



**PROSUME**

decentralizing power





Prosume provides utilities, aggregators, TSOs/DSOs and technology providers the blockchain software and support necessary for their product and solution offering to end-users, allowing them to regulate energy data management, trace all data flows and rest assured that all information provided is 100% verifiable and secure.



The perks of using

# Blockchain

## SECURE, INCORRUPTIBLE DATA

The immutable quality of distributed ledger means that consensus amongst all nodes in a network is required for information to be validated, resulting in tamper-proof data storage.

## ENHANCED TRUST IN A TRUSTLESS SYSTEM

A decentralised approach to certifying all energy transactions between validated players in the ecosystem: consumers, prosumers, suppliers (utilities) and grid operators (distribution and transmission) means that power is not concentrated in the hands of a few, but spread out amongst many.

## TRANSPARENCY & RELIABILITY

The universally accessible nature of blockchains means that each and every stakeholder can verify data with the assurance that it is correct and indisputable.





# Our customers

- Utilities
- TSOs/DSOs
- Aggregators
- Energy communities
- ESCOs
- Technology providers



# Our services

6 ways Prosume revolutionises the energy sector:

- i) Smart contracts
- ii) Smart billing & Automated payments
- iii) Peer-to-peer energy exchange
- iv) Grid balancing
- v) Trading processes optimization
- vi) Energy source traceability





# Our services

## **i. Smart contracts**

Automatic regulation and settlement of transparent, on-demand energy flows and transactions.

## **ii. Smart billing & Automated payments**

- Precise and instant monitoring of prosumers' energy consumption, production and energy expenditure.
- Regular, intervalled payment methods, with minimum delays and reduced collection costs.

## **iii. Peer-to-peer energy exchange**

Prosume's solution integrates existing suppliers/aggregators as partners in the platform. Suppliers manage P2P interactions between prosumers through matching bid and ask conditions. All data will be easily retrievable by the supplier, easing internal billing processes.



# Our services

## **iv. Grid balancing**

Algorithmic management for the profiling and scheduling of prosumers' production and consumption by aggregators and in turn, grid operators.

## **v. Trading processes optimization**

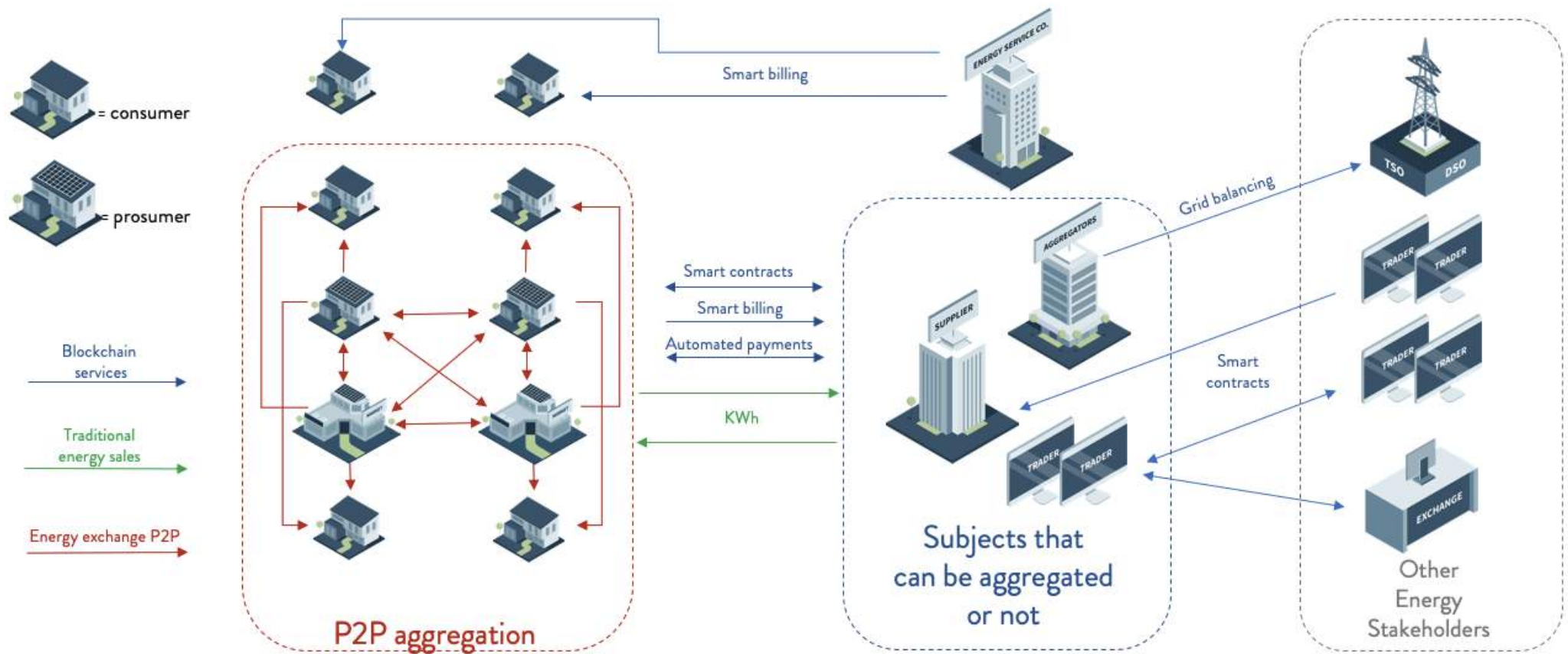
Adopting blockchain technology, energy traders and market stakeholders can integrate processes and data (i.e. deals) coming from market exchanges or legacy systems on to a shared platform on which every entity can manage its own data and share such information with counterparts, grid operators, regulators and authorities.

