

APPROACHES TOWARDS AN (URBAN) SPACE-RELATED QUALITY MANAGEMENT



Abstract

“Space-related modeling and simulation“ are to act as central working means for “(urban) space-related quality management“, assisting planning and design processes with its possibilities and contributing to comprehensibility and awareness of planning measures for all those involved in the planning process. The main emphasis of this work is dedicated to the description of elements concerning planning methods grouped as “key activities“ in line with a “space-related quality management“ around the “conception of building-up and urban volume, resp.“, as well as to the support the space-related production of models and simulation furnish.

(Urban) Space-Related Quality Management

Comprehensive quality management in connection with the quality securing conception has become the major auxiliary means in configuring production and service-trade processes. Examination of its applicability and the transformation of these conceptions with regard to planning and configuration processes suggests itself.

Considering area development planning as “material and procedural task“ “space-related quality management“ would have to refer to the quality of “production processes“ and the quality of the “product“ (meaning design). The “production- and service-trade processes“ and the “products“ to result, however, will considerably differ from conventional production processes and products of industrial manufacture.

Despite all required differentiations a number of “links“ encouraging a selective

transformation of the concept of “quality management“ in line with issues of area development planning result, e.g.:

- definition of terms
- clear determining of quality requirements
- shaping of awareness
- documentation of process and product
- increase of effectiveness and efficiency
- identification and analysis of key activities
- consistent consideration of client's requests
- rigorous application of quality
- critical examination and validation of activities, processes and findings
- methodical proceeding
- comprehensibility
- securing of quality achieved
- continuous quality improvement
- responsibility for the entire “product“
- confidence building

Three correlated topic complexes qualify

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Synthesis image:

Built reality: subject of knowledge and object of planning (example Vienna)

as “action fields“ in terms of quality management in space-related planning and configuration processes:

Frame conditions of planning processes

This complex refers to the definition of terms (“concepts“), system elements and their relations including the identification of those involved in space; the “configuration-determining physical“ and “function-determining system structure“ of space.

Space-related planning and configuration processes

“Completeness“ of planning processes is to be sought, major elements thereof as the definition of the problem in question, the problem-related elaboration of space-related quality requirements and their validation.

Space-related model generation and simulation

Space-related model generation and simulation is closely connected to all

elements and phases of planning and configuration processes.

„Key activities“ for (urban) space-related quality management are enumerated below in line with the individual phases of space-related planning and configuration processes: (view table 1)

The described “key activities” are to be regarded as elements of a correlated system of planning elements and not as a sequence of planning steps to be performed.

Model Generation and Simulation

(Urban) space-related quality management is directly connected with questions of space-related model generation and simulation. Space-related thought processes rely on space-related model generation and simulation.

Planners always work with abstraction and anticipations (preview) of reality (circumstances, interactions, findings).

Model generation and simulation issue a contribution accompanying the planning process making for comprehension of space, for the conception of planning ideas, for the communication in the context of the specific planning and configuration process, i.e. for conveying messages (“mediation”) regarding planning issues and for conveying planning ideas, assisting decision finding and public relations and thus for quality securing throughout the entire planning process.

Models and simulations are “auxiliary means in handling reality“ (Bossel, 1994:11). They are elementary components of the human world of

thoughts, permitting experimenting with variants and scenarios and thus source of new (space-related) knowledge. The simulation functions “knowledge”, “decision” and “communication”(Markelin-Fahle, 1979:19f.) illustrate the background of the planning process.

Space-related model generation is to be interpreted as approach based on reality, space-related simulation as the approach towards reality. The approach based on reality leads via concept analysis and model concepts, the approach towards reality via concept synthesis and space-related concepts (configurative and function-related concepts). Space-related concepts amount to “turntables”, model generation and simulation to the “driving belts” in the field of tension resulting from space-reality and space-related model (or language) making for configuration and structure development.

	“(Urban) space-related Quality Management” – Key Activities
ANALYSIS [Present]	
[A] Space-related “monitoring”, determination of specific quality requirements	Continuous monitoring of space, space-analytical representation of present stock and changes throughout time; periodical elaboration and verification of client’s requests and other quality requirements.
[B] Definition of space-related decision principles, specification of radius of action	Characterization of space - the “characteristics of space” acting as the basis for decisions regarding specification of frame conditions of spatial development and the definition of “conservation and alteration priorities”.
[C] Space-related conception aids, spatial ideas	Identification and development of “spatial models” as space-related conception aids and approaches to solutions, development of spatial ideas.
SYNTHESIS [Required]	
[D] Space-related (spatial) conception and development of variants	Increase of number of possible solutions by drawing up spatial development scenarios and solution variants, creativity simulation, early integration of “project development.”.
[E] Spatial impact analysis, checking of spatial compatibility	Screening of development potentials, sounding out and optimizing of “tailor-made fit regarding stock and planning” („fit“ and „fitness for use“); accompanying throughout spatial impact analysis and checks for spatial compatibility.
[F] Informing – “mediation”	Developing of comprehensive information and communication concepts; best-possible information in planning issues (environmental mediation) and on planning contents.
[G] Normative implementation of subjects of planning	The adequate legal wording of the constructional-spatial consent met is to grant that essential substance is observed during the transition from space-related “concept” to its constructional-spatial realization.

