

# Session 3: Energy Communities and Social Innovation

## Case: E-Land, Auroville

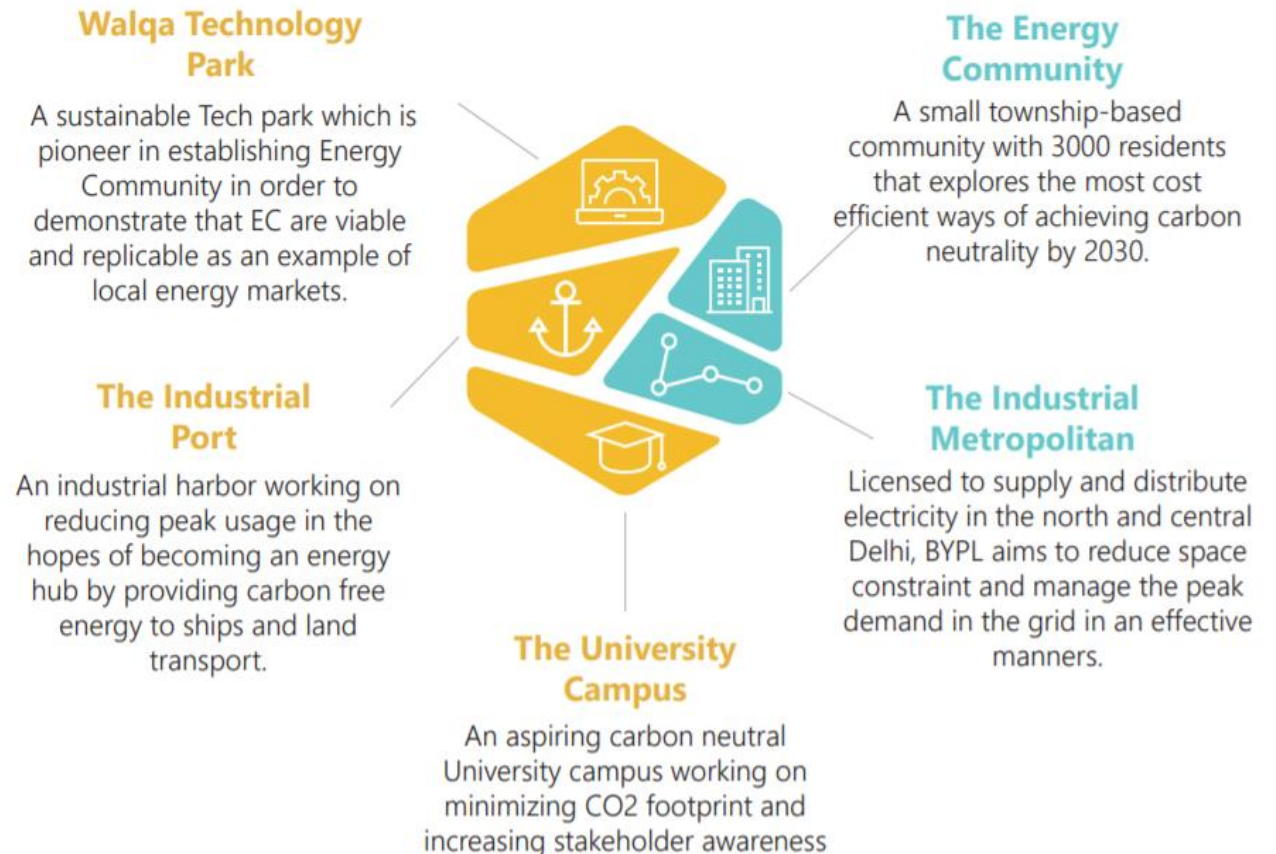
**Speaker :** *Minna Kuivalainen*

*Behavioural Scientist, Smart Innovation Norway*