## **vi. Energy source traceability**

Tracing an energy's source, from production to consumption

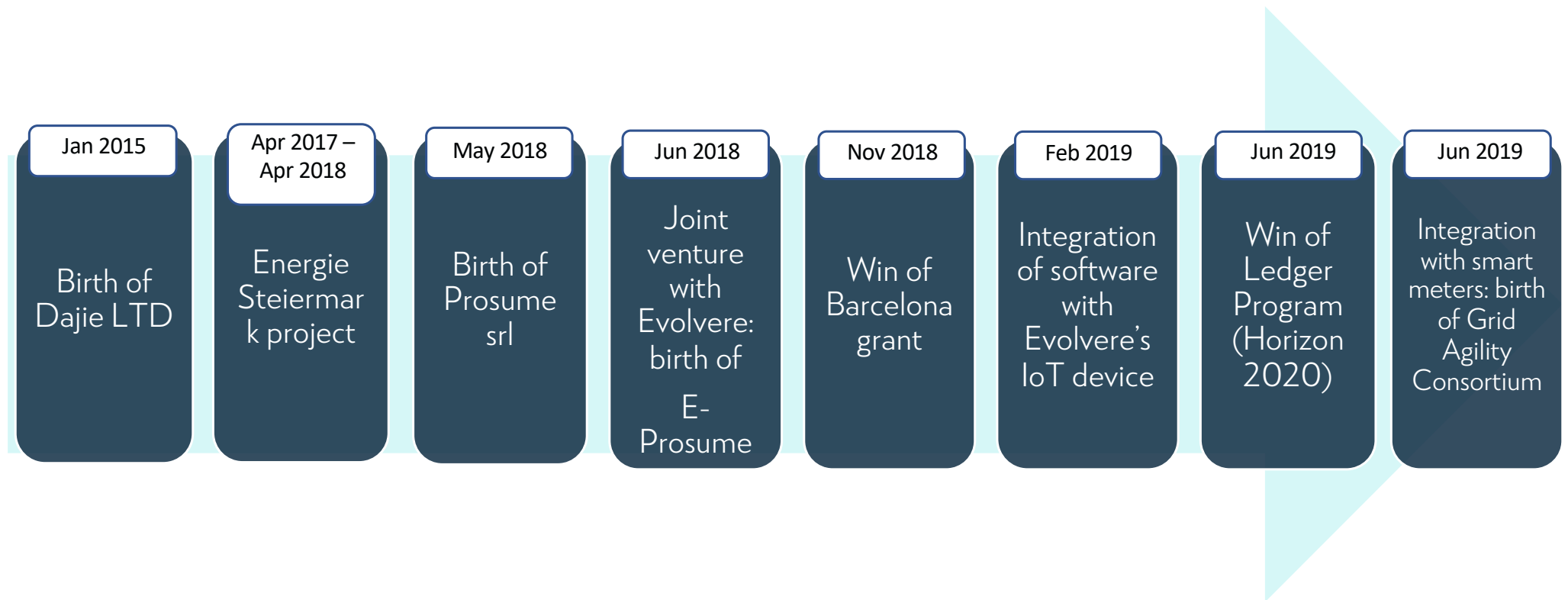


# Our model





# Timeline



# The team



**Mattia De Vecchi**  
CEO



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**Giacomo Beretta**  
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Country manager  
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**Amanda Lim**  
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**Luise Müller-  
Hofstede**  
Global business  
developer