Table 1

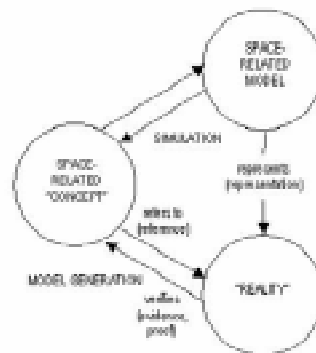


Table 2 (own interpretation, based on Schönwandt, Wasel, 1997:1118)

Space-related „Dynamics“ of the Semiotic Triangle

Remarks:

The “Semiotic Triangle” (cf. Schönwandt-Wasel, 1997) refers to the “correlation of language/signs and ideas/ thoughts and objects”, resp.. It is based on a clear differentiation of (material) “objects” and “human thoughts”, of “signs” and the “denoted”. Language (and words, resp) as well as signs thus first denote specific objects and events and secondly, also specify concepts, some words, signs and linguistic

expressions only refer to concepts. They refer to “two kinds of “objects””, i.e. “concepts” (immaterial objects) and “material objects and events, resp.”.

Urban Space, Building-up Volume

Settled space, urban space and its built-up volume (as major parameter) are those “concepts” to be secured and improved. Built reality stands for the spatial ideas of past and present generations: it is subject of knowledge and object of planning. The configuration of urban space and its partial spaces is mainly characterized by securing and creative advancement of the “building-up and urban volume”.

The “interaction between compound three-dimensional elements and free spaces” of the settled space determines the quality of public space. The architectonic object and its relation to public space is that delicate joint to be designed with special care. Building-up and its volume are of special importance within the framework of the components of space constituting “urban design”, “urban space” and “public space”. Public space predominantly acts as reference object for the perception of space, the space experience and the behavior of those involved in space. The public space, the village and urban space attract public interest due to their significance for the general public, arouse the public attention and are object of public appropriation due to space utilization. By determining the building-up and urban volume an essential principle for village and urban design is established.

Digital Cities, Urban Space Experimental Labs

Model generation and simulation in an up-dated manner are interlaced with the development of “digital cities” and “urban space experimental labs”. The “digital city” is put to use today in order to develop the “real city” of tomorrow, calling for clear definition, selection and extensive digitization of space-relevant data, their automation-supported recording,

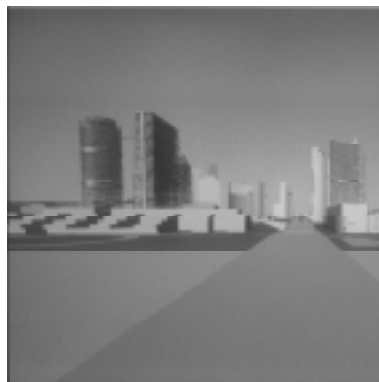
continuous actualizing and organization in space-databases and the development of suited user-interfaces.

“Digital cities” (cf. Voigt&Linzer, 1999) are to be regarded as “information-turntables” where communities (larger cities such as smaller municipalities and municipal associations) issue information relevant to planning, citizens and users. “Digital” cities also can be considered as “working models for the city of the future”.

An “urban space experimental lab” (cf. Voigt et al., 2000) could and should in its broadest meaning represent an “expert system” and a “planning assistance system” prior to decision making as well as an auxiliary means supporting decisions making up-dated decision principles pertaining to planning available to decision-makers and those in charge (the planning administration, extern specialists and consultants, politicians and above all committed citizens), accompanying decision processes as accurately as possible and assisting in conveying information on the subjects planned.

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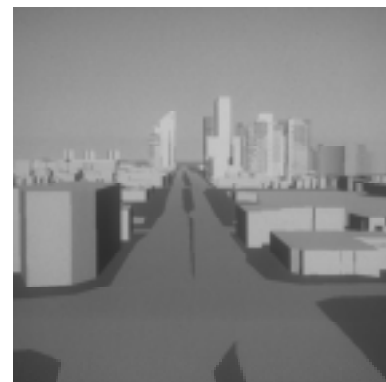
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Figs 1 & 2:

“Digital cities”: working models for the city of the future (example Vienna: workshop highrise buildings “Wagramer Straße”)