



SMART VILLAGES
New thinking for off-grid communities worldwide



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SMART VILLAGES: ENERGY AS A CATALYST TO HOLISTIC RURAL DEVELOPMENT

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OUTLINE OF PRESENTATION

- Why Smart is smart
- Nexus findings in Asia
- Novel nexus issues
- Learning from outside Asia
- The future





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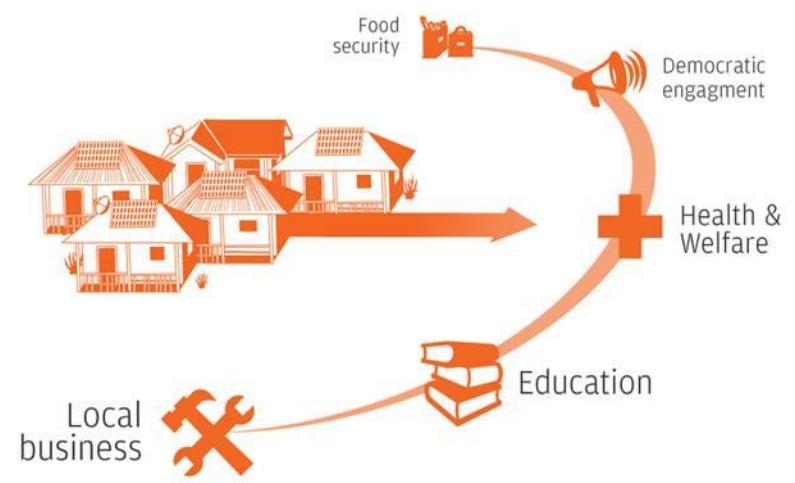
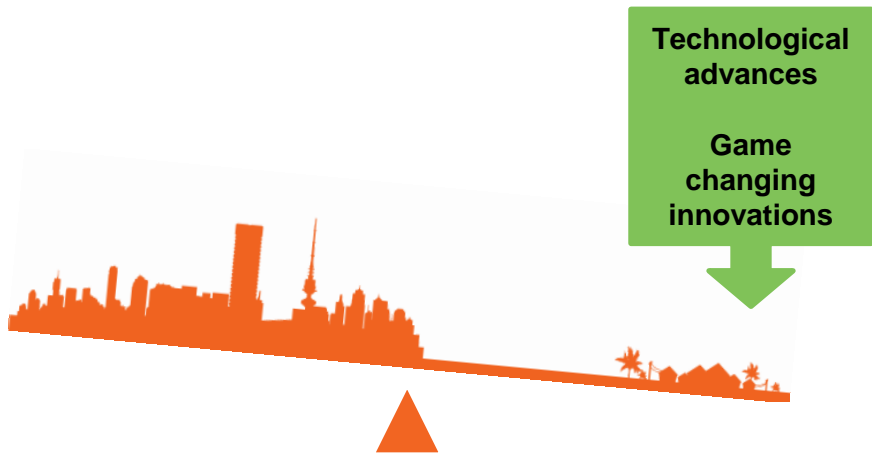


47% of world's population and 70% of the world's poor live in rural villages

SMART CITIES



SMART VILLAGES





REGIONAL ENGAGEMENT

- Pakistan, India, Sri Lanka, Nepal, Bangladesh, Myanmar, Thailand, Indonesia, Philippines, Singapore, Korea, Malaysia
- Impact studies in Borneo
- Scale-up competition in India
- Student poster competition in Pakistan
- Addressing disaster resilience, cookstoves, island energy needs, energy-water-sanitation, energy-agriculture, energy-health and education, business models, innovative technologies etc.



NEXUS: AGRICULTURE

- No-brainer!
- Relevance to increased output, efficiency, and value
- Strong interaction w other nexi
- Village entrepreneurship
- Novel business models
- Affordable finance, awareness
- Innovations, esp ICT, for precision ag, markets





NEXUS: WATER

- Lower profile
- Connection to agric: waste and water pump
- Initiatives highly fragmented – energy link seldom made explicitly
- Potential for entrepreneurship and sustainability lower, unless WAAS, agric or cooking connection
- Water quality monitoring
- Women & children key



NEXUS: HEALTH

- Lack of reliable data. In Africa, c 25% health facilities w/o power
- Evidence of impact difficult
- General clinic electrification
- Improve tools for practitioners
- Record-keeping
- Lighting/cold storage/sterilisation
- Innovations, esp ICT, remote diagnostics, telehealth





NEXUS: EDUCATION

- 30% of children attend schools not connected to any sort of electricity
- Energy *can* play a role, but only one of many challenges
- Support teachers, not replace them
- Significant training needs for teachers
- Bottom-up localised approach needed
- Support teachers'/school sustainability
- Innovations: adult education, local servers, tool for community/cultural interaction



NEXUS: RESILIENCE

- Combination of decentralised infrastructure and innovative service provision
- Natural or socio-economic shocks
- Build social capital, accumulated assets and everyday resilience
- Traditional knowledge and environmental stewardship
- Appropriate, “hardened” tech
- ICT: early warning & recovery





NEXUS NOVELTIES



- Democratic Engagement
 - Informed voters
 - Rural voice
 - Direct democracy
 - Rights education
 - Community engagement/media
- Migration
 - Rural to Urban
 - Urban to Rural
 - International
 - Flexibility



MORE NEXUS ISSUES

- Energy & finance/banking
- Energy & connectivity
- Energy & IDPs
- Energy & transport
- Energy & conflict
- Energy & religion
- Energy & biodiversity
- Energy & indigenous knowledge
- Energy & culture





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GLOBAL INSIGHTS

- Mobile money & integration
- Weather & crop insurance
- AWE, reverse osmosis, UV leds
- Early warning for epidemics
- E-health and smartphones
- “Loaded tablet” experiment
- Places without teachers
- School of the Air
- Back-application of resilience
- Internet businesses
- Community mobile networks



GENERAL OBSERVATIONS

- Focus has been on access rather than use or “smartness”
- Promote holistic approach with common policies & strategies
- Bottom-up community-led models
- Innovative financing for community services
- Very last mile challenges
- Need model/pilot implementations
- Build awareness & capacity
- Need impact studies and data
- Need to encourage new technology partners to enter field





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Thank you for your attention
www.e4sv.org | info@e4sv.org | [@e4SmartVillages](https://www.instagram.com/e4SmartVillages)