



**Lumenaza**

**utility-in-a-box**

Software to transform any energy market player into  
an innovative digital utility



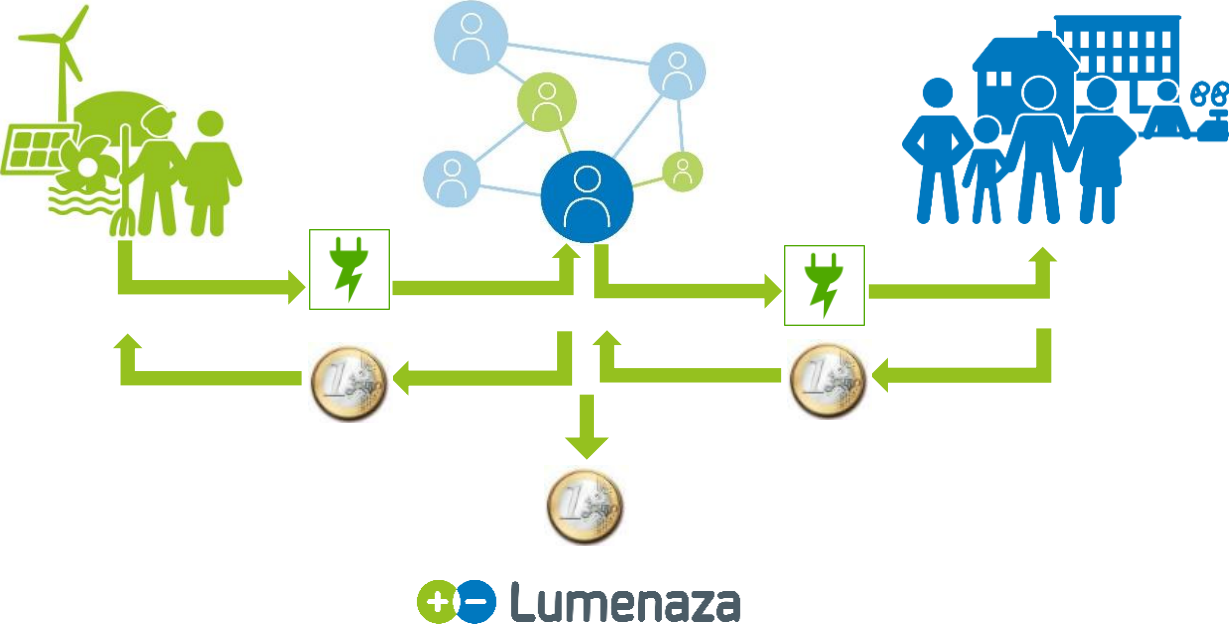
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```



dezentral

digital


# Connecting peers - White label SaaS business model





# Example – regional community

## FichtelgebirgsStrom *echt regional. echt regenerativ.*



**FichtelgebirgsStrom**  
*echt regional. echt regenerativ.*

**Jetzt wechseln**


**13 Anlagen** ☀️ 8 🌬️ 2 📧 3 🌊 0

produzieren 2017 bereits für uns

# 14.330.983 kWh

das entspricht **7.954 t CO<sub>2</sub>** vermiedenes CO<sub>2</sub> oder **143.310** 🌳 zur Bindung dieser CO<sub>2</sub> Menge

**Jetzt Produzent werden** **Jetzt wechseln**



**506 kWp**

Solarpark, Wunsiedel, Egerstraße


FichtelgebirgsStrom  
*echt regional. echt regenerativ.*

Erzeugen & Verbrauchen | Strom aus unserer Umgebung | Auszeichnungen & Presse | Über Uns | Login

Ihre Postleitzahl: 3000 kWh pro Jahr  
oder Durchschnittswert für...  
3 Personen im Haushalt  
 Privat  Gewerbe  
 sonstige Tarife

**Strompreis berechnen**

Fichtelgebirge




Mehr Ertrag durch regionale Vermarktung - auch für Sie!

**Jetzt Produzent werden**

**Unsere Produzenten vom FichtelgebirgsStrom**

- Solarpark, Wunsiedel, Egerstraße **506 kWp**
- Windkraftanlage Wunsiedel, am Wildenberg **3.300 kWp**
- Biomasse Heizkraftwerk Schönbrunn, Wunsiedel, Bayreuther Str., 2012 **188 kWp**
- Biomasse Heizkraftwerk Schönbrunn, Wunsiedel, Bayreuther Str., 2014 **188 kWp**
- Solaranlage, Wunsiedel, Rot-Kreuz-Str. **43 kWp**
- Solaranlage, Wunsiedel, Am Energiepark 1 **185 kWp**
- Solaranlage, Wunsiedel, Feuerwehr **100 kWp**
- Solaranlage, Wunsiedel, Am Energiepark 2 **279 kWp**



# Solar+ inter-regional community by EnBW



- Full package of hardware, energy management, power and services!

