

Enhancing Cities Capacity for Emissions Reduction

-TEAM MITIGATE

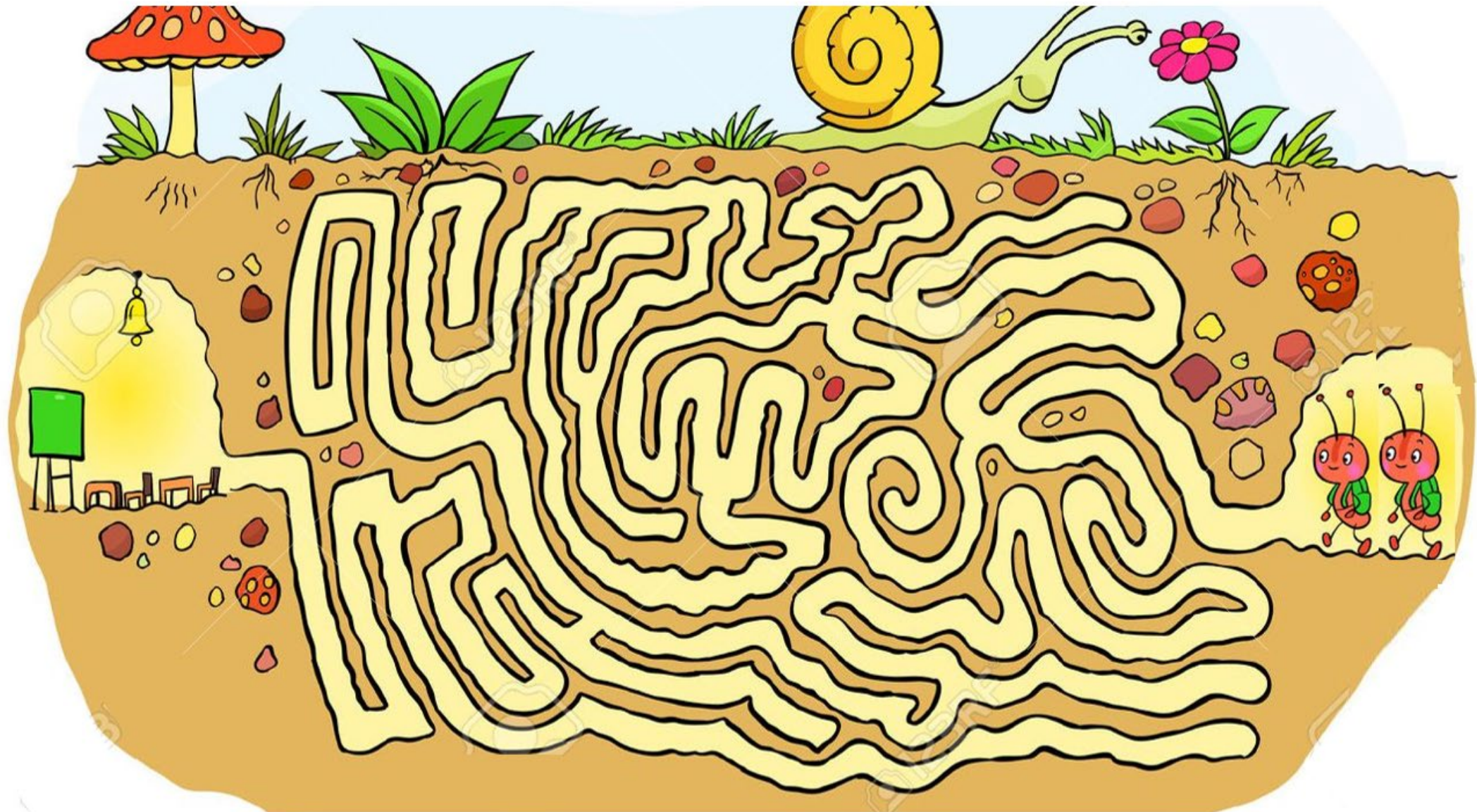
Mentor: Mr. Sanjay Seth, Senior director, TERI

