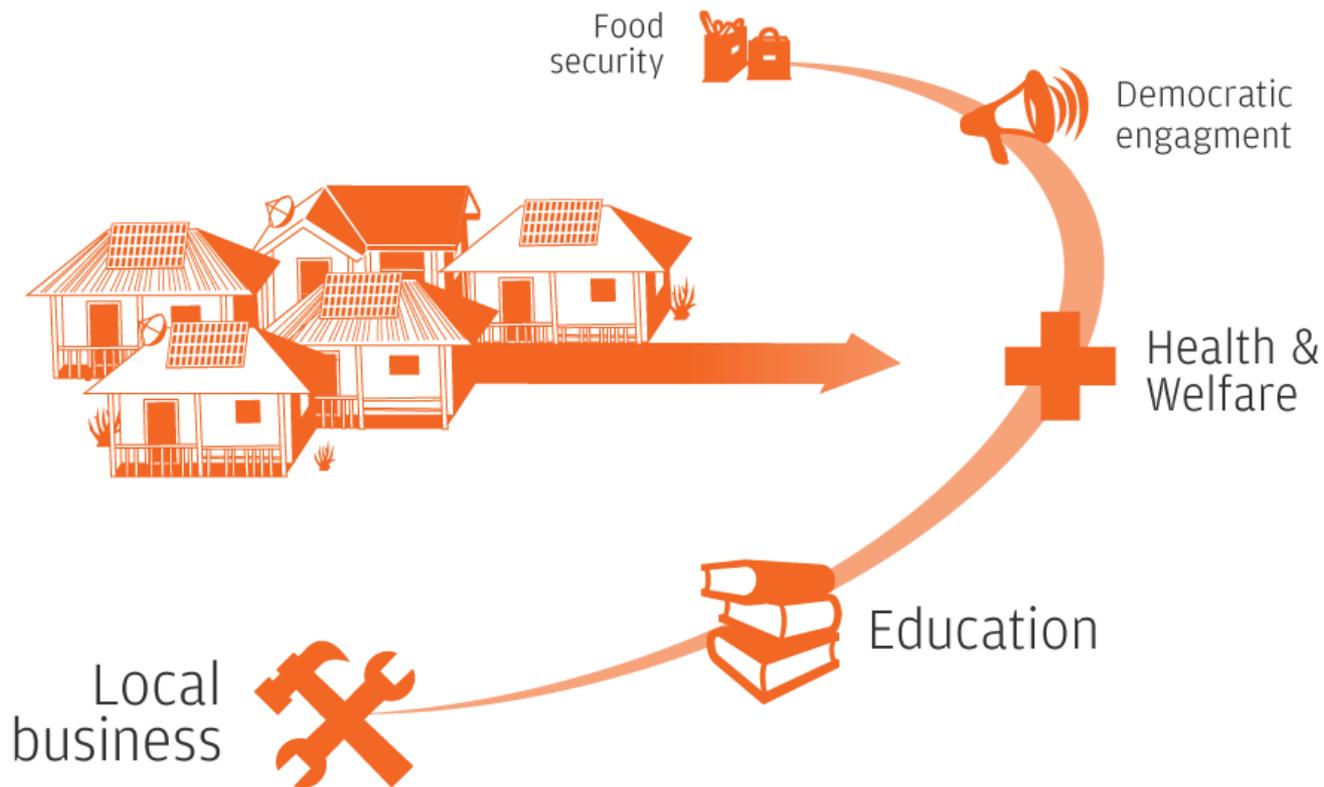




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## ENERGY AS A CATALYST FOR DEVELOPMENT





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## SMART CITIES: NEED FOR A VILLAGE LEVEL ANALOGUE

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

**SMART  
CITIES**



**SMART  
VILLAGES**



## SMART VILLAGES: SOME KEY FEATURES



### Key services: education, health , clean water and sanitation

- ICT connectivity: distance learning and world's knowledge base
- Modern health services and tele-medicine
- Provision of clean water and safe sanitation



### Foster entrepreneurship in the provision and use of energy services

- Capture more of the agricultural value chain
- Create new businesses



### Through ICT connectivity, participate in governance processes

- At local, regional and national levels
- Smart communities with strong rural/urban linkages



