



Tech Sharing

Using AI for efficient energy management

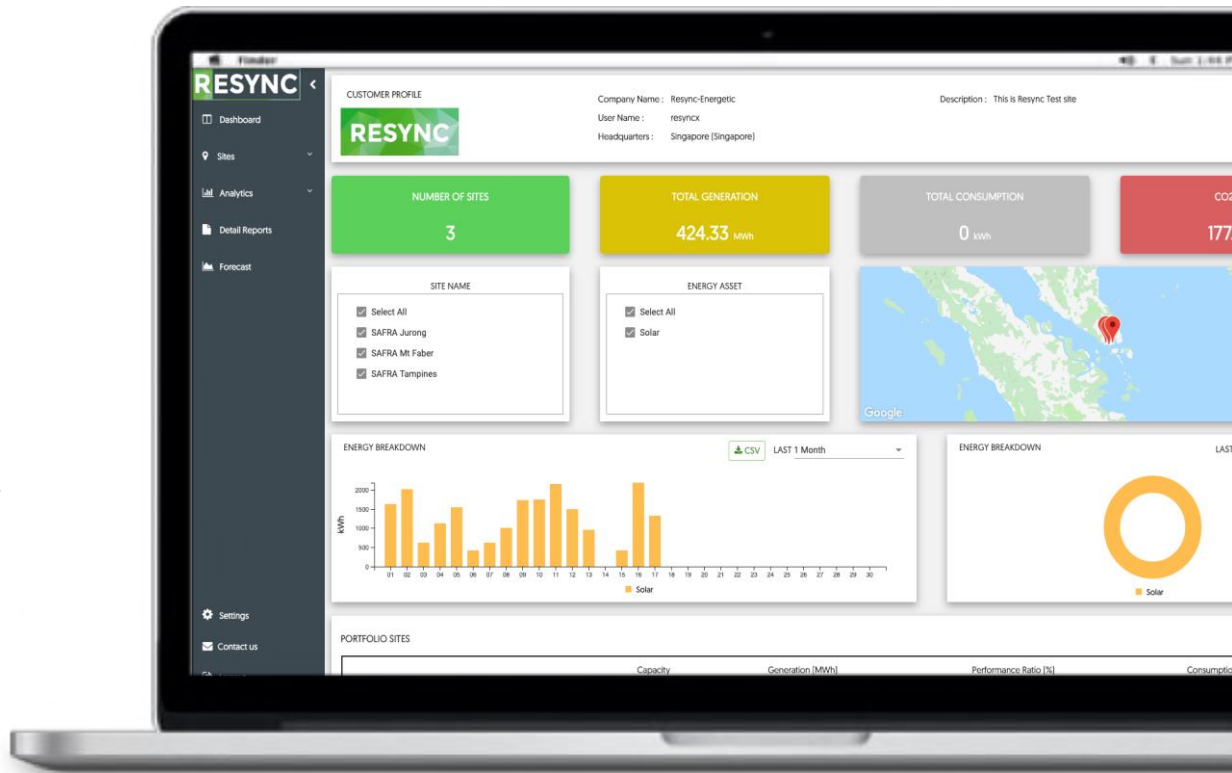
By Jayantika Soni, Co-Founder & CTO, Resync