**Super cute  
developers**



# ENERGIE STEIERMARK PILOT

In 2017 Prosume (previously Dajie Ltd) developed a pilot for Energie Steiermark (an Austrian utility company) and Next (the company's digital branch) with the goal of demonstrating a feasible peer-to-market use case amongst a utility's customers. The project started in April 2017 and remained active for a year.

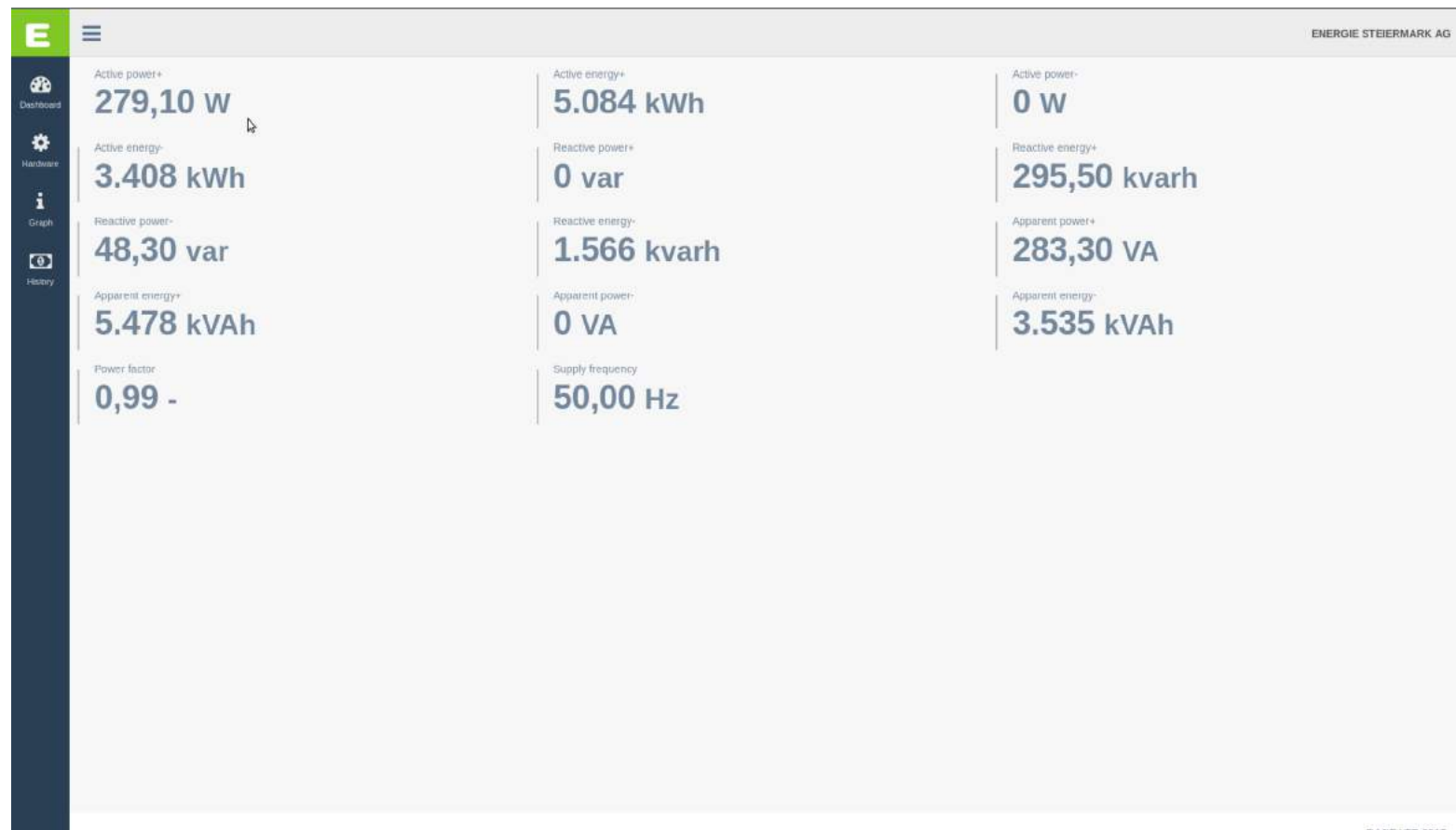
Main features included the following:

- Multiple assets on a single blockchain.
- Assets, issuable at any time.
- Decentralized asset exchange with bid & ask order book.
- Embedding of memos within transfers (encrypted messages).
- Easy implementation of smart contracts can easily be implemented to match bid & ask orders.
- Use of a permissioned blockchain, where blockchain owners control their account management for private use.
- Triple asset setup: payment token (DEC), transaction token (DAJIE) and kWh log token (KWH).

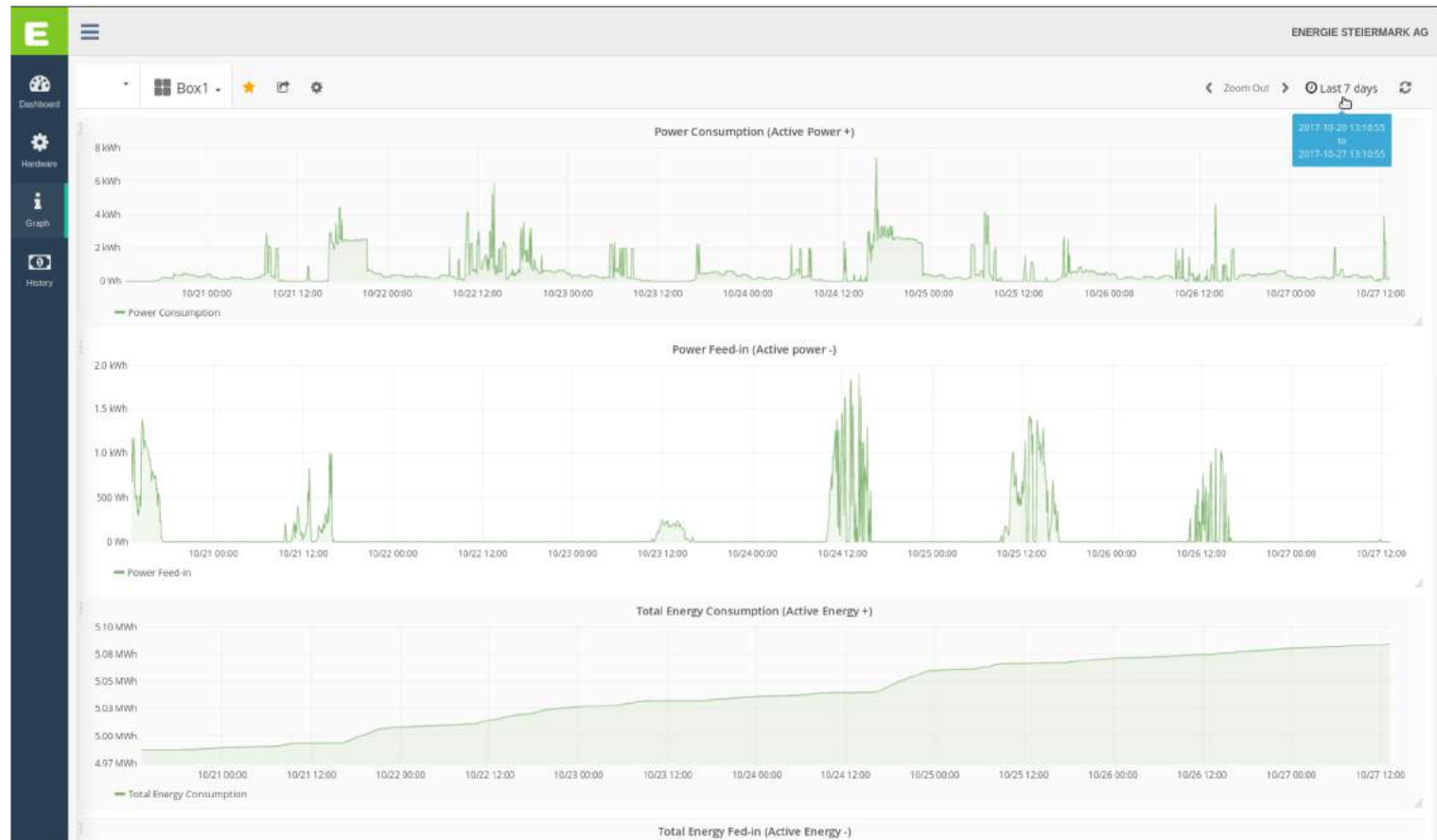
The project has since been put on hold, awaiting smart meter deployment.