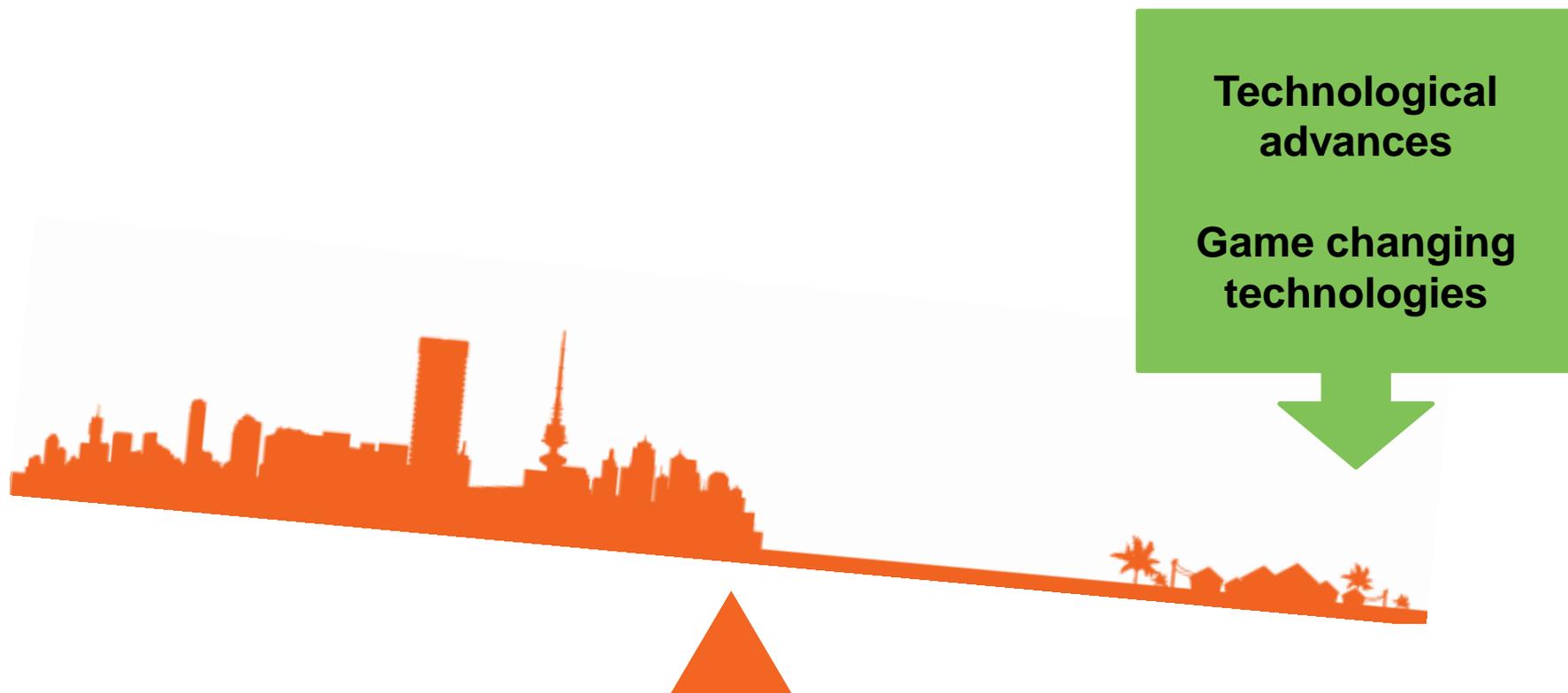
Building more resilient communities better able to respond to shocks

All enabled by access  
to modern ENERGY



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## SHIFTING THE BALANCE OF OPPORTUNITIES BETWEEN CITIES AND VILLAGES



## THE SMART VILLAGES INITIATIVE

**Focus:** sustainable local energy solutions for rural communities

**Policy advice:** an insightful, ‘view from the frontline’ of the challenges of village energy provision for development, and how they can be overcome

**Engagement:** bringing together the key players: scientists, entrepreneurs, villagers, NGO’s, financiers, regulators and policy makers etc:

- **What are the barriers?**
- **How can they be overcome?**
- **What messages to funders and policy makers?**