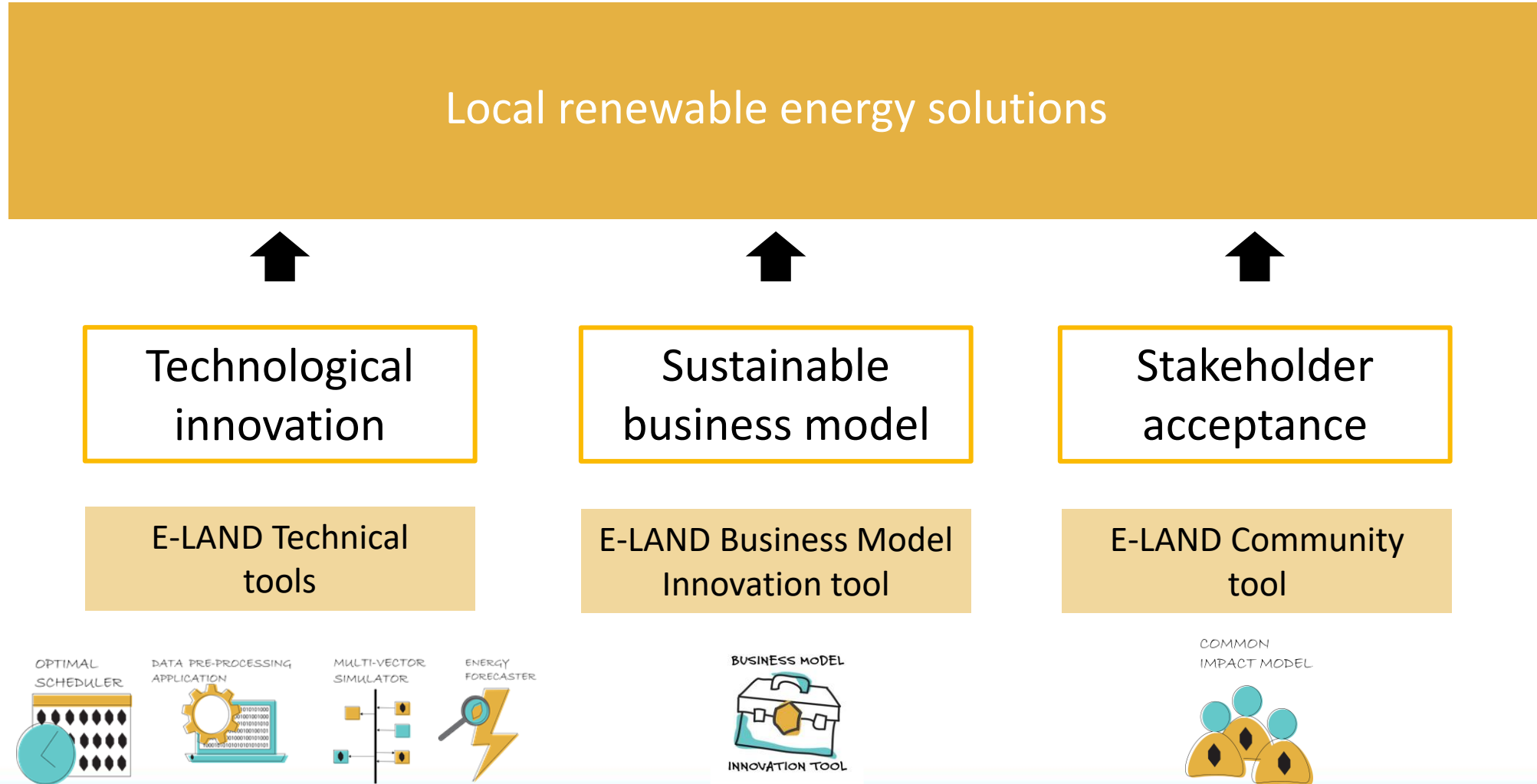
## E-Land

- Provide solutions to multi-vector local renewable energy systems with limited connection to the main grid
- 48 mths, from 2019 to 2022
- Pilot sites in:
  - Norway
  - Spain
  - Romania
  - India