# Energie Steiermark pilot: metered data



# Energie Steiermark pilot: metered data graphs



# Energie Steiermark pilot: transactions on the blockchain

ENERGIE STEIERMARK AG						
<div><div>E</div><div>DAJE</div><div>199,98</div></div> <div><div>DEC</div><div>66.384,74</div></div>						
<div>Dashboard</div> <div>Hardware</div> <div>History</div>						
<div>Show 50 entries</div> <div>Search:</div>						
Timestamp	Type	From	To	Description	Tx-ID	
2017/10/27 12:32	Payment	graz004	steiermark	17,280 [DEC]	b9885bea833eb8d93f2715f2199df03eeac06aac	
2017/10/27 12:17	Payment	graz004	steiermark	17,280 [DEC]	01fb5342b6a77b5ed0bbd4fede42577ca353a351	
2017/10/27 11:47	Payment	graz004	steiermark	16,920 [DEC]	6fd297947082db3cd00951ac847b37425ce16b8	
2017/10/27 11:17	Payment	graz004	steiermark	20,160 [DEC]	e55030e8499727ba634b9f4035724a39e1a8fad	
2017/10/27 11:02	Payment	graz004	steiermark	37,440 [DEC]	2540ae7793bd7c372647d87e4aab27eae123b840	
2017/10/27 10:32	Payment	graz004	steiermark	28,200 [DEC]	1bd8aca7a3e63cd8693a80a381d69e9ba10717ae	
2017/10/27 10:02	Payment	graz004	steiermark	29,160 [DEC]	02e814a7cc03e36bb3cbdaa4889ac3487eb5c519	
2017/10/27 09:32	Payment	graz004	steiermark	24,360 [DEC]	06ba507b36371719f89915cfadd0ec3c3caf258	
2017/10/27 09:02	Payment	graz004	steiermark	23,040 [DEC]	0f5a570010fd860150ceca680edd90628919d8f	
2017/10/27 08:32	Payment	graz004	steiermark	24,000 [DEC]	b0d98049b2f89b1681809d967042a605bf202639	
2017/10/27 08:02	Payment	graz004	steiermark	24,240 [DEC]	4175c7c210d03802d4619c2f9f6d34b1d9e0f25c	
2017/10/27 07:32	Payment	graz004	steiermark	23,760 [DEC]	618ca575f3cc17b3f16799cd50563a57d8a535c3	
2017/10/27 07:02	Payment	graz004	steiermark	23,640 [DEC]	98026ca8d4c87167049836d03f2ca33454fdb7a	
2017/10/27 06:32	Payment	graz004	steiermark	20,880 [DEC]	2ed6910a2d0c96d9df06c9bca4b53b4fde3c3c98a	
2017/10/27 06:02	Payment	graz004	steiermark	17,400 [DEC]	e0091b578b41ac8846fa94291508bb33444dcaa	
2017/10/27 05:32	Payment	graz004	steiermark	17,040 [DEC]	51425d8ef13d50e9a91bc8b33a2df9b8cc96a4	
2017/10/27 05:02	Payment	graz004	steiermark	17,280 [DEC]	d63d12a5816ecc72c8b8af4e299032ba6fc741d	
2017/10/27 04:32	Payment	graz004	steiermark	17,520 [DEC]	e958e4ef2b358627a42e0b343315a5a6630b8482	
2017/10/27 04:02	Payment	graz004	steiermark	17,280 [DEC]	2d3dc5e43c65698a8c179b4bd7d5b7c43f604bce	
2017/10/27 03:32	Payment	graz004	steiermark	17,520 [DEC]	e2e0fc3a637986e836d1a0acde2a4d4fb0e51f2d	
2017/10/27 03:02	Payment	graz004	steiermark	17,520 [DEC]	985b836a2ab6e03c50d9f108dd13e647a9a29ca	





# Barcelona Energy Community

In Q4 2018, Prosume (through its subsidiary branch Prosume Solutions SL) won a grant from the city council of Barcelona to develop a pilot project for its community.