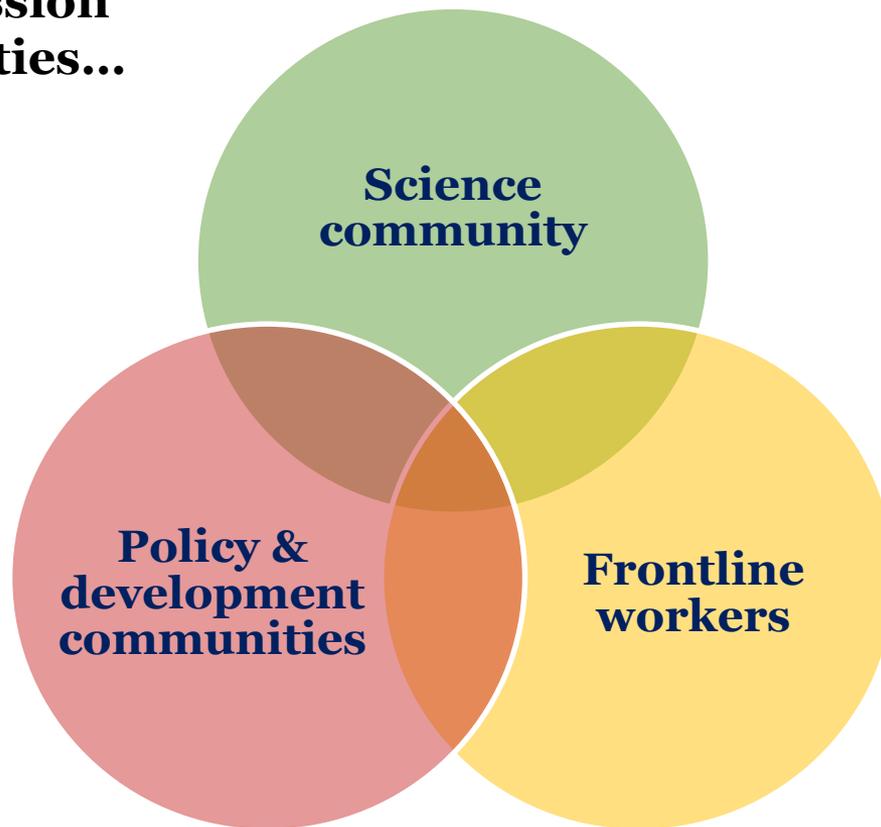




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**Facilitating discussion  
between communities...**



**...on the barriers to energy access for rural  
development and how they can be overcome**

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## SMART VILLAGES INITIATIVE: A PARTNERSHIP



