



CELTIC-NEXT eurogia<sup>2020</sup>  
Next Generation Communications for the Digital Society

# EUREKA Eurogia SolarPact Project

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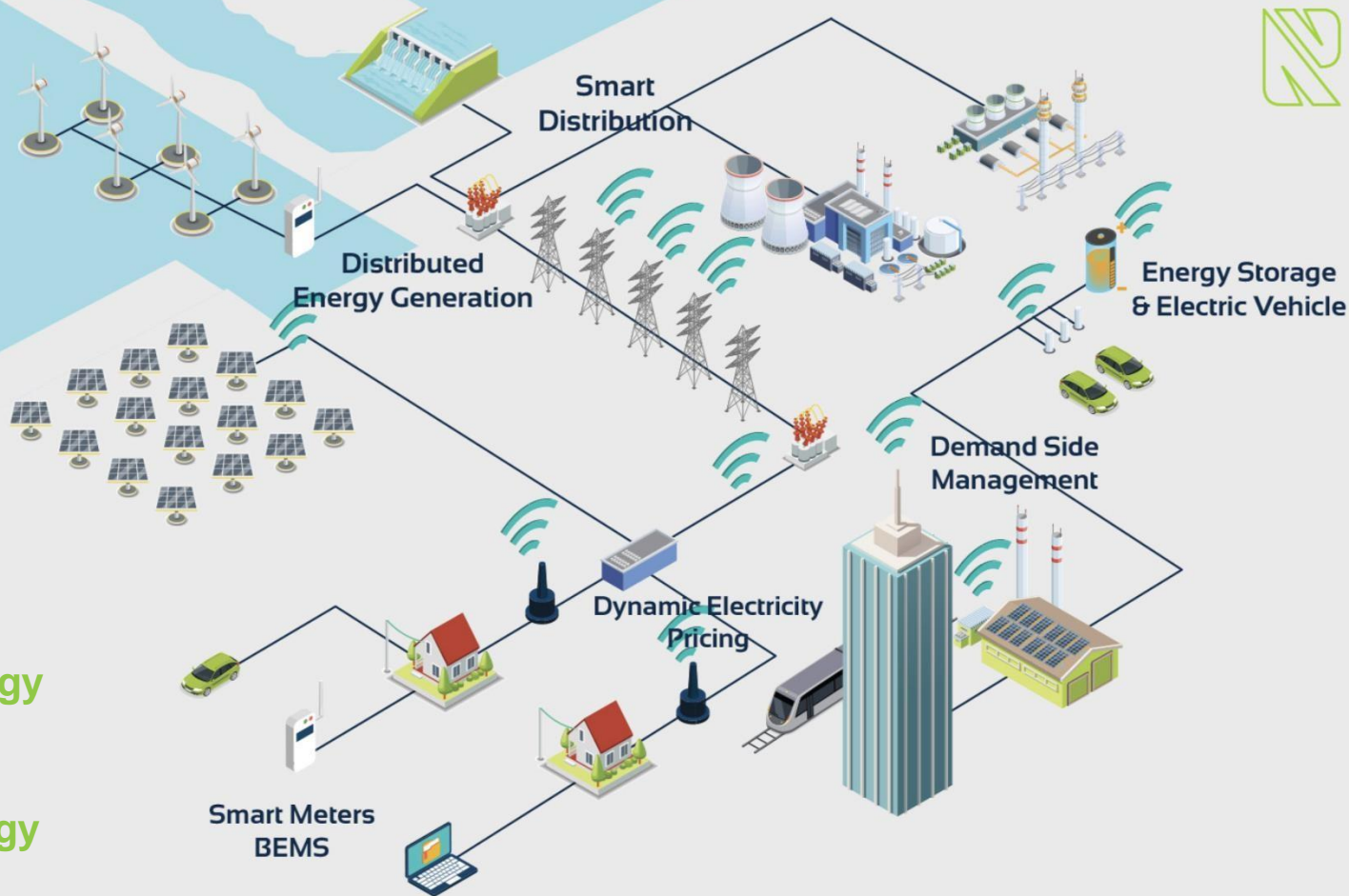
Business Impact from CELTIC and Eurogia Projects