-Jairam Ramakrishnan

-Murtaza Mohammadi



**Ministry of Housing
and Urban Affairs**
Government of India



Introduction

- Rules of the game
- Put forth our strengths

Inception

- Deep dived into PS
- Opened the Pandora's box

Ideate

- Brainstorming
- Quantity and not Quality

Improve

- Test concepts with experts
- Networking
- Redefining Boundaries

Infiltrate

- Design a Business Model
- Implementation Plan





Ministry of Housing
and Urban Affairs
Government of India

teri



National Institute of Urban Affairs

pwc

ISGF
India Smart Grid Forum

giz

Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



British
High Commission
New Delhi

CEER
Centre for Energy, Environment & Research

ae
ee Alliance for an
Energy Efficient
Economy

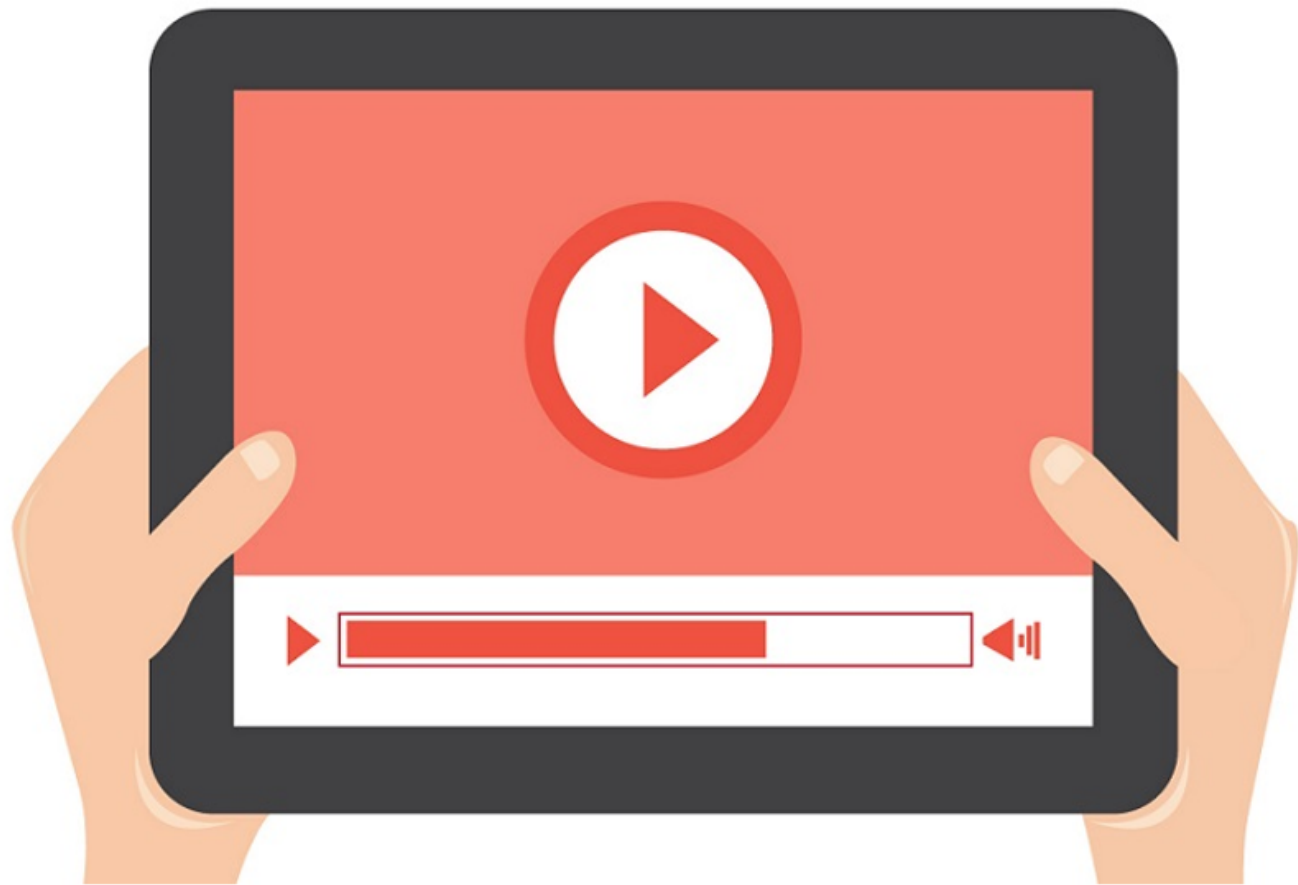
Indicsoft
TECHNOLOGIES

TATA POWER-DDL

EATON
Powering Business Worldwide

SmartGrid
CANADA

Lets watch our Smart Solution! 😊





ASSUMPTIONS

- The PV charges the battery completely during the day time.
- The battery discharges completely after charging EV's
- Cost of Lithium-ion batteries will further plummet
- The aggregator enjoys same benefits as that of the residential solar PV customer
- DISCOM's will introduce hourly pricing/ TOU pricing
- Premium rates will be obtained for Peak shaving
- The battery discharges twice in a day