#MSTechCommunityAPACOnline



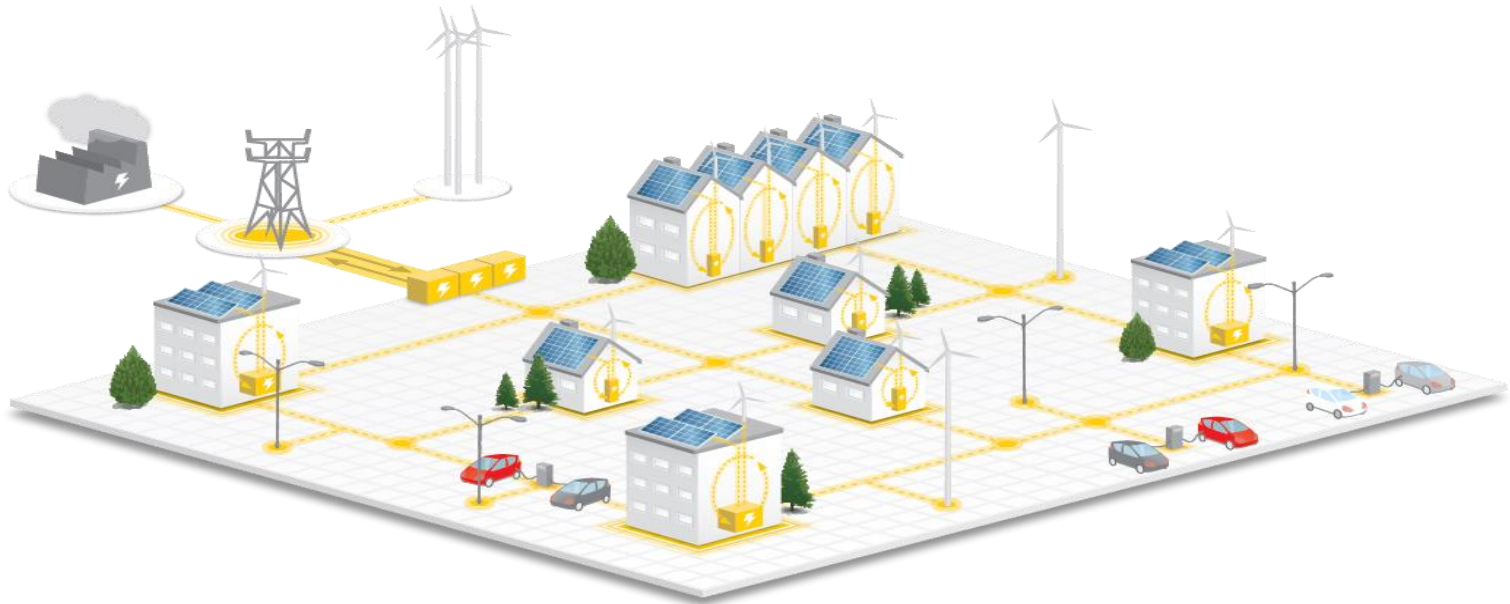


Using AI for Efficient Energy Management



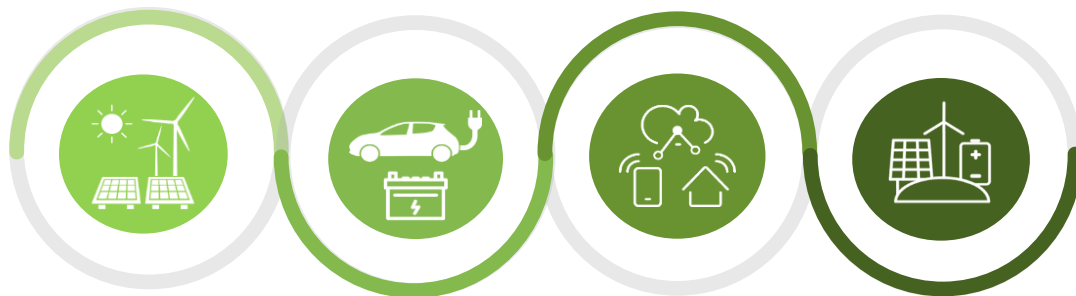
Global energy sector is in the midst of a major transformation

High penetration of renewables and dropping prices of batteries are disrupting trillion dollars energy infrastructure, by moving from centralized power plants towards distributed energy resources



Future is a clean, intelligent and distributed energy ecosystem

Energy disruption is mainly driven by a dropping prices of renewables and digitalization of the ecosystem