September 15<sup>th</sup> 2020



Internet of Things  
Cloud  
Platforms  
Big Data Analytics  
Artificial Intelligence  
Blockchain  
Cybersecurity

Micro-grids  
Distributed Generation  
Energy Storage  
Electric Vehicles  
Transactive Energy  
New Market Mechanisms



# SOLUTION

## Energy AI & IoT Platform

### Cloud-based End-to-end Energy Intelligence Solutions for Buildings, Facilities and Utilities

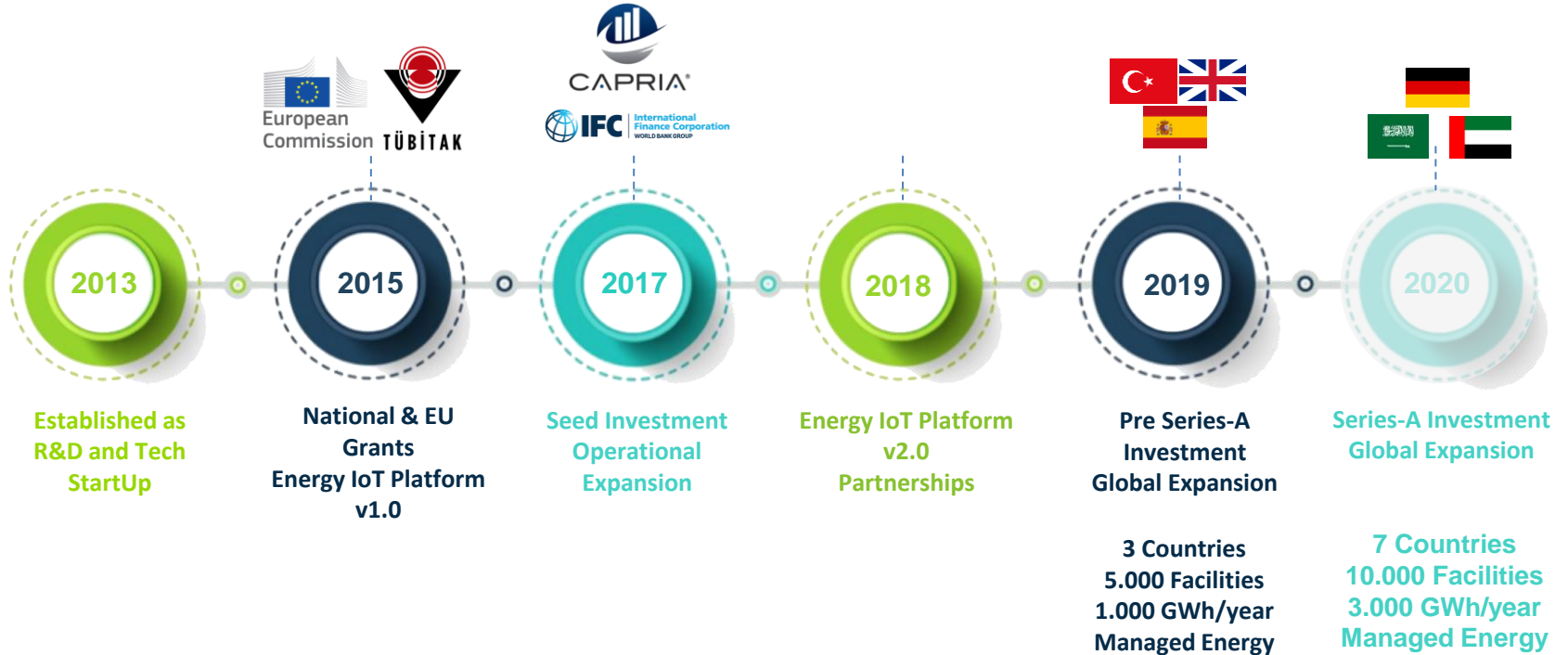
Turns Data into Actionable Intelligence

Track the real time condition of your energy assets, monitor energy performance of your buildings, systems and renewable energy plants and obtain data-driven notifications from anywhere and anytime you need.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 864283

