SITUATION/ MUD./KERSTI N HÖGER

From HUBs to MUDs

The featured projects indicate that hubs are diversifying into what could be called a hybrid urban typology, quite different from their monofunctional predecessors. In the light of the current restructuring of the city into more multifaceted urban spaces, these constellations hold promising opportunities. By merging formerly separated typologies for consumption, business, housing and culture around public spaces, they emancipate themselves from their original transport function. They transcend the qualities of traditional infrastructural hubs as spaces of transit and exchange to form self-sustaining entities, cities within the city. As comprehensive mixed-use developments (MUDs) which integrate diverse social groups – not only the business elite and tourists, but also inhabitants and suburban day trippers – they become intersection points between the global and local, allowing an 'intense urbanity' to evolve.

MUDs represent important urban development opportunities in prominent locations like France's Euralille, Berlin's Potsdamer Platz, New York's Times Square and Oslo's Christiana