The project, “Barcelona Energy Community”, focuses on the blockchain registration of data related to consumption, production and energy storage of the town buildings.

Due to the latest regulation permitting actual peer-to-peer energy exchange amongst communities (Real Decreto 15/2018), the pilot’s main aim is to simulate energy exchange between city buildings.

The project will install around 20 blockchain light nodes in these buildings, adding to the nodes that will be cloud-hosted by June 2019. The project’s validation will begin in September 2019 and conclude in December 2019.

We’re currently in talks with the city of Barcelona in order to translate this project simulation into a real-life peer-to-peer situation by 2020.



# Barcelona Energy Community

The main features of the service platform are:

- Deployment and validation of blockchain based tools that support smart communities of energy prosumers.
- Integration of power plant, storage systems and consumption sites.
- Peer-to-peer exchange of electricity between prosumers on a distributed micro-grid.
- Micro-grid management tools.
- Integration of the tools developed by the city council through the EU-funded DECODE project (development of the blockchain framework for energy will be based also on the specific requirements provided by the DECODE steering Committee).

# Presenting e-Prosume

## Blockchain technology enters the household

Italian energy aggregator Evolvere has allied with Prosume in an unprecedented partnership between a leader in the distributed generation sector and a blockchain solutions provider.

Managing around 12,000 PV plants, Evolvere's large network is significant: it will be the first time an aggregator has shook on a blockchain development plan, making e-Prosume the first project of its kind and proportions.





# Smart homes: the future

Aimed at bringing the blockchain into smart homes, the joint venture's first plan of action is to integrate Prosume's software with EUGENIO, a smart home gateway manager.

Through an app on a device, e-Prosume allows homeowners to manage various aspects of their everyday lives: energy savings, safety, comfort and smart payments, in a wholesale upgrade of the definition of 'smart living'.





## **Nodes on a blockchain**

Integrated and installed into homes (within a year) would be some of the first 2.000 smart home devices in the world that would represent the nodes on an energy blockchain network.

Through a customised cloud platform, this integration enables production and consumption data collection, progressing the liberalisation of the local energy market and evolving its smart grids. From the real-time collection and analysis of such data, end-clients will also enjoy new services made possible by recent IoT and Big Data technologies. The possibilities don't end there: e-Prosume will also offer Balance of System services to grid operators.