# MILESTONES



# 360° ENERGY & OPERATIONAL INTELLIGENCE



Predictive Maintenance

Energy Management

Sustainability Management

Utility Bill Management

Optimum Energy Procurement

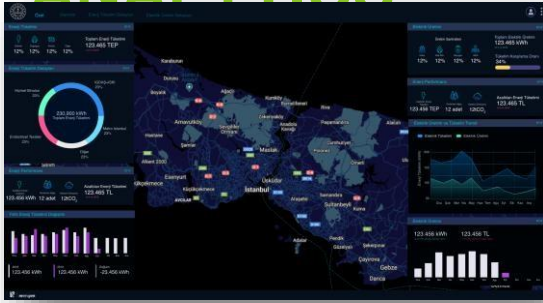
Demand Side Management

Asset Management

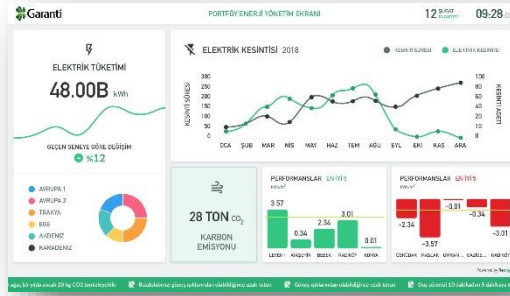
Power Plant Management



# 360° SUPERIOR FEEDBACK MECHANISM – PREDICTIVE ANALYTICS



Customized – white labeled platform



Executive Reporting



In-dept Technical Analysis



Real Time Operational Dashboards



Automated & Customized Reporting



Native Mobile Apps



# R&D Focus -Digital Future of Smart Grid & Smart Cities

Big Data

Smart

Grid

Smart

Cities

Artificial

Intelligence

IoT & Blockchain

of Energy

Innovative & Disruptive

Technologies Peer to Peer

Energy Transaction

Measurement & Verification

Resiliency & Efficiency

Maintenance

Energy

Gamification

Demand Response



IDERE4C



Game4SEEN

SolarPact



As an expert on the studies of **DIGITALIZATION, SMART, IOT, ENERGY, DATA ANALYTICS**

## Some of Our R&D Project Ideas

- Platform-as-a-Service Application Marketplace for Smart Cities
- Wireless sensor network-based demand response platform
- AI-powered chatbot based utility customer engagement portal
- IoT Monitoring and Gamification based End User Behavior Enhancement for Energy Efficiency
- Big Data for Energy Efficient Buildings & Cities
- Blockchain-based microgrid optimization
- Gamification supported customer engagement for demand side management
- LoRaWAN & NB-IoT hybrid network based smart sensor management platform
- Solar Plant Supply Side Management & Real Time Control
- Renewables integrated Smart Grid optimization



