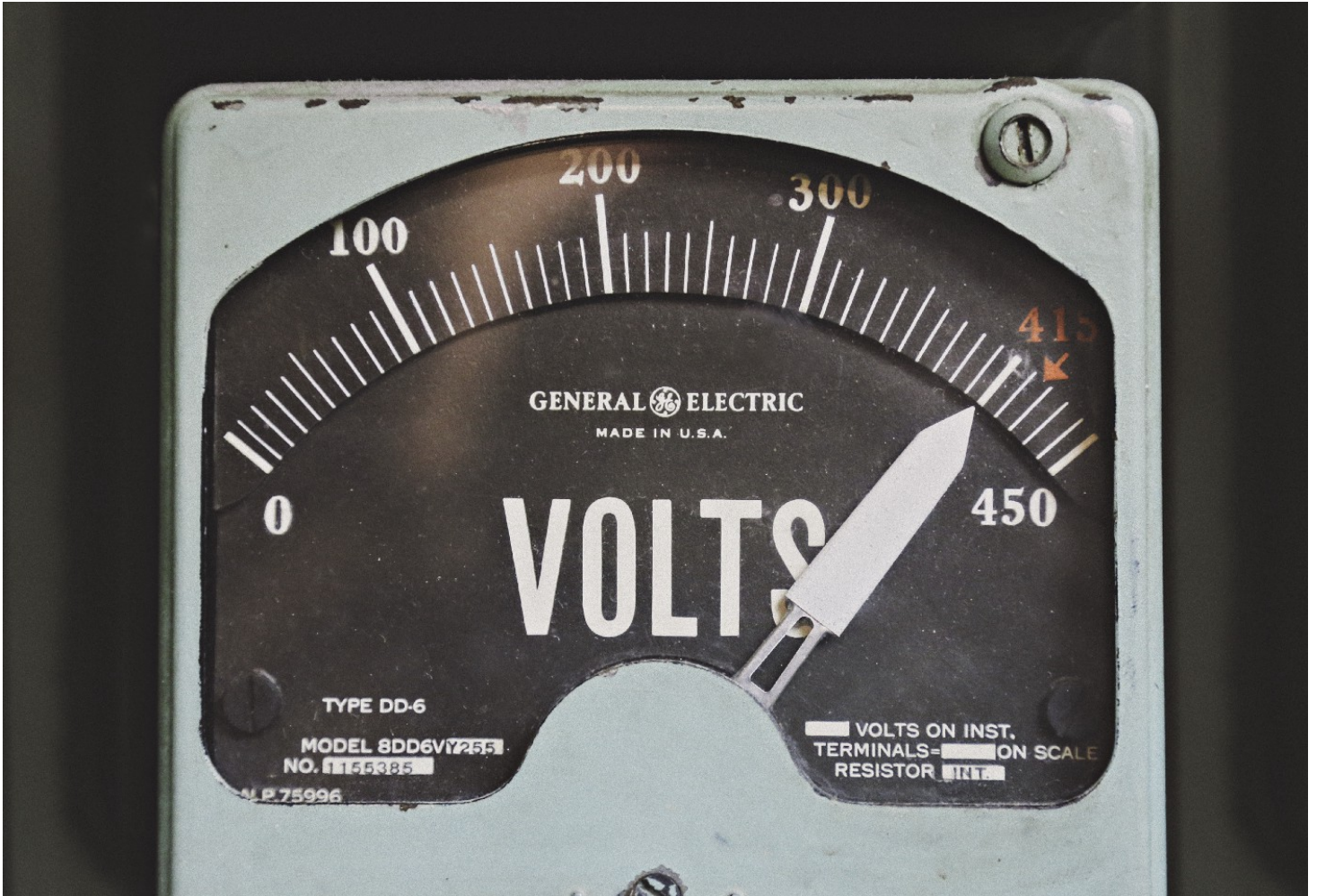


Epoch and Map of the Energy Transition through the Consensus Validator

EPOCH 1618000449



GOAL Discuss solutions, methodologies, systems, projects to support the Energy Transition towards Energy Convergence

TARGET Operators, Customers, Regulators, Legislators, Inventors, Academics, Scientists, Enthusiasts

