European Multi-threaded Dynamic SME Networks for Market-Driven ELV Recycling

The recycling is the area urgently needing introduction of advanced ICT networking, keeping in mind that:

(1) for recycling, being crucial in achieving a global sustainable development through saving primary materials, and in diminishing global pollution, an interregional networking is the only way to assure sustainability, and
(2) the requirements upon networking in recycling are exceptionally complex.

The networking of recycling SMEs on trans-national basis, especially in new and old Europe is, more than in any other domain, a ‘conditio sine qua non’. This project will develop a set of advanced agent-based ICT solutions, to support establishment and operation of dynamic multi-regional and trans-national networks of car recycling SMEs, and an appropriate methodology.

The specific complexity is the multi-threaded character of networks, i.e. the participation of each SME in several value chains causing strong networks interconnection.

To achieve targeted highly dynamic business models, the 4 key RTD problems have to be solved.

As a result the innovative solutions will be provided as

(1) Set of free SW Building Blocks of a highly scalable, open architecture, agent-based platform for operation of dynamic recycling SME networks, including powerful distributed decision support system for network management and infrastructure for knowledge sharing, (2) methodology to model, establish and operate these networks, (3) 2 BCs addressing establishment of 2 SME networks, from new and old EU countries, and enabling the verification of the developed results.

The E-Mult system will be an effective means to build dynamic networks and will provide innovative infrastructure for their operation. The highly diverse and flexible ICT solution to revolutionise efficiency in ELV recycling will enable these SMEs to perform on a par with other industry and will give them an extreme flexibility, enabling them to go beyond the capabilities of the current approach in many other sectors.