## E-LAND PILOT SITES



# E-Land approach



# E-Land engagement strategy



## Common Impact Model

PROCESS

TOOLS

### Phase 1 (Data collection)

Identify potential local and clean energy solution (**technological scope**)

Map community features and stakeholder views on the solution (**cultural scope**)

Identify roles for key stakeholders in the community (**theoretical scope**)

#### Modular community scoping questionnaire

- Guidance for interviews, focus groups, site visit

### Phase 2 (Analysis)

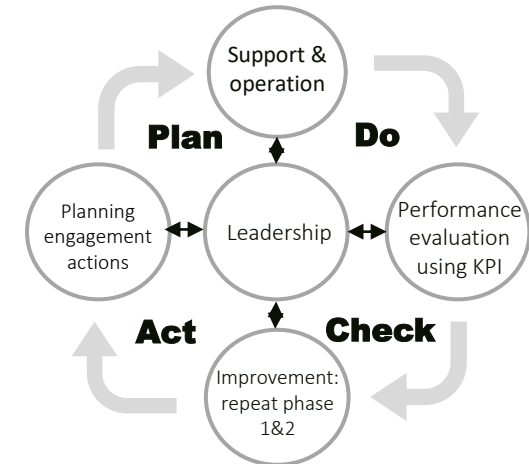
Data analysis and local partner feedback rounds

Inputs for engagement strategy

#### Community profile template

- Community values & practices mapping
- Rational & emotional reactions mapping
- Solution readiness score
- Stakeholder matrix

### Phase 3\* (Engagement Strategy)



#### Tactical workbook template

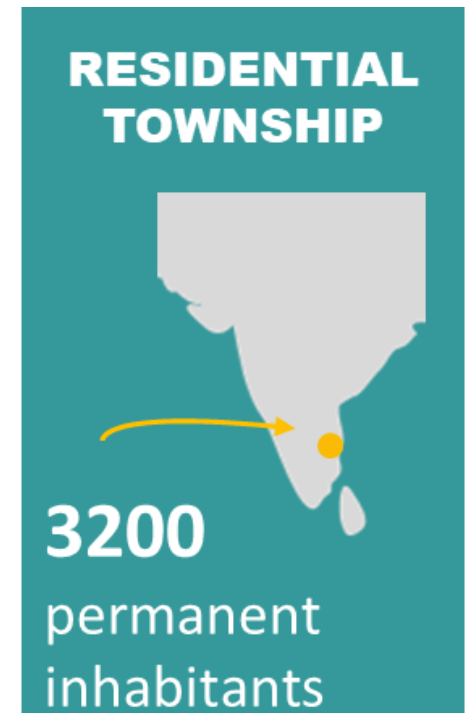
- Guidance for planning, monitoring & evaluation of engagement actions
- Blueprints for on & offline community communication



*“Produce more solar energy locally in Auroville by installing new solar PV plants and battery storage in the next two years”*

How was the Common Impact Model applied?

- Identify key stakeholders
- Assess:
  - Overview of the community
  - People’s values and attitudes
  - Drivers and barriers regarding the solution
  - Preferred communication channels, etc.
- Co-create recommendations