# All functionality in one software suite



# Legacy software lacks scalability, flexibility and low cost

- Complex software is needed to intelligently control all participants.
- It needs to be fast, flexible and scalable – Telecommunication / Internet style
- Legacy software was developed in the nineties and lacks all parameters
- Cost to serve is too high for innovative business models

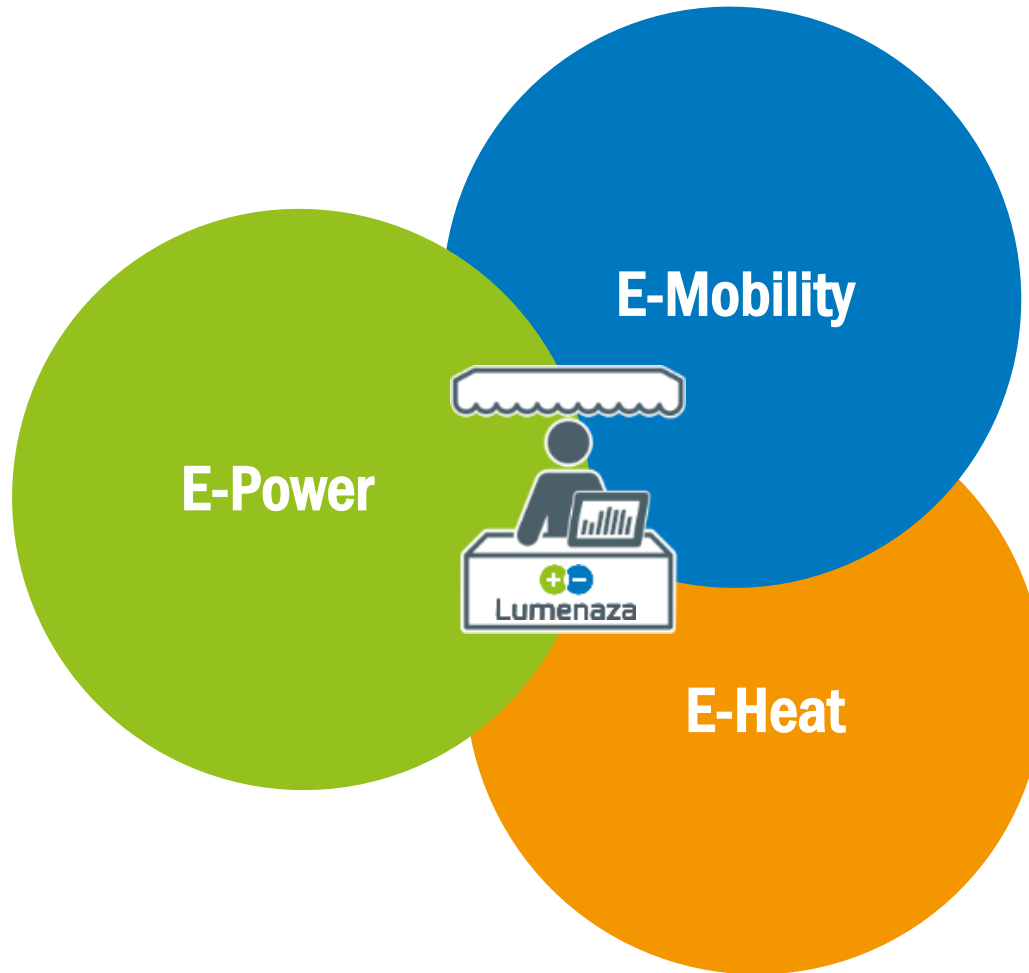
## Past

- Yearly bills
  - 200 power plants
  - Billing once per year
  - No flexibility trading
- |                  |
|------------------|
| <u>x 12</u>      |
| <u>x 8,500</u>   |
| <u>x 35,000</u>  |
| <u>x 525,000</u> |

## Present & Future

- Monthly bills
- 1.7 million power plants
- Billing every 15 mins
- Flexibility trading 1min intervals

More services on a bill – Not only kWh but also services and insurances





# Our impact



Less grid extension through regional consumption



Full replacement of conventional energy generation through intelligent control of renewables





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# Utility-in-a-box- Software

