CELTIC-NEXT Proposers Day
25th September 2019, in Istanbul

Pitch of the Project Proposal
BENTRADE

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KoçSistem Profile

- Internet of Things Platform: Platform360
- Digital Signage Solution: Pixage
- Digital Workforce–RPA
- e-Government Products
- Leasing Solutions
- Mobile Workplace
- Cybersecurity solutions
- 3 Data Centers
- 150+ Maximus Cloud Customers
- 250+ Managed Service Customers
- 60+ SAP Customers
- 8,500+ Virtual Servers
• As technological advancements come to life, **new smart energy delivering services** become available such as rooftop solar panels and storage devices.

• Triggered by new technologies, policy, regulation, and customer expectations are all contributing to a **shifting paradigm**

• Traditional utility businesses can no longer only rely on **demand for the commodity**

• Demand grows and become distributed and **centralized grid is too costly** and sluggish for these needs

• **Lack of customer choice** as well as financial models are locked in

• **Too much energy waste** and loss take place
Objective 1:

• Decrease dependence on commodity electricity and disseminate use of renewable energy sources

• Create distributed energy asset owners (Prosumer)

• Track and audit energy production, consumption and transfer

• Balance demand response

• Reduce risks of failure and cyber attacks by distributed model

• Help create disruptive business and revenue models

• Provide smart energy services to customer with trust

• Create alternative financial models

• Create digital asset history
Solution Offer

Next Generation Telecommunications

Marketplace Generic Trading API

P2P Communication

Blockchain (Orders, Transaction, Settlement)

RES (Renewable Energy Source) based Smart Micro Grid

Subscription  Pay Per Use  Bidding  Buy & Sell  Licensing  Data Monetization  ......

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Solution Offer

<table>
<thead>
<tr>
<th>LAYERS</th>
<th>COMPONENTS</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Grid</td>
<td>Distribution Generation, loads, storage, electric voltage</td>
<td>Paid for installation, configuration, operation and maintenance costs</td>
</tr>
<tr>
<td>ICT</td>
<td>Communication network devices, data storage, information flow, smart contracts, ledgers</td>
<td>Paid as service provider, licensing</td>
</tr>
<tr>
<td>Control</td>
<td>Monitoring and control systems</td>
<td>Paid for service and infrastructure usage</td>
</tr>
<tr>
<td>Business</td>
<td>Market Authorities, local market participants, trading platforms, mobile service providers</td>
<td>Paid for electronic services, contribution fees</td>
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</tbody>
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Impact

• Introduce DLT in electricity market

• Achieve better understanding of customers behavior, interest and acceptance of active participation

• Develop new algorithms and techniques to support service and business innovations based on big data, AI and interoperable DLT

• Give suggestions to the national governance method and regulations related to DLT

<table>
<thead>
<tr>
<th>Issue</th>
<th>Traditional Approach</th>
<th>Blockchain Approach</th>
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</thead>
<tbody>
<tr>
<td>Single Point of Failure</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Energy Profile Anonymity</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Payment System</td>
<td>Centralized</td>
<td>Peer-to-peer sales/purchase system</td>
</tr>
<tr>
<td>Payment Settlement</td>
<td>By central authority</td>
<td>Through Consensus between all nodes</td>
</tr>
<tr>
<td>Energy Profiles Integration and Aggregation</td>
<td>By central authority</td>
<td>Through distributed ledger and consensus between all nodes</td>
</tr>
<tr>
<td>Demand Response Programs</td>
<td>By central authority</td>
<td>Autonomous signaling through node cooperation and smart contracts</td>
</tr>
<tr>
<td>Energy Agreements Verification</td>
<td>By central authority</td>
<td>Through consensus between all nodes</td>
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**Partners**

**Turkey**
- KoçSistem
- KoçDigital
- Entek
- Sedaş (DSO)
- Tredaş (DSO)

**Sweden**
- Stockholm University
- IBM Sweden
- Lulea University of Technology
- Jamkraft AB
- SuperGrid

**Expertise Needed**
- Micro grid communication and infrastructure provider, operator
- DSO - Distribution System Operator
- Business model and market operator
- Policies, rules, regulation facilitator
- IOT
- Cybersecurity
- Blockchain
- Data analysis, mining, deep learning
For more information and for interest to participate please contact:

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