RENEWABLES

25% of world's total energy
by renewables by 2020*

ENERGY STORAGE

Grid-connected battery storage
will grow to \$14 billion by 2021*

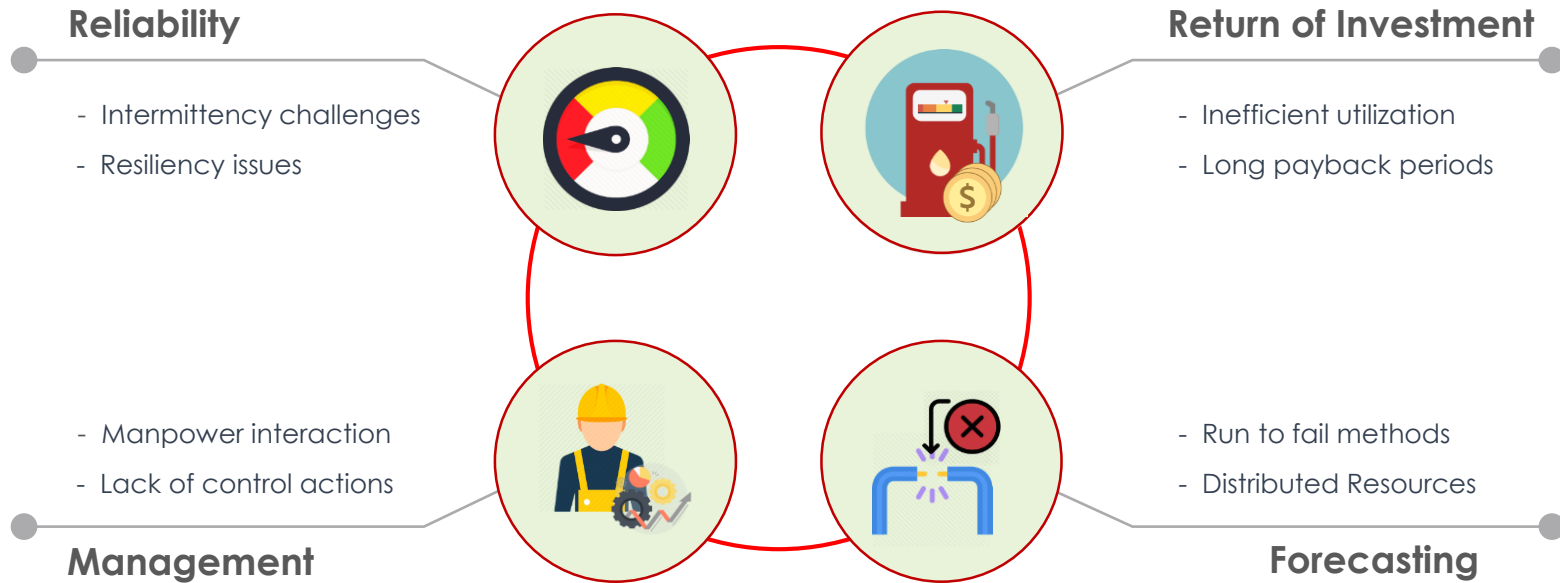
DIGITAL IoT

Millions of sensors and various IoT
devices are installed every year

SMARTGRID

Microgrids are the future of
decentralized energy infrastructure

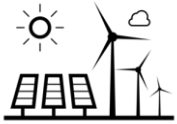
Challenges to overcome towards smart and reliable grid



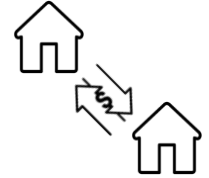
RESYNC virtual power plant for efficient smart grids

Manage all assets on the same platform

✓
Generation Assets



✓
Peer2Peer trading



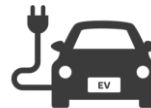
✓
Smart buildings



✓
IoT & smart meters



✓
EVs and mobility



✓
Smart Microgrid

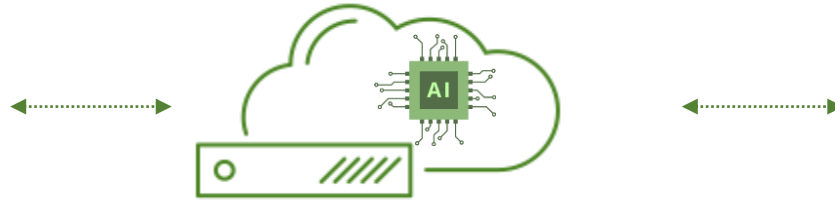


RESYNC's AI based software optimization and real time control



MONITOR

Aggregation of real time performance data from Building loads, renewable energy assets and electricity tariffs



ANALYSE AND PREDICT

Creating value for this data, we designed deep learning algorithms to adjust algorithms based on the generation and consumption patterns



VISUALISE

Interactive dashboard with real time performance data and individual energy asset visualization. Customized APIs are provided based on the request.

CONTROL AND OPTIMIZE

Take real time control actions on energy sources and controllable loads using our unique algorithms

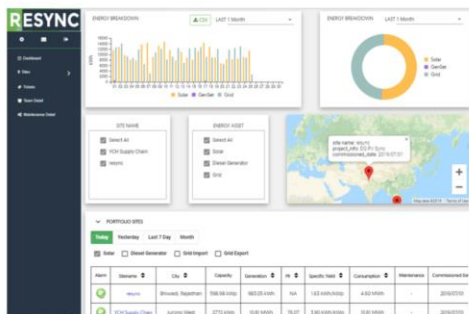
MANAGE

All aggregated data is stored in highly secured database, where we perform data segregation and data analytics

FACILITY MANAGEMENT

Real-time management of facility stuff with automated alarm notifications, ticketing system and action items.

