ORAMA

AI FOR A SMARTER POWER GRID

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The Problem

10% OF THE GENERATION IS LOST IN TRANSMISSION

SMART METERS ARE NOT USED TO THEIR FULL POTENTIAL

100M € COST & ENERGY WASTE

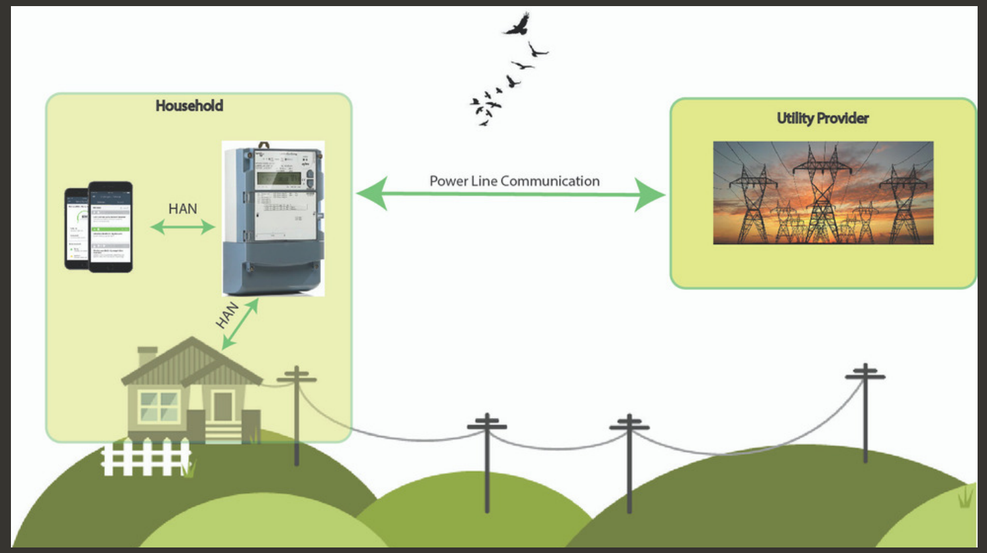
NON OPTIMAL LOAD FORECASTING

SOLUTION - VALUE PROPOSITION

OPTIMAL LOAD FORECASTING BASED IN AI ALGORITHMS

UNIQUE SELLING POINT

- Power prediction for each district/cluster
- No need for extra hardware installation
- Localized power profile



- Energy and money saving
- Optimal dispatch and use of energy resources
- Minimization of the Power Grid losses

SOLUTION - STATE OF DEVELOPMENT

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

BKW

ewz

2018 Q1

Development of the concept and optimization of the AI algorithms

2018 Q2

Application in energy data sets in US

2018 Q3

Collaboration and training data sets from swiss energy supplier (BKW, EWZ)

2018 Q4

Evaluation of the results and 2 european customers approach

SOURCES

[1] Energy Disaggregation via Current Smart Metering Infrastructure. N.Chrysogelos, Prof. Dr. G. Hug, PSL lab ETHZ

[2] Considering Time Correlation in the Estimation of Privacy Loss for Consumers with Smart Meters. J. Chin, Prof. Dr. G. Hug, PSL lab ETHZ

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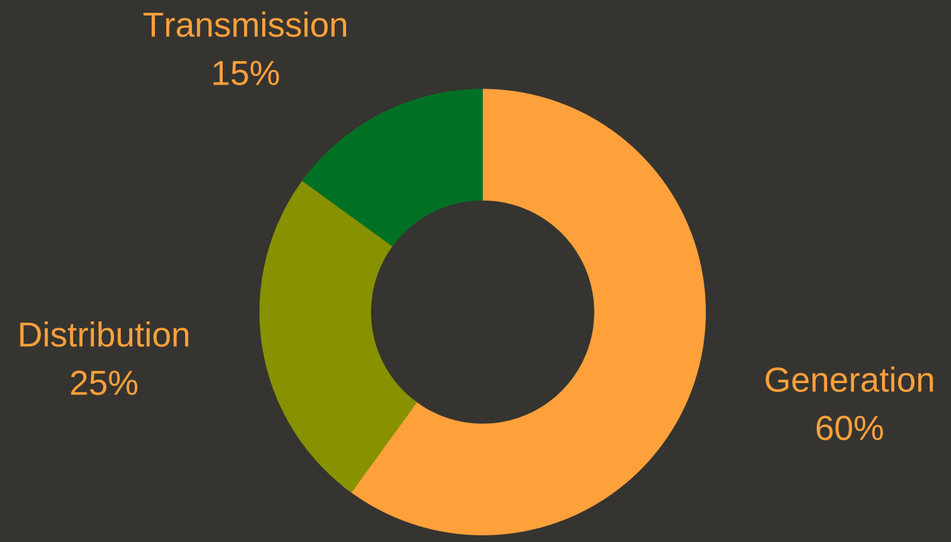
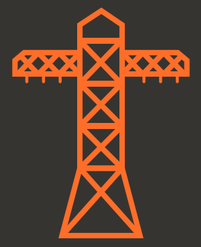
MARKET

More accurate load forecasting results in saving of **10%** per year which is translated into

11 million € only in Greece

125 million € in Europe





26 x Grid Operators

ΑΔΜΗΕ, Terna S.A. , PSE SA, HEP-OPS, EMC Serbia, ENTSO-E, ..

50 x Energy Suppliers

ΗΡΩΝ, Elpedison, Protergia, Energy Eastern Europe Hydropower SA, Energa PL, Tauron Polska Energia, ..

COMPETITORS

Household - SM Manufacturers

- Cost at the customer
- Privacy issues
- Unreliable disaggregation due to cheap smart meters

Grid operator - Energy Supplier

- High level - district level energy disaggregation
- More sustainable and significant CO2 emissions reduction

Enervalis

ABB

SPAMA

BKW

SPAMA

BUSINESS MODEL

Key activities

- Software development
- Consulting services & support
- Promotion and marketing

Revenue Streams

- Revenue from value added services
- Yearly fee for the use of the platform
- Support

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Channels

- F2F sales campaign
- Promotion through energy/power grid workshops

Customers Segments

- Energy- intensive companies with high potential value of greener profile

Customer Relationships

- Software awareness
- Sales evaluation and advocate

TEAM

NIKOS CHRYSOGELOS

Electrical Engineer

- Studied at NTUA, ETH Zürich
- Worked at Cern, ABB R&D Power Systems, Drone start up

CHARALAMPOS MICHAIL

Software Engineer

- Studied at Ceid, Uni of Edinburgh
- Works at Unisystems, Piraeus Bank

CHARALAMPOS FOTEINOS

Market Analyst

- Studied at TEI of Athens, Uni of Boras Sweden
- Worked at Historical Archives of Hydra, Omonia Trans

Use of Funds and Roadmap

2019 Q2

Assesment of AI algorithms in other European countries

2019 Q2,3

Developing an online platform capable of real-time load forecasting

2019 Q3,4

Release of a demo and approach customers

2020 Q1

Introduction of new features (green energy prioritization, pricing intelligence)

Thank you

Questions ?

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