# e-Prosume interface: measures and payments

e-Prosume

History

Payment

HGM

Price

Set Price

Transfer

Users

Logout

History

e-Prosume > History

HGM 

evo1

Reset

TX ID 

Search

Reset

Dates range 

Reset

Export CSV

All Daily Monthly

Viewing 50 records

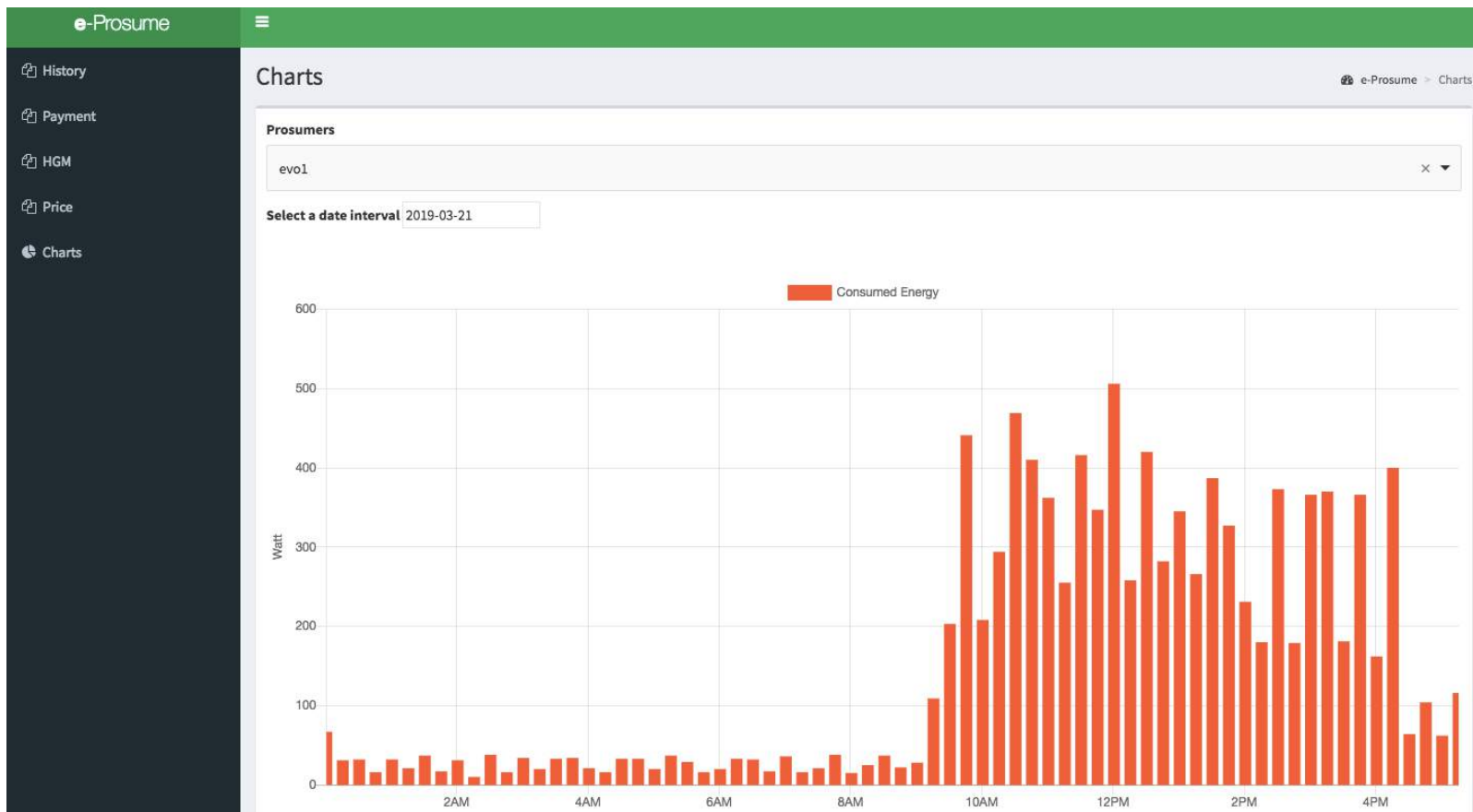
Timestamp	TX ID	From	To	Asset	Type	Value	Purchased/Sold Energy
2019-04-09 14:31:00	b066e13f34c5b97d898...	evo1	evolvere	TFT	measure	1.00	44.00
2019-04-09 14:16:00	b36419f25fa82d814bd...	evo1	evolvere	PRS	payment	0.42	
2019-04-09 14:16:00	b36419f25fa82d814bd...	evo1	evolvere	TFT	measure	1.00	42.00
2019-04-09 14:01:00	36a9a15e69cb394c4b...	evo1	evolvere	PRS	payment	0.13	
2019-04-09 14:01:00	36a9a15e69cb394c4b...	evo1	evolvere	TFT	measure	1.00	13.00
2019-04-09 13:46:00	7c7b47d0969cc20abef...	evo1	evolvere	PRS	payment	0.81	
2019-04-09 13:46:00	7c7b47d0969cc20abef...	evo1	evolvere	TFT	measure	1.00	81.00
2019-04-09 13:31:00	4c941f808c10d62c0f6...	evo1	evolvere	TFT	measure	1.00	15.00
2019-04-09 13:31:00	4c941f808c10d62c0f6...	evo1	evolvere	PRS	payment	0.15	
2019-04-09 13:15:55	c073f0ae3d53b1ce641...	evo1	evolvere	PRS	payment	0.67	
2019-04-09 13:15:55	c073f0ae3d53b1ce641...	evo1	evolvere	TFT	measure	1.00	67.00
2019-04-09 13:01:00	2af76a36b95bc1cdb67...	evo1	evolvere	PRS	payment	0.82	
2019-04-09 13:00:55	2af76a36b95bc1cdb67...	evo1	evolvere	TFT	measure	1.00	82.00
2019-04-09 12:46:00	d2817e5f70ad3be2cb3...	evo1	evolvere	PRS	payment	0.54	
2019-04-09 12:46:00	d2817e5f70ad3be2cb3...	evo1	evolvere	TFT	measure	1.00	54.00
2019-04-09 12:31:00	4e2efef75dcd498aa0fd...	evo1	evolvere	PRS	payment	1.33	
2019-04-09 12:31:00	4e2efef75dcd498aa0fd...	evo1	evolvere	TFT	measure	1.00	133.00
2019-04-09 12:16:00	f1e39c5e8bb946924f6...	evo1	evolvere	TFT	measure	1.00	253.00