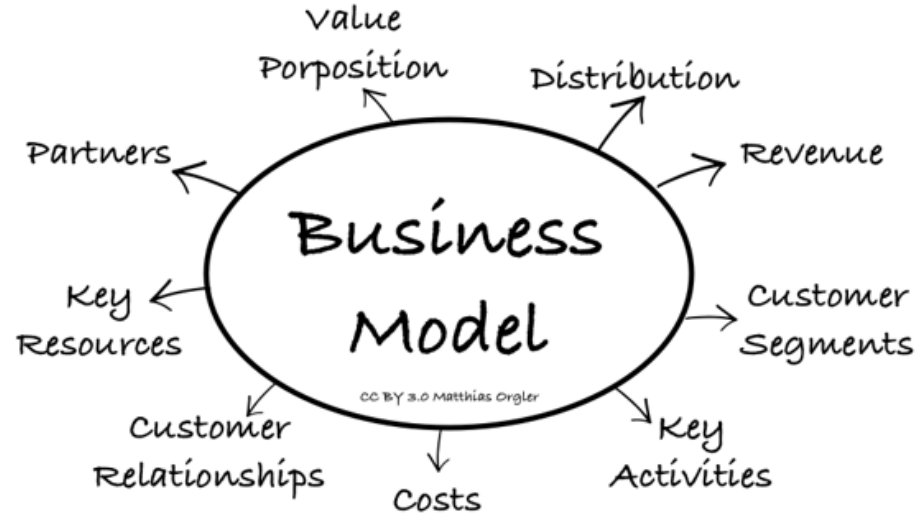
OUTCOMES



- A Future-Ready solution, enhancing higher PV penetration, BESS to support grid and Fast Charging Infrastructure
- Diversity of Sectors covered
- DISCOMS need not fear on the Power quality issues anymore and No loss of revenue.
- Communities will now have a Fast DC charge station powered by green energy
- The residents save on electricity bills up to 60-70% with zero investment.



- The SPVs under Smart Cities Mission will now be able to easily achieve the 10% mandate
- Envisaged a bundled approach aligning with 6 National Policies and Frameworks
- Brings in community engagement
- City Agnostic, Flexible, Affordable and Scalable Solution



- A Business model is developed to operate on PPP model
- Business model assessed based on
 - ✓ Capital Cost
 - ✓ O&M
 - ✓ PBT
- Project lifetime of 15 years with PBT in 9.61 years
- Positive NPV is achieved! 😊
- NO Element of Subsidy considered in our Business Model



PILOT PROJECT

City Selection Rationale

Bangalore
Bhubaneswar
Chandigarh
Gwalior
Indore
Nagpur
NDMC
Pune
Vishakapatnam

No	City	Smart city	Solar city	Solar cell present	Solar rooftop project in SC	EV project(s)
1	Agartala					
2	Agra					
3	Aizawal					
4	Ajmer					
5	Allahabad					
6	Amritsar					
7	Aurangabad					
8	Bhubaneswar					
9	Bilaspur					
10	Chamoli					
11	Chandigarh					
12	Coimbatore					
13	Dehradun					
14	Dimapur					
15	Faridabad					
16	Gandhinagar					
17	Gurgaon					
18	Guwahati					
19	Gwalior					
20	Hamirpur					
21	Haridwar					
22	Howrah					
23	Hubli-Dharwad					
24	Imphal					
25	Itanagar					
26	Jodhpur					
27	Jorhat					
28	Kalyan-Dombivali					
29	Kohima					
30	Ludhiana					
31	Madhyamgram					
32	Mohali					
33	Moradabad					
34	Mysore					
35	Nagpur					
36	Nanded					
37	NDMC					
38	New town kolkata					
39	Panji city					
40	Puducherry					
41	Raipur					
42	Rajkot					
43	Rewa					
44	Shimla					
45	Shirdi					
46	Surat					
47	Thane					
48	Vijaywada					
49	Jabalpur					
50	Visakhapatnam					
51	Pune					
52	Indore					
53	Bangalore					



The pilot costs only
1.9 Cr

Thank you! 😊