

Position Paper of **ARÇELİK A.Ş.**

Objective

This paper is prepared for the participation in the 2nd usage area workshop about "Towards a Future Internet Public Private Partnership".

Firstly, the company information and R&D capabilities of Arçelik A.Ş. will be introduced briefly. Later the contribution possibilities to the project and ideas about theme will be summarized.

Company Information & R&D Capabilities

Arçelik is being the pioneer in Turkish household appliances sector, with more than 18.000 employees, 10 production plants in 4 different countries; namely, Romania, Russia, China and Turkey, 12 sales and marketing companies worldwide. Arçelik Company has been providing its consumers in more than 100 countries with its ten brands; Arçelik, **Beko**, **Grundig**, **Blomberg**, **Elektra Bregenz**, Arctic, Altus, Leisure, Flavel and Arstil.

Arçelik A.Ş. realized a consolidated turnover of 3,5 billion € in 2009 and produced over than 10 Million units of refrigerators, washing machines, ovens, dishwashers and dryers. Arçelik is the 3rd largest household appliances manufacturer in Europe.

Arçelik R&D meets global standards for technology and product development and focuses on products that:

- Are environment-friendly (recover, recycle, reuse, and low energy, water and detergent consumption),
- Ensure comfort and customer satisfaction (**smart**, quiet, practical),
- Are affordable and comply with standards of the future.

The R&D activities of Arçelik are carried out with approximately 650 personnel. Arçelik R&D organization has expertise on its own products as well as on the engineering disciplines that are related to product functions; such as thermodynamics, fluid mechanics, vibration and acoustics, materials, computer aided engineering, **power electronics** and **electronic control**.

Contribution Possibilities

The European future internet initiative is aiming "Applying" the internet for a better life. Houses are most important places in human's life style. In the houses the basic and

inevitable major players are the household appliances, since they are used for cooking, food preserving, cleaning and air-conditioning purposes. So they will in our life/home in the future. By integrating the white goods to the future internet several social and environmental benefits can be achieved. These benefits can be summarized as follows:

▪**Home automation**

- Control of the white goods by remote access
- Monitoring of the white goods by remote access

▪**Smart grid integration & demand management**

- Reduced energy cost for the user
- Peak demand reduction and reduction of CO2 in the atmosphere

▪**E-Maintenance/ Remote Diagnose**

- Update of the embedded software (updated efficient algorithms, new recipes in the oven, software bugs...)
- Directing possible failures and pro-warning to the repair shops

As Arçelik A.Ş. we are willing and ready to participate in the projects and large scale experimentations with the future internet platform to realize above concepts. We have the ability and expertise in white goods embedded hardware/software design, home automation integration and wireless communication application.

In the large scale experimentation, with the cooperation of smart grid focused electricity utility supplier and smart meter producer we can integrate our products in a smart city application. For our scenarios, real time processing capabilities, security of the data and information privacy are the major functional expectations from the future internet.