MARKET Operators, Customers, Regulators, Legislators, Inventors, Academics, Scientists, Enthusiasts

POWER [mW]

TAG #Epoch #Optimize #PowerMarket #Blockchain #Method #EnergyOptimization
#DemandSideResponseAggregator #Electricity #EnergyTransition #DemandSide #ResponseSide
#EnergyConvergence #CommoditiesAsAService #EnergyMarket #Supply #Demand #Validator #EU
#Response #FlexibilityServices #Ledger #Pool #Consensus #Staking #Mining #EpochONE
#MathModel #Algorithm #MachineLearning #DeepLearning #ArtificialIntelligence #Blockchain
#ElectricalFlexibility #Resilience #EnergyCommunity #DemandResponse GreenDeal
#NegaWhEXchange

INSPIRARION #Aristotle, #GalileoGalilei, #LudwigVonMises, #LuigiEinaudi, #AbrahamCresques.

LEDGER [Roberto Quadrini](#) [IT]

VALIDATOR [Stefano Melchior](#) [ES]; [Giorgio D'amico](#) [CH]

PATENTS [Publication list](#)

BIBLIOTEX [1] [Energy Transitions Indicators](#); [2] [Epoch Converter](#); [3] [Agenda 2030](#)



Ledger

The Ledger is an [inventor](#) and one of the [Tecnalogic](#)'s founders. [Tecnalogic](#) is a R&D company that aims to [#Optimize](#) the current [#PowerMarket](#), enabling the operators to evolve in a distributed, decentralized ecosystem, as to [#Blockchain](#) model.

We operate with a multidisciplinary *#Method* (engineering, computer science, mathematics and economics) focusing the work on *#EnergyOptimization*, integrating them into a single model, through the virtualization of the areas relating to supply and demand *#DemandSideResponseAggregator*.

Our vision is based on nature, *#Electricity*, and which must be managed as the **Mother of Raw Materials** for the development of human activities in harmony with the environmental, economic and physical context.

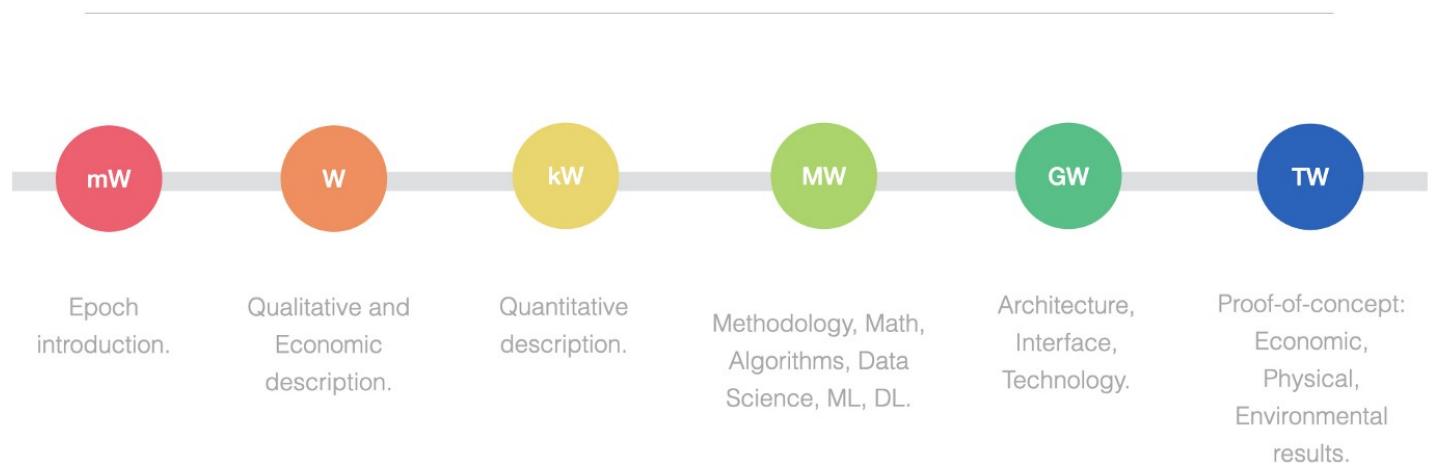
The *#EnergyTransition* is **NOT** a transition mode **FROM** one energy source to another, but the transition from a disaggregated energy consumption approach *#DemandSide* to an aggregated one integrated with the supply *#ResponseSide*.

