



# MFKK – Invention and Research Center

## I Profile

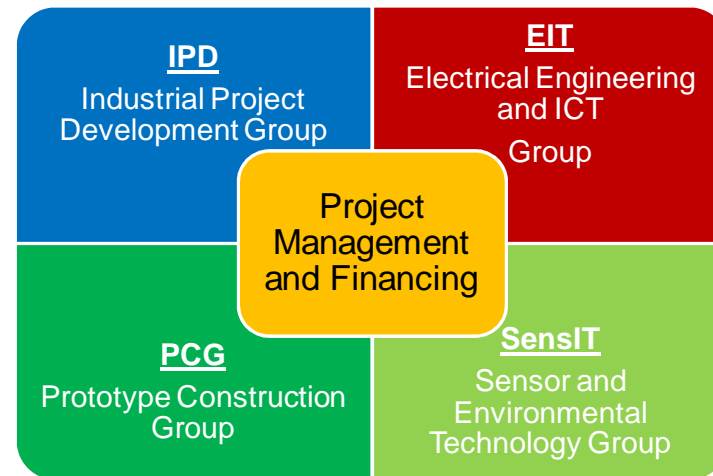
1. Established in 2003 in Budapest, MFKK is a private organization involved in multidisciplinary research
2. Dynamically developing group of professionals
3. We deliver R&D services in order to increasing the competitiveness of our clients
4. Project experience in European R&D projects as partners and coordinators

## II Key Partnerships & collaboration

- ✓ Key partnerships at national and international level

## III Infrastructure

- ✓ Well-equipped electrical laboratory
- ✓ Mechanical workshop for prototyping
- ✓ Analytical instrument lab





## **Project and Results:** Energy Efficient Technologies for SME

### **GERONIMO:**

Getting Energy Reduction on Agendas in Industrial Manufacturing Operations (EIE/07/220/SI2.466709)



### Objectives:

- \* Raise the awareness of the members of the dairy farm industry for energy efficiency.
- \* Their needs and aspirations are then fully RESEARCHED and the results and conclusions IMPLEMENTED in a web-based GERONIMO solution
- \* mobilising the participation of the dairy industry
- \* Creation of information exchange between partners

### Role of MFKK

Creation of web portal for information exchange, training, best practices



## •Experiences made

- more that 1000 registred members and increasing
- up to 20 Dairy Farm Association (DFA) registered, representing 30K farmers from 15 EU member states.
- have gained the critical mass to sustain its continuity after the project.
- energy reduction in the region of 4800 MWh/annum on European dairy farms
- reduced CO2 emissions and savings of millions to the EU economy in environmental and health impacts
  
- customised solutions to regions/countries
- energy efficiency solutions and technologies for dairy farms: Vacuum pumps, milk cooling, water heating, lighting, ventillation, feeding, water management



## Project and Results

ENERGYMON: Energy efficiency monitoring system for buildings

Wireless monitoring system to measure (heat, cold, electrical) energy consumption over a specified period.

Energy consumption audit:

- \* Measuring energy flow inside building: heat, cooling, and electricity.
- \* Building the energy flow model of the building under measurement
- \* Optimization of building model for operation and building renewal plan scenarios.
- \* Measuring after reconstruction in order to check the increased energy efficiency.

\* <http://www.energymon.eu>



## Experiences made

### ENERGYMON:

- \* Energy efficiency in buildings is hot topic. There is a lot of solutions and confusions.
- \* Energy Audit recommended by EC for buildings considering the building only without use. (Difficult to predict the energy consumption.)
- \* Our technology focusing to measure **energy consumption habits**. (Energy consumption over time and space)
- \* Application of additional measuring technologies (thermographic camera) will increase the efficiency of the energy consumption audit
- \* Easy to detect energy leaks caused by reckless use of bad habits.



## Recommendations for other SMEs and EC

Realisation of Energy Save just by habit change:  
(Office building, 2 store, 300 m2 approx, 25 users)

- \* 10 – 15 % on lighting
- \* 15 – 30% on heating (gas consumption)
- \* 25 – 45% on energy needed for hot water production
- \* 25 – 50% on air conditioning (separate units, without inverter control)

The Energy monitoring will help for:

- \* Scope identification (what is the best way to save energy)
- \* Cost reduction and return of investment
- \* Safety Issues (enough energy capacity to serve critical tasks)
- \* Risk Identification and contingency plan (together with safety)



***Thank you for your attention!***

***Questions and Comments?***

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