

# Shift in human behaviour & energy



#### **Past**

People were predictable

#### **Present & Future**

People behave stochastically





# Story so far





Weather forecasting



Historical data

# Behavior-ignored forecasting

- -usually accurate
- -not flexible energy grid

# EnergAlser







Weather forecasting



Historical data

Al model for Energy forecasting

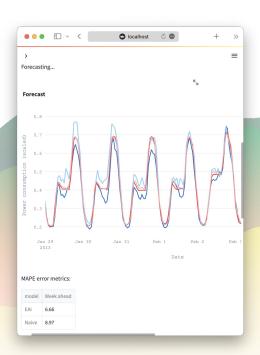


# Behavior-aware forecasting

- -accuracy
- -resource managements
- -flexibility

## **Our Solution**

#### **Our Product**



#### **Forecasting**

- Peak loading
- Day/week-ahead
- Districts wise demand





## Value proposition

- Resilient grid
- Reduced energy loss
- Integration of renewables and DERs (prosumers)

Contribute to net-zero and sustainable energy



# Windows of opportunity





#### **Cost benefit**

**Money equivalent** of increased accuracy of forecast

~\$100-500 per week per substation (~10000 substations in a major city)

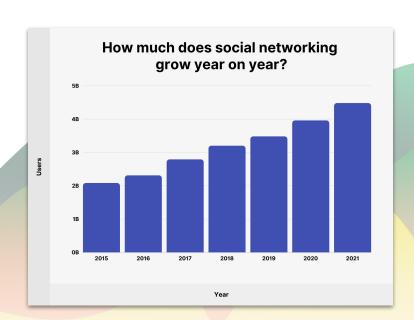
## Flexibility management

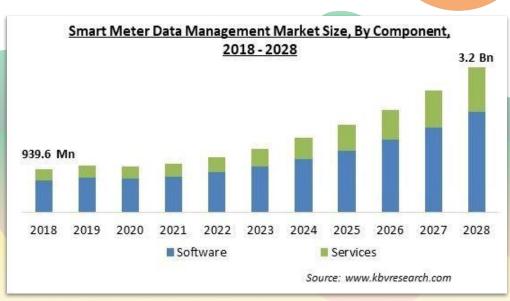
- Grid operators
- Utilities
- Facility management
- Prosumers

Efficient interaction with the demand side
Trigger energy production (renewables)

## Trends in Market







People behaviour data

Smart meter data

# EnergAlser team





Team leader
Sergei Bykov
Astrophysicist



Armin Nabizadeh Astrophysicist



Elvira Khromykh
BIM expert



**Dannie Sheng**Data Scientist



**Deepti Yadav**Data Scientist



Patrick Fu
Urban Data Scientist



# DEMO By Patrick



# Backup

# Market Status & opportunities

EAI

Key Metrics: money equivalent of increased accuracy of our solutions (forecasts).

**MONEY PROFIT**(compared with old models)

\$769 (y/home)\*300(homes)\*0.1(error reduction)~

~\$450 per week per substation

**\$280** mil per city per year (London)

# WINDOW OF OPPORTUNITY FOR FLEXIBILITY MANAGEMENT

- Grid operators
- Utilities
- Facility management
- Prosumers

Efficient interaction with the demand side
Trigger energy production (e.g. from renewables)

#### FINANCIAL INVESTMENTS

Data: \$20k/year

Research and development:

~3-4 person years

Software: ~2-3 person years

## **Business model**

Key Partners	Key Activities
Grid operators	Real-time data collection
Prosumers (Passive partners)  Data aggregators	Demand forecasting  Predictions to operators
	Key Resources (cloud, servers etc) already available with siemens
Cost Structure	
Data: \$20k/year	
Research and development: ~3-4 person years	

Software: ~2-3 person years

# Value Proposition

Net zero contribution from prosumers

Reduced Carbon Emission

Grid flexibility and Stability

Electricity cost reduction up to 30%

Reduction of energy waste by clients

### Customer Relationships

Co-creation

Customer segments

Grid operators

Energy producers??

#### Channels Digital

#### **Revenue Stream**

License as per need

# UN sustainability goals