This transition is strategic for *#EnergyConvergence* model, where commodities will evolve into customer services *#CommoditiesAsAService* through an economic exchanges, reducing costs marginal due to “waste” due to unmanaged energy.

The *#EnergyMarket* is based on *#Supply* and not on *#Demand*. This model has created an economic model “cost-centric” which is “helped” by incentives strategy, with a “long-term costs for the system” approach.

This “**Epoch**” initiative is intended to be the starting point for mapping, as did the Buxoler, author of the “Mappa Mundi”, the strategies, systems, methods, algorithms and technologies to trace the path of the *#EnergyTransition* towards its *#EnergyConvergence*.

Power



The initiative is aimed at an audience of different scientific, professional, cultural backgrounds, to all those interested in making contributions, proposing alternatives with the different solutions, but all in the direction to support the stakeholders (*Operators, Customers, Legislators*) studying the strategies and solutions for these changing markets.

EU has great technologic know-how, which must be made operational, we have developed everything in this direction (*methods, algorithms, math models*), and are ready to enable *#EnergyTransition*.

Each *#Epoch* is also validated in other countries (through the consensus process), where we propose this vision of the *#EnergyConvergence*, through the first step of the *#EnergyTransition*.

The validation process, identical to that of the *#Blockchain*, enables each *#Validator* to present issues related to their country, the projects in progress, the legislative news and to make their stakeholders aware of the *#Validator's* work in *#EU*.

The goal is to converge towards the decentralized electricity grid model, which through [DIRECTIVE \(EU\) 2019/944](#), creates a decentralized, flexible, market by reducing pollution due not planning of *#Demand* (Energy Consumption) using only *#Response* (Energy Production).

All the information, the methodologies described in the *#Epoch*, the intellectual properties are extracted from the patents listed therein and owned by [Tecnalogic](#)

Patents

Method and algorithms into electrical flexibility patents of Tecnalogic



Consensus Process

Launch a structured path with the following objectives in each country where [Tecnalogic's #Patents](#) are active, with the coordination of reference subjects with specific geographical expertise:

- dissemination of consent
- increasing awareness of existing problems
- proposal of possible solutions
- qualification of business opportunities
- partnerships (commercial, scientific, financial)
- training activities (webinars, workshops, courses)
- technical activity (analysis, consultancy, projects)
- *#FlexibilityServices*
- business opportunity

Once the pre-qualification process has been completed according to agreed specifications, all business opportunities will be conveyed by the relevant coordinator to [Tecnalogic](#), which will deal with the final qualification of the opportunity and consequently will define together with the coordinator a proposal for the identified counterpart.

Once the proposal has been accepted, the activity will be provided by [Tecnalogic](#), where provided with the technical and / or commercial support of the coordinator and its structure.