**Project team:  
Universities of  
Cambridge and  
Oxford**



**Funding:  
charitable  
foundations:  
CMEDT & TWCF**

**Key partners:**  
- National Science Academies  
- Practical Action

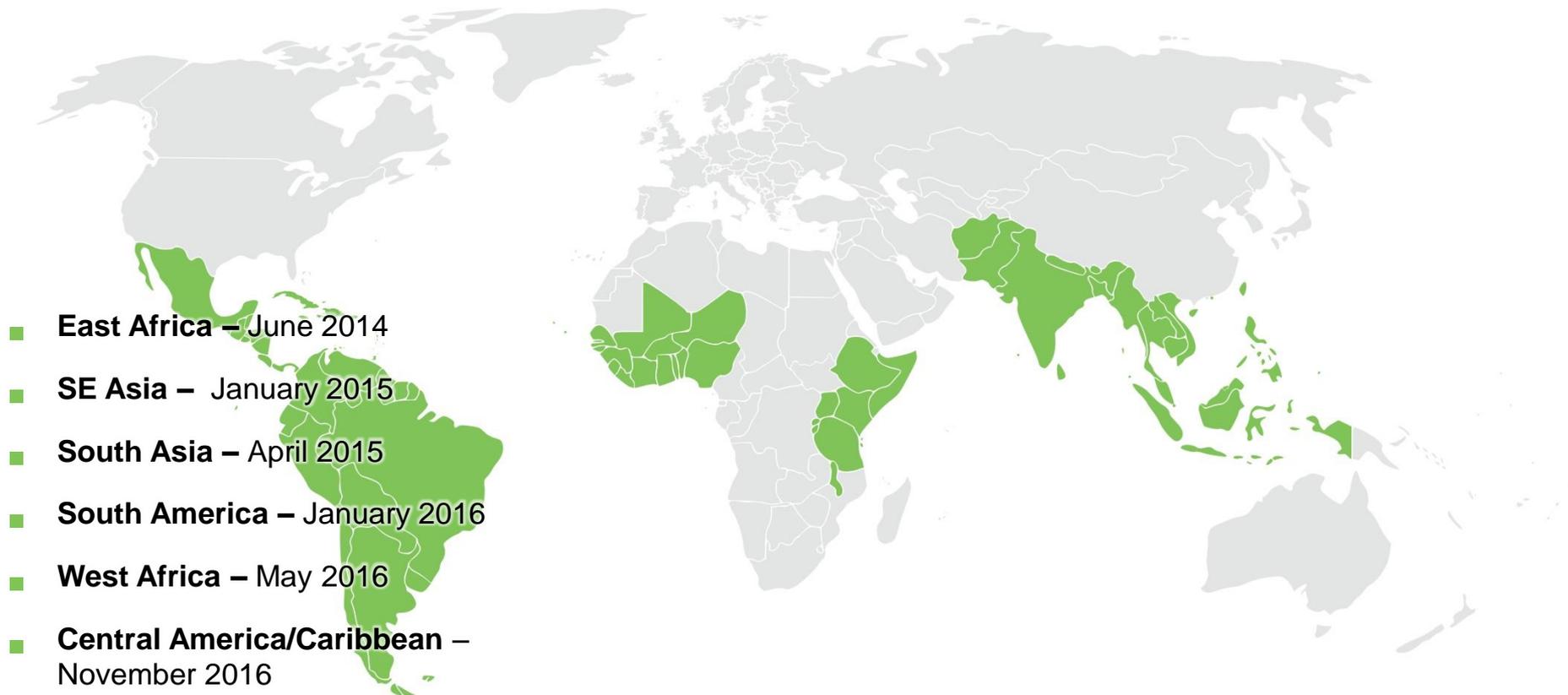




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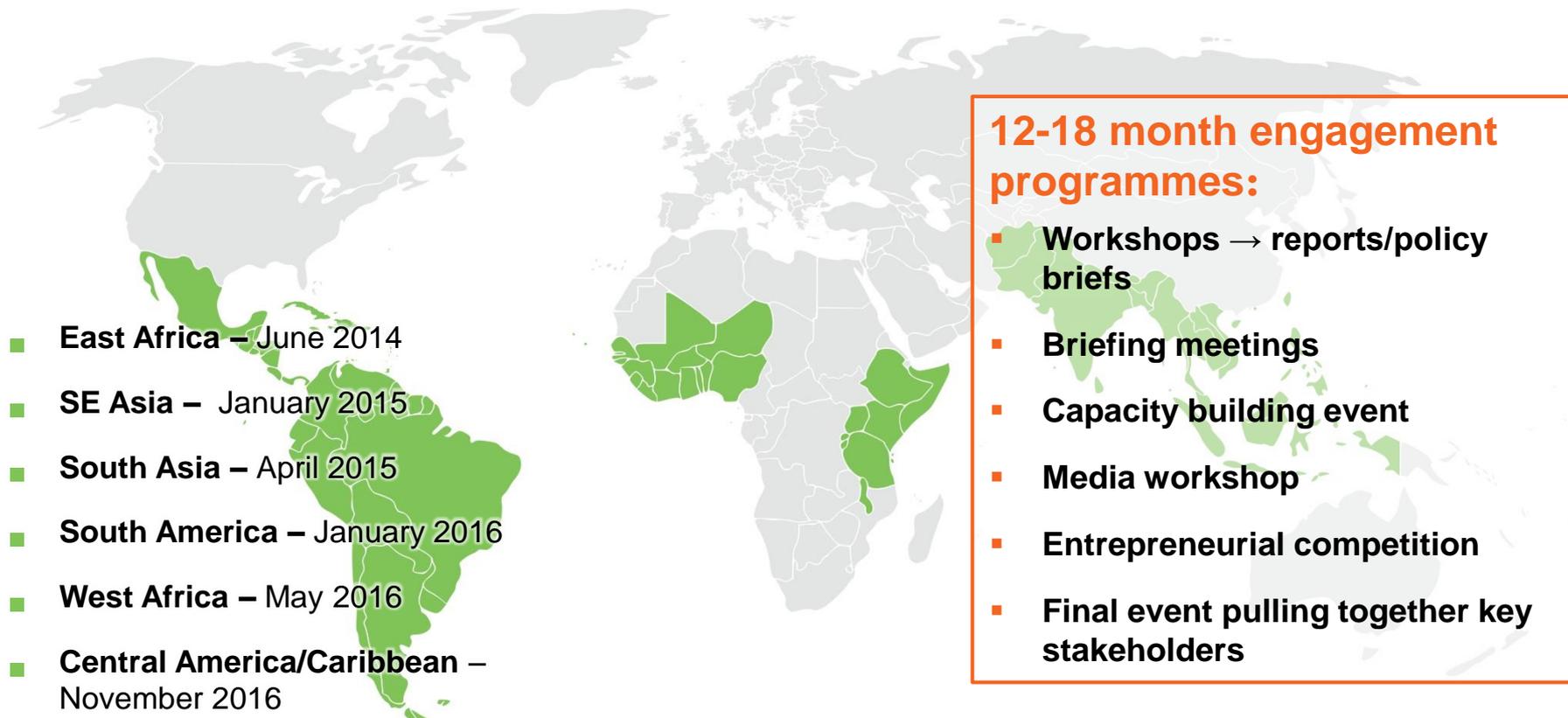
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## SIX REGIONAL ENGAGEMENT PROGRAMMES