# AUROVILLE COMMUNITY

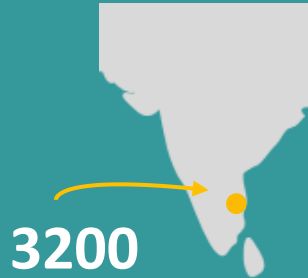
Community profile

## GREEN VISION



Achieve carbon neutrality by 2030 and operate in an islanding mode

## RESIDENTIAL TOWNSHIP



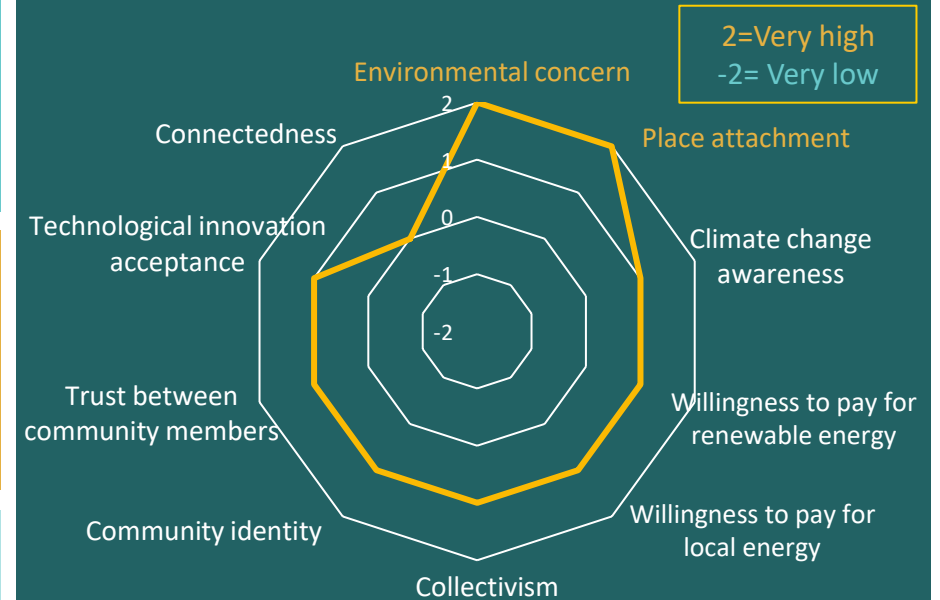
**3200** permanent inhabitants

## TOP COMMUNICATION CHANNELS

- ▶ AuroNet (online internal portal)
- ▶ News and Notes (weekly bulletin)
- ▶ Word-of-mouth (friends, lunch table)

*"It is in the DNA of Auroville to go for sustainable solutions."*

## COMMUNITY VALUES



## 120 MICRO COMMUNITIES

A diverse township composed on many smaller communities



Some 6 months old, some 50 years old

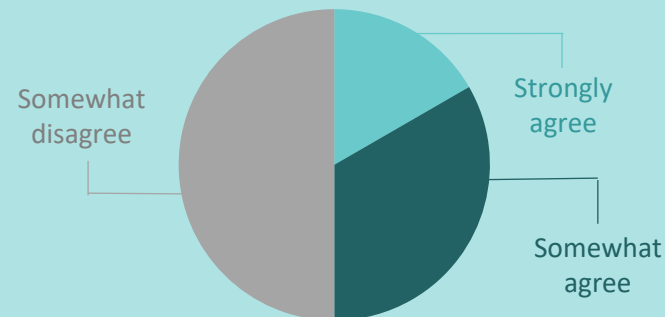


Some urban, some very rural



## CONFLICT RESOLUTION

Conflicts and disputes are resolved in an accessible and low-cost way



## TOP COMMUNITY CHALLENGES



Infrastructure upgrades (energy, roads)



Governance & Communication



Accessing skilled professionals

# AUROVILLE COMMUNITY

Solution Dashboard

**PROPOSED ENERGY SOLUTION:** Installing new solar PV and battery storage in Auroville in the next 2 years

## KEY STAKEHOLDERS

Town Development & Planning Committee

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Funds & Asset Management Committee

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Auroville Budget Coordination Committee

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Electrical Services Auroville

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Varuna Energy and Water

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Auroville Council

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Auroville Residential Assembly

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Auroville Center for Scientific Research