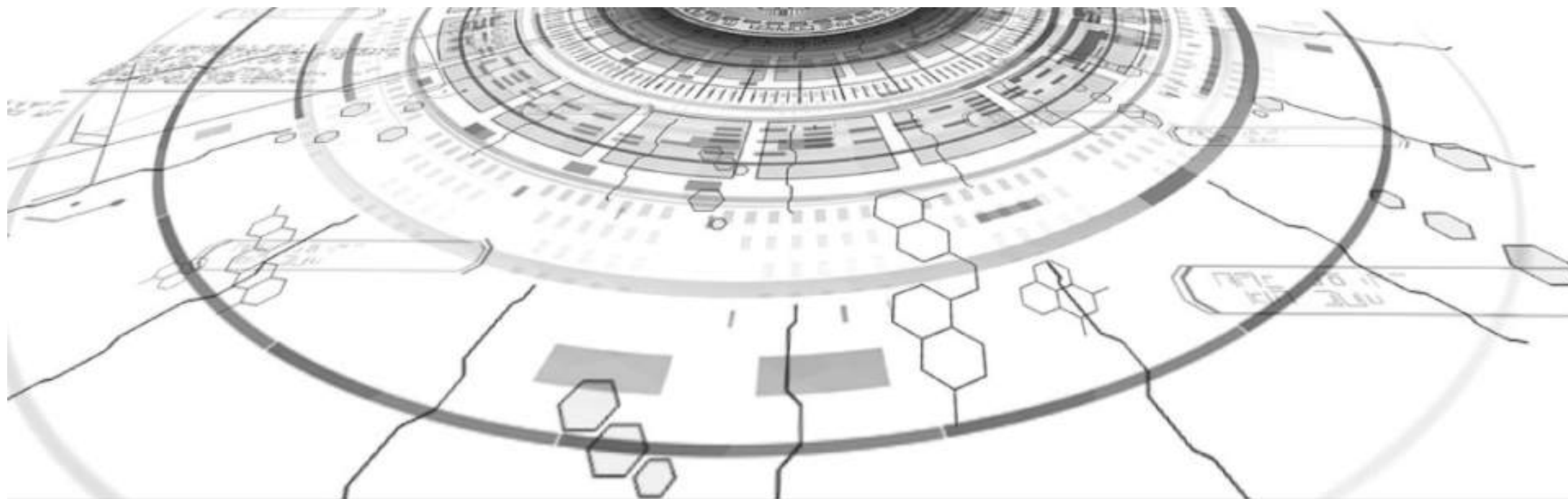


# e-Prosume interface: “blocks”

e-Prosume		Block 3767052		e-Prosume > block > 10762	
History		Parameter	Value		
Payment		Block Number	3767052		
HGM		Wallet Type	OperationTypeTransfer		
Price		From	evo1		
Set Price		To	evolvere		
Transfer		Asset	TFT		
Users		Amount	1.00000000		
Logout		purchasedEnergy	24993900		
		energyDiff	44		
		txID	b066e13f34c5b97d8982aaff3298a052		
		purchasedPower	177		
		reactiveEnergy	4516803		
		autoConsEnergy	0		
		consumedEnergy	44		
		buyPrice	0.01		
		sellPrice	0.01		
		subID	20934		
		Timestamp	2019-04-09 14:31:00		

# e-Prosume interface: chart example





# Thank you

Contact us for more  
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