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## CROSS-CUTTING ACTIVITIES



## WORKSHOPS HELD TO DATE

### West Africa

- First West Africa Regional workshop: Accra, Ghana, May 2016
- The WEF nexus, Senegal, August 2016
- Country focus – Togo, February 2017

### East Africa

- First East Africa regional workshop: Arusha, Tanzania, June 2014
- East Africa media dialogue workshop: Kigali, Rwanda, November 2014
- East Africa Community Leaders' dialogue workshop: Terrat, Tanzania, August 2015
- Concluding high-level workshop for East Africa engagement: Kigali, Rwanda, September 2015

### South Asia

- Smart Villages in Nepal: Kathmandu, Nepal, April 2015
- Southeast Asia media dialogue workshop, Seoul, June 2015
- Smart Villages in Bangladesh: Dhaka, Bangladesh, August 2015
- Smart Villages in Pakistan: Islamabad, October 2015
- State level brainstorm: Odisha, India, April 2016
- 4<sup>th</sup> Forward Look workshop: Mini-grids, Bangalore, India July 2016
- Energy & Agriculture, Hyderabad India, September 2016

### Southeast Asia

- First Southeast Asia regional workshop: Kuching, Malaysia, January 2015
- Southeast Asia media dialogue workshop: Seoul, South Korea, September 2015
- Energy for off-grid islands: Bunaken island, Indonesia, November 2015
- Sustainable dissemination of improved cookstoves: lessons from Southeast Asia: Yangon, Myanmar, December 2015
- Smart Villages and resilience to natural disasters: National University of Singapore, May 2016
- The energy & water nexus, Philippines June 2016
- Asia wrap up Workshop, Thailand March 2017

### South America

- First South America regional workshop: Lima, Peru, January 2016
- Sustainable energy for rural communities in Bolivia: La Paz, Bolivia, April 2016
- Media workshop, Paraguay, July 2016
- Resilience, Ecuador January 2017

### Central America and Caribbean

- Opening regional workshop, Dominican Republic, November 2016

### UK

- 1st Forward Look workshop: New technologies for off-grid villages – a look ahead: January 2014
- 2nd Forward Look workshop: Potential breakthroughs in the use of energy in off-grid villages: December 2015
- Business and financial models: January 2016
- 3<sup>rd</sup> Forward look Workshop: Frontier energy storage technologies: Edinburgh University, May 2016



## THE SMART VILLAGES INITIATIVE



### 1. A key aim: identify framework conditions to:

- foster entrepreneurial activities in delivering & using energy services
- maximise leverage of public sector funding

### 2. An underlying premise: to maximise social benefit and development impact:

- integrate energy access with other development initiatives
- take a community level approach

### 3. An important concern:

- to catalyse rapid progression through the various levels of energy access



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**Thank you for your attention**

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