**AND MANY MORE....**

**CONTACT US FOR DETAILS!**



# SOLARPACT PROJECT

## SOLARÇATI REQUIRES

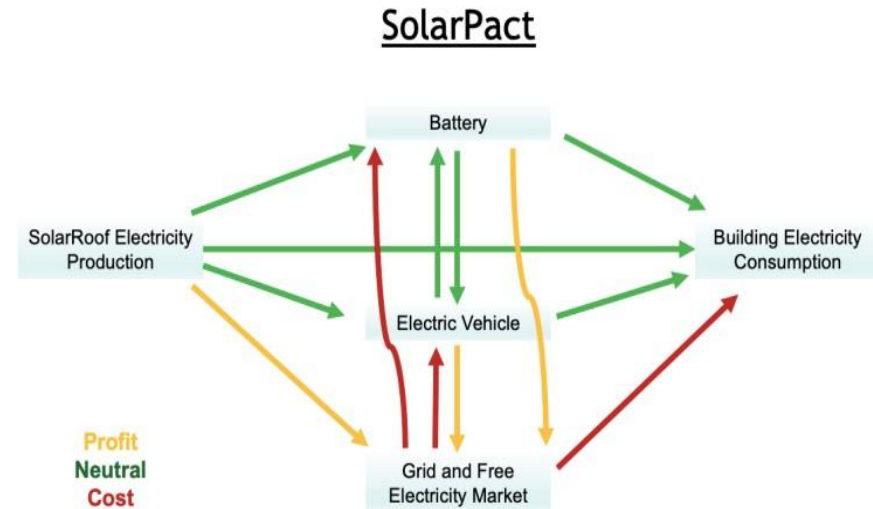
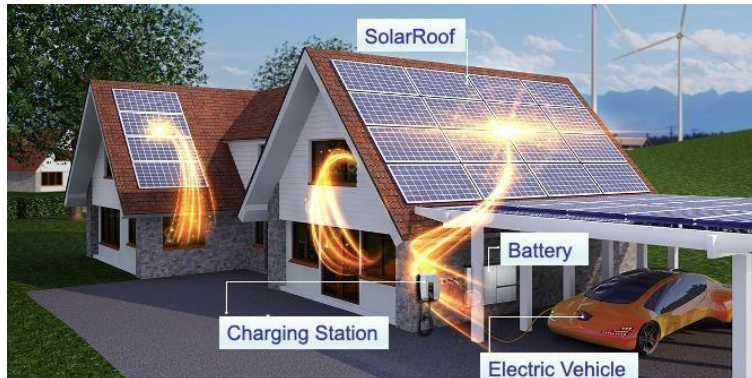
- EACH SOLAR PLANT MUST BE MONITORED BY APP
- SOLAR & STORAGE SYSTEMS MUST BE SUPPORTED WITH INTELLIGENT OPTIMIZATION ALGORITHM
- MUST SELECT LOWEST AND PUREST ENERGY OPTIONS FOR PEOPLE

THEY NEED AN ALGORITHM WHICH SERVES A LOAD WITH LOWEST PRICE



# SOLARPACT CONCEPT

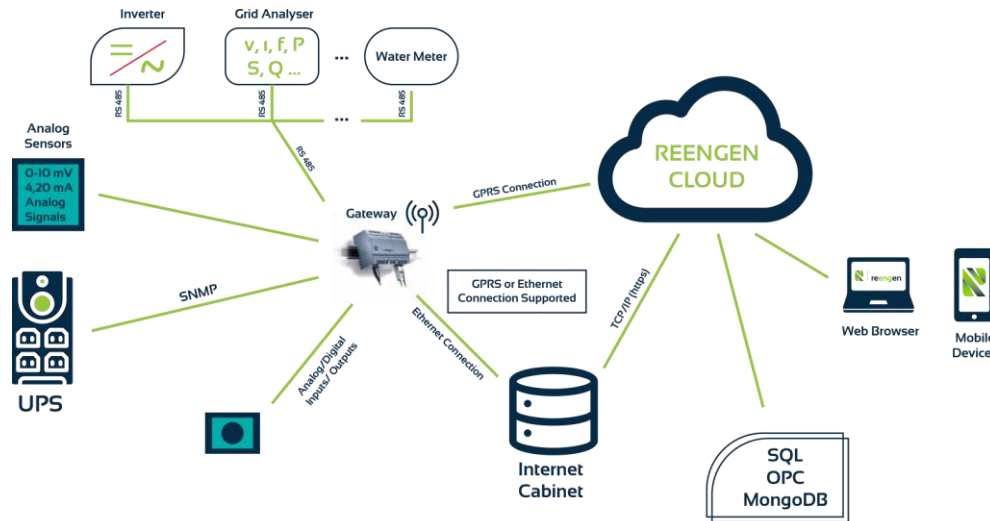
Smart Algorithms and User Interaction for Residential and Commercial Solar Prosumers



The goal of the SolarPact project is developing and demonstrating advanced algorithms and software applications for solar prosumers, smart scheduling of local production and consumption via algorithms and user interaction for both the commercial and residential sectors.

