

THE URBAN STRUCTURE UNIT APPROACH – A SUITABLE FRAME FOR ENVIRONMENTAL AND SPATIAL URBAN INVESTIGATIONS

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EXTENDED ABSTRACT

The way of life of urban population produced multifaceted variations of habitation. This always was associated with different spatial patterns within urban areas. To get a picture of the urban built up environment, settlements can be divided along structural characteristics to urban structural units. These areas with physiognomic homogenous character are marked in the built-up area by a characteristic formation of buildings and open space. Urban structural Units stands for a multitude of spatial significant attributes like typical building types linked with typical building sizes, also for characteristic urban density, for an equipment of infrastructure and for typical configurations of undeveloped areas. These attributes determine preconditions of today's urban living. They determine also the window of opportunity to affect the causes of environmental effects of urban habitation.

One example of using the urban structural approach is the development of a method that enables a rapid assessment of PAYT-conditions along the urban structure. The intention of the assessment is, to support stakeholders in implementing a Variable Rate Pricing System in urban waste management. The investigation is part of an ongoing European research project (PAYT) [1].

Starting point of the investigation is the development of a systematic of urban structural units regarding specific spatial factors of PAYT. Based on this, different technical solutions for waste collection were reflected in front of urban structures, to define different levels of "accountability of waste to the generator". The level depends on the combination of urban structure and technical solution for waste collecting. Linking this with benchmarks for a PAYT-yield (share of separated recyclables) and the cost of PAYT, ongoing investigations aim at a "what-if" –spread sheet, that will allow the user to assess different PAYT state choices for the various housing units.

Regardless to the outstanding results, the investigation has already shown, that the urban structural approach is suitable to structure complex issues of waste management dealing with spatial references. The differentiation of alternative technical solutions, regarding the potential effect to influence waste producers in separation their waste, is a basis to develop a methodical frame to assess cost and benefit of strategies for PAYT implementation.

Key words: urban structural unit, waste management, PAYT