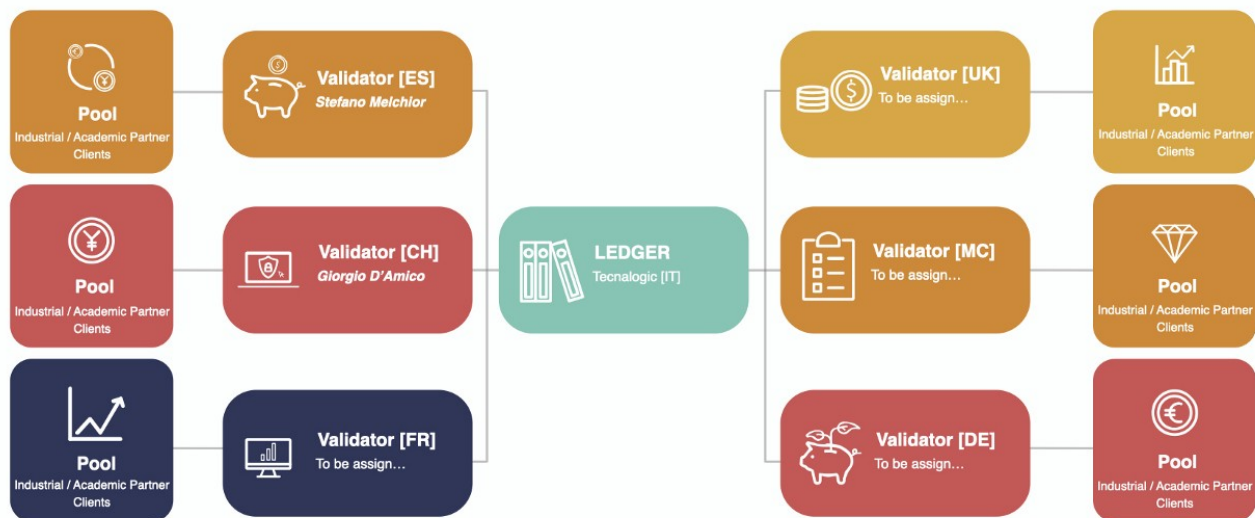
Perspectives

Upon successful completion of a series of operational activities in a particular country, it will be possible to evaluate the opportunity to create an operating company consisting of the following subjects:

- one or more financial partners
- the coordinator who contributed to the development of the business
- [Tecnallogic](#)

Actors

- [Tecnallogic](#) [#Ledger]: creator and first promoter of the methodology in Italy, central point of reference to address all opportunities
- national coordinators [#Validator]: reference figures who represent [Tecnallogic](#)'s thinking in the reference country, contributing to its dissemination and subsequent application
- industrial partners, academic partners, Customers [#Pool]: subjects who show interest in deepening, supporting, adopting the solutions proposed by [Tecnallogic](#)



Preliminary Steps

- **Dissemination** [#Consensus]: progressive promulgation #Epoch of [Tecnallogic](#)'s vision in each country through specific contents created for social channels, associations, study groups,

media, think tanks, institutions; in addition to being published in the local language of the country, the topic of common interest is completed with specific details and examples of the country in question, according to an agreed and simultaneous editorial plan between all the subjects involved.

- **Collection** [*#Staking*]: the coordinator collects issues related to the *#EnergyTransition*, legislative indications, promotional activities between associations, local industry needs, and qualified business opportunities within his area of competence.
- **Operations** [*#Mining*]: pre-qualified opportunities (interlocutor, activity, goal) are proposed to [Tecnalogic](#) for the organization of dedicated in-depth meetings for the definition of operational activities.