## BENEFITS

-  1 Energy autonomy
-  2 Identity enhancement
-  3 Environmental benefit

## BARRIERS

-  1 Funding
-  2 New gridline opposition
-  3 Unfavorable regulation

## AFFECTIVE REACTION TO SOLUTION

### Rooftop solar



**Very positive**

*"Very needed"*  
*"Auroville has been pioneering this"*

### Battery storage

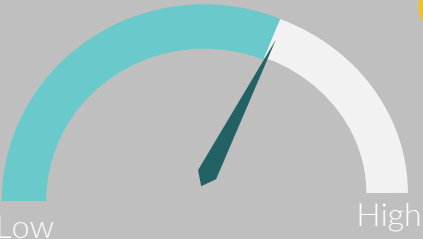


**Quite positive**

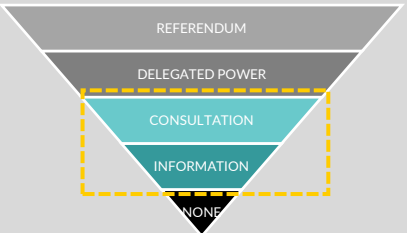
*"Expensive"*  
*"A necessary evil"*  
*"Will grow when prices drop"*

## SOLUTION READINESS

**6/10**



## COMMUNITY INVOLVEMENT IN PLANNING



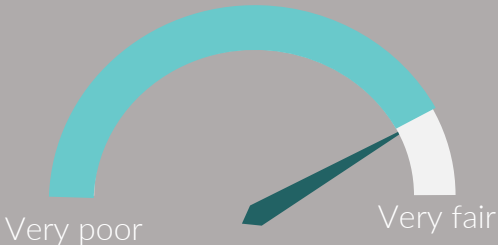
## ENERGY KNOWLEDGE

**MODERATE**

**Most know**

- ▶ Where their electricity comes from
- ▶ How much they spend on electricity

## PERCEIVED FAIRNESS



# Findings: Auroville

- Recommendations for Auroville:
  - Engage community members in public hearings to educate why increasing local PV infrastructure is needed and how it will benefit Auroville as a whole
  - Show and tell for local financial bodies
  - Engage workshop with state government officials and state utility company to demonstrate pilot actions, present a case for policy barriers

## Infrastructure public hearing

2

BARRIER

Engagement recommendation

Invite community members to participate in a public hearing designed to educate residents about why the green energy infrastructure is needed and how it will impact Auroville as a whole. Residents

## Show & tell for local financing bodies

1

BARRIER

Engagement recommendation

Present the BMI tool & MVS/EPA simulation results to local financial organisations (also consider synergies with MAMCA workshop)

## On-site 'pilot-to-policy' workshop

3

BARRIER

Unfavorable regulation

Engagement recommendation

On-site workshop with Auroville energy stakeholders and state government officials to showcase E-LAND piloting work. Through demonstrating the innovative actions being taken, Auroville can present a case for exemptions and policy barriers.

### Regulation engagement: Tactical workbook

Objective	Address barrier #3: The current Indian regulations limit the potential of energy communities by preventing them from selling excess energy into the grid	
Description	Auroville site visit to showcase piloting work. This could include E-LAND as well as work from other projects	
Target	<ul style="list-style-type: none"> <li>Electrical services Auroville (AVES)</li> <li>Varuna energy</li> <li>Auroville Center for Scientific research</li> <li>State government officials</li> <li>State utility company officials</li> </ul>	
Materials	E-LAND communication package (e.g. E-LAND video, pilot sheet, project sheet)	
Timeline	TBD	
KPI	Some ideas: N.participants by organization, policy change	



# Key Takeaways

- Models/ strategies of engagement help to:
  - Be strategic about engagement
  - Understand stakeholder preferences and motivations
  - Timely and more effective engagement
- But:
  - No one-size-fits-all solution, needs to be adapted to local context
  - Planning the engagement vs. engaging people

# Thank You

For discussions/suggestions/queries email: [www.indiasmartgrid.org](http://www.indiasmartgrid.org)  
[www.isgw.in](http://www.isgw.in)

E-Land: <https://elandh2020.eu/>

Watch videos of the E-Land toolbox: <https://elandh2020.eu/videos/>

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