Although FASUDIR is primarily focused on energy efficiency issues, it will also address the district sustainability and resource efficiency. Recommendations made by the IDST to increase efficiency will mainly focus on technologies and strategies which deliver more energy efficient buildings and districts, but without penalising and preferably enhancing the global sustainability, resource efficiency and the environment of the district.

With more than 70% of European building stock built before the first energy crisis (1970’s), energy retrofitting of buildings is envisaged as the most promising strategy to reach the EU’s “20-20-20” targets. However, the traditional approach to the building energy efficient retrofitting brings poor results in relation to urban sustainability, resource efficiency and economic return across a district. Although the district retrofitting approach is frequently the most sustainable and cost-effective, the complexity of decision making grows exponentially the larger the district in question. This is especially true considering the fragmentation of the construction sector, which includes many stakeholders, most of them SMEs.

To support the necessary building-retrofitting market mobilisation in Europe to fulfil EU-targets in 2020 and 2050, new business models and financial supporting tools need to be developed. FASUDIR will address this challenge by integrating through its IDST all key stakeholders and relevant networks at the district scale and across the entire value chain, as well as by ensuring that the newest technologies for energy and resource efficient retrofitting are incorporated, especially those emerging from SMEs.

FASUDIR will develop an Integrated Decision Support Tool (IDST), supported by a new methodology, which can evaluate the retrofitting needs of a whole urban district. It will help decision makers to select the best energy efficient retrofitting strategy to increase the sustainability of the district and will consider the set of buildings within as a whole energy system.
The installation of district scale systems makes it easier to include more sustainable energy management strategies, for example:

- Exploitation of the synergies between buildings due to their different energy use profiles to lower the overall installed power;
- Exploitation of wasted energy from industrial and other processes by the surroundings area;
- Installation of renewable energy sources such as biomass boilers or solar panels at a district level, overcoming many of the challenges related to the deployment of such technologies at building level (poor solar aspect, space requirements, biomass availability);
- Installation of cogeneration systems, which can provide thermal and electrical energy at the same time. Installing them at district level allows them to satisfy additional requirements or special conditions to avoid some of the problems associated with this equipment (high noise levels, required space, etc.);
- In historical districts, an urban strategic energy approach helps to overcome barriers and restrictions applied to individual historic buildings.

The FASUDIR tool interacts with the main stakeholders involved in the retrofitting process.

The FASUDIR project will focus on the definition of the retrofitting framework at a district scale, developing a comprehensive methodology that will allow selecting the optimal, off-the-shelf technologies and strategies for each specific energy retrofitting project in terms of sustainability as a whole (environmental, economic and social). The assessment will be based, among others, on currently available sustainability indicators from international sustainability committees (iiSBE) and certification labels (LEED-ND, BREEAM Communities).