Advanced stages

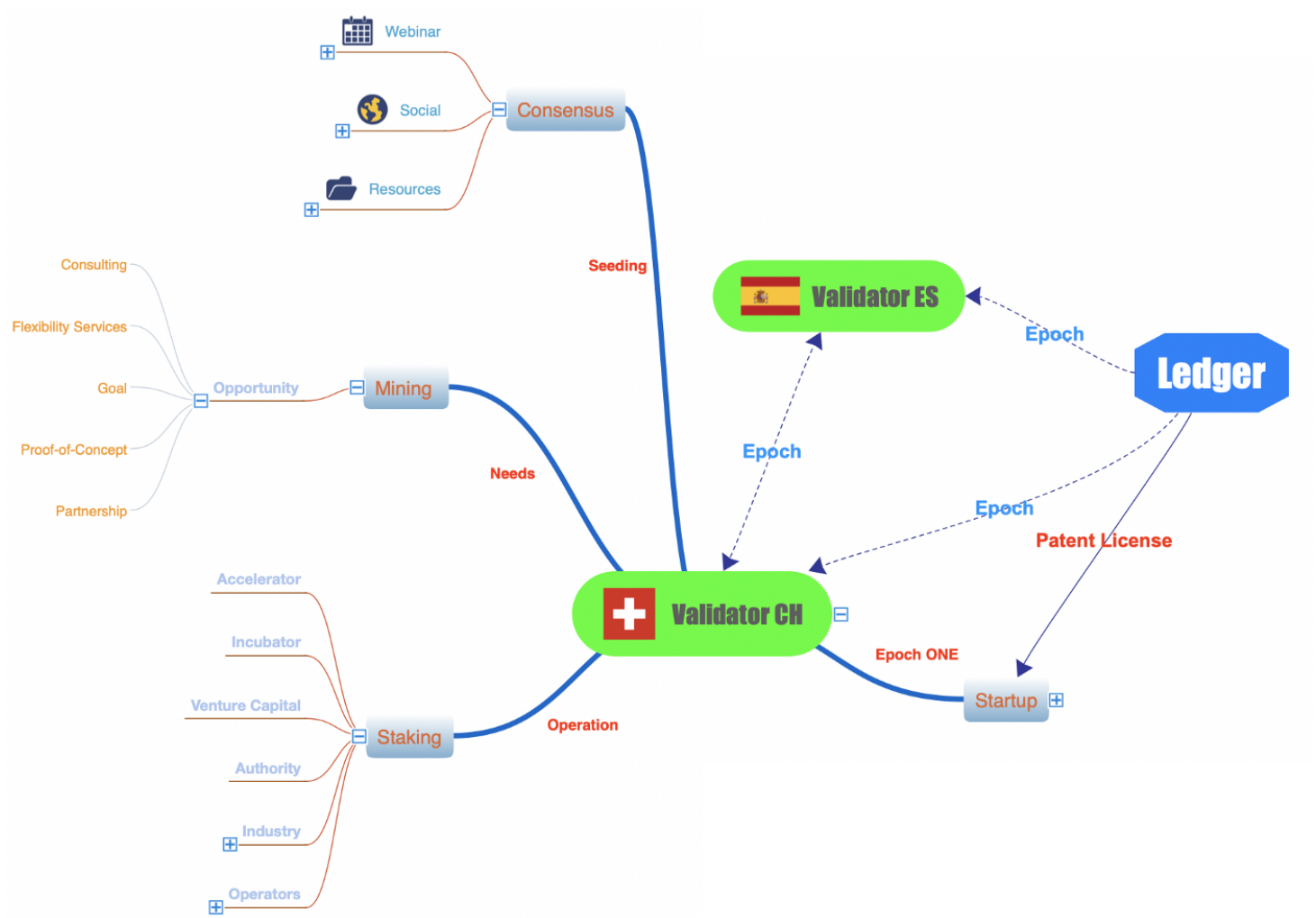
Establishment of operating company *#EpochONE*.

#Validator will be entitled to a corporate share and will be an active part of the team, operating in one or more of the following areas:

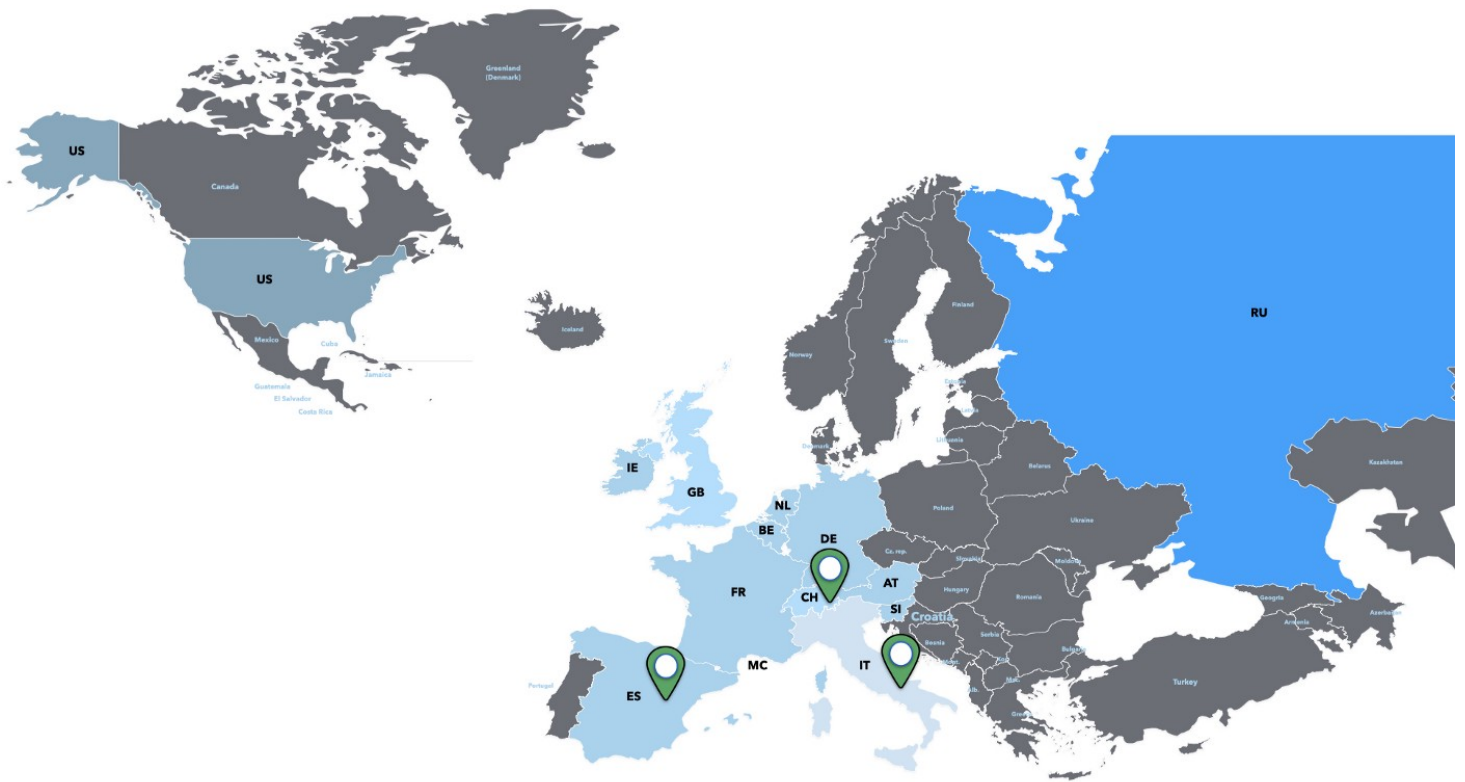
- management
- commercial
- marketing

The company will have a sub-license to use [Tecnalogic](#)'s patented methods, which depending on the terms of the agreement will have:

- geographical limitation to one or more countries
- exclusivity or non-exclusivity for a single country.



Validators distribution



Tecnalogic

Who we are

Research and development company that for over 8 years has been carrying out its contribution to the *#EnergyTransition* up to the *#EnergyConvergence*, a stage in which the virtualization, through digitalization, of energy vectors, opens the energy market to the *#CommoditiesAsAService* business model.

It has filed method patents in the main countries and makes its know-how available to operators and through the technology transfer phase enables the creation of startups based on business models aimed at *#EnergyAsAService*, through *#MathModel* *#Algorithm*, *#MachineLearning*, *#DeepLearning* and *#ArtificialIntelligence* on *#Blockchain* technology.

Our points of reference

- **Agenda 2030.** Since its publication (1 January 2016) we have made the values of the Agenda our own, in particular objectives 7 and 13;
- **Recognition of the importance of Customers' *#Demand*** and their *#ElectricalFlexibility* mapped and created by [Tecnalogic](#) methods;

- Need to **balance the electricity grids** in order to reduce consumption, increase *#Resilience* and operate with *#ElectricalFlexibility*;
- **Respect and make applicable the Community Directives**, in particular the [DIRECTIVE \(EU\) 2019/944](#) and the relative [REGULATION \(EU\) 2019/943](#);
- **Operate according to the directives of the EU** planning and control bodies;
Support for renewable energies and optimization of the networking of their production (essential for the 2030 Agenda).
#EnergyCommunity and their role in participation: *#DemandResponse*, *#Resilience* and the *#ElectricalFlexibility* market.

Our *#NegaWhEXchange* platform will contribute to the following *#GreenDeal* goals:

- Provide clean, cheap and safe energy;
- Provide clean, cheap and safe energy; Building and renovating in an energy and resource efficient way;
- Accelerate the transition to sustainable and smart mobility.

The balancing of electricity consumption and the integration of distributed generation plants from renewable sources benefit from the exploitation of the digital energy flow maps provided by *#NegaWhEXchange*, therefore the use of the platform can significantly reduce the carbon footprint by optimizing the congestion and reducing the need for fossil fuel power plants held in reserve to resolve the grid

Awards

NegaWh
EXchange



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“Transform limits into constraints to create flexibility”, **Roberto Quadrini**