# TECHNOLOGY Edge Analytics

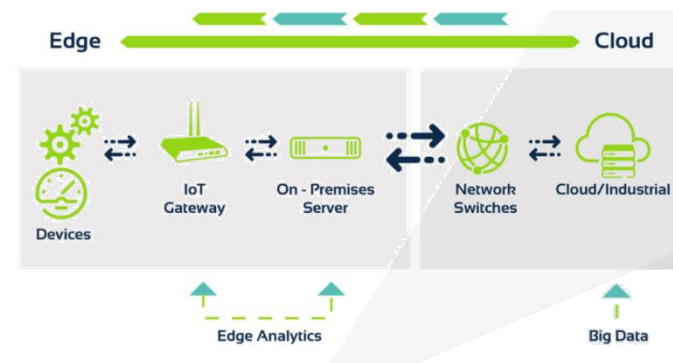
Scalable and replicable communication infrastructure



Modbus, IEC6205621, SNMP, BacNet, Profibus, 2-Way Communication, Remote Control.. ...

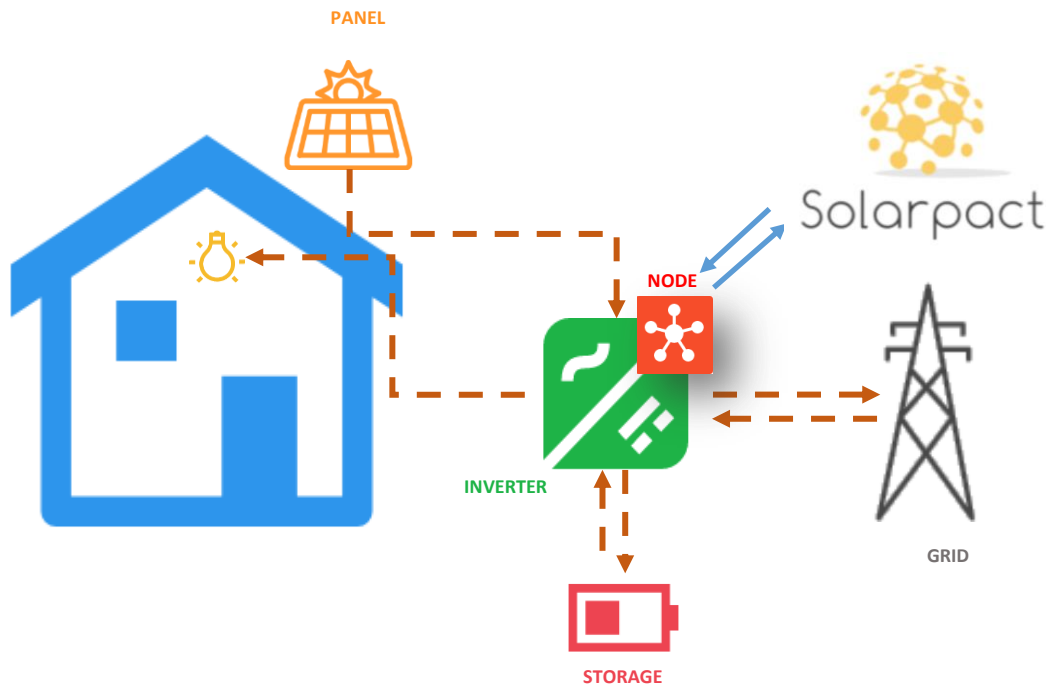
## IoT Gateway

All-In-One Advanced Hub



# TECHNOLOGY AI-POWERED OPTIMIZATION

## SOLARPACT



- **SELF LEARNING SMART ALGORITHM**
- **COMPARES**
  - ✓ **HOURLY ELECTRICITY PRICE**
  - ✓ **HOUSEHOLD CONSUMPTION**
  - ✓ **STORAGE LEVEL**
- **DECIDES CHEAPEST ENERGY SCENARIO**

# Thank you!



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