

Black Box[®]

Energy black box:
know first, then act



Black Box[®] is the real-time, continuous, web-based system for energy analysis, safety, well-being and human comfort in buildings.

Through the use of innovative IoT and Machine Learning technologies, Black Box intercepts the energy waste of primary power plants in compliance with European UNI EN and Italian regulations with the automatic processing of the Energy Signature.

Abandoning traditional technologies and supervision systems limited only to electrical and thermal monitoring and remote control, Tonalì E.A. offers machine learning predictive analytics solutions, in real time, continuously. *Smart Building* and *Smart City* solutions that generate measurable and shared financial savings in real time..



TONALI E.A.
Energia & Ambiente

Research and innovation

It is increasingly strong need for improved production efficiency to private buildings, commercial, public and industrial, both from an energy point of view and from well-being and safety of people point of view. Traditional technologies such as monitoring, home automation, regulation of air conditioning systems and technological solutions for human safety have reached considerable technological levels over the years. Unfortunately, the purchase costs and often long payback times of these technologies slow down their development despite government incentives.



Tonali E.A., in collaboration with Black Box Green, offers innovative solutions by designing and installing hardware and software systems with advanced sensors. **Energy analysis solutions in real time, continuously, which generate measurable and shared financial savings in real time, guaranteeing::**

- the integration of existing traditional monitoring and supervision systems with open protocols
- data analysis in real time, continuously, via web wi-fi "Lora" and / or sensor networks in Mesch technology
- elimination of the constraints of proprietary protocols with standard universal integrated interfaces
- reduction of human interventions in the energy control of safety and well-being, often inefficient
- fast playback time
- **Building automation systems according to UNI EN 15232 (valid in Italy in order to obtain 110% Super Bonus)**



BLACK BOX®

Black Box institutional Awards:

- Casa Clima, Klimahouse Trend 2016
- National Confederation of Crafts and Small and Medium Companies 2017
- GiveMeFireAward 2020



TONALI E.A.

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Ed. 10/20