Product overview and features



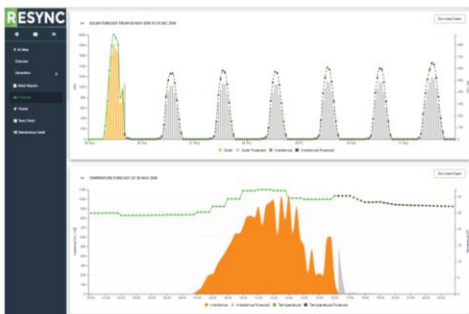
MULTIPLE SITES MONITORING



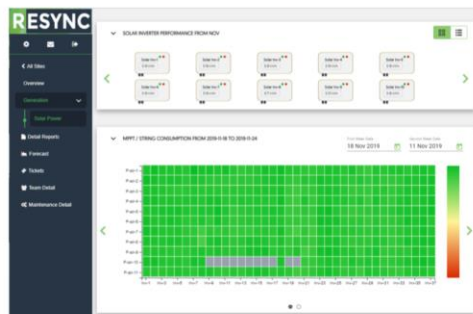
INDIVIDUAL ASSET ANALYSIS



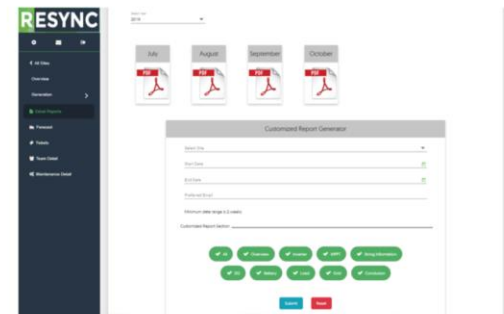
INVERTER LEVEL INSIGHTS



FORECAST & REAL-TIME CONTROL



ANALYTICS & OPTIMIZATION



CUSTOMIZED REPORT

Product overview and features



PERFORMANCE EVALUATION



I-V CHARACTERISTICS

The dashboard displays two tables. The top table, 'Active Maintenance', shows maintenance tasks with columns: No. Name, Maintenance Type, Assign To, Maintenance Start Date, Maintenance End Date, and Task. The bottom table, 'Past Maintenance', shows completed maintenance tasks with the same columns.

No. Name	Maintenance Type	Assign To	Maintenance Start Date	Maintenance End Date	Task
001	General	john.doe@example.com	2023-10-01 00:00	2023-10-01 00:00	Task 1

No. Name	Maintenance Type	Assign To	Maintenance Start Date	Maintenance End Date	Task
001	General	john.doe@example.com	2023-10-01 00:00	2023-10-01 00:00	Task 1
002	General	john.doe@example.com	2023-10-01 00:00	2023-10-01 00:00	Task 2

MAINTENANCE



TREND EVALUATION



STRING LEVEL ANALYTICS

The dashboard displays a table of tickets with columns: ID, Status, Subject, Assign To, Category, Assigned To, Priority, Date updated, and Ticket History.

ID	Status	Subject	Assign To	Category	Assigned To	Priority	Date updated	Ticket History
0001	Open	Site inspection on 10/01/2023	John Doe	General	john.doe@example.com	High	2023-10-01 00:00	🔍
0002	Open	Module not working	John Doe	Maintenance	john.doe@example.com	High	2023-10-01 00:00	🔍
0003	Open	Inverter issue	John Doe	General	john.doe@example.com	High	2023-10-01 00:00	🔍
0004	Open	String not working	John Doe	General	john.doe@example.com	High	2023-10-01 00:00	🔍
0005	Open	Inverter not working	John Doe	General	john.doe@example.com	High	2023-10-01 00:00	🔍

TICKETING SYSTEM

Customers



Multi-disciplinary Team



Emir Nurov

CEO and co-founder



Dr. Jayantika Soni

CTO and co-founder



Neo Jia Jun

Lead Data Scientist



Jaydip Prajapati

Snr. Firmware Developer



Mohit Bhalshod

Full Stack Developer



Zhi Long Yeo

Computer Vision



Ritika Chandgothia

Business Development



Mehul Kumar

Mobile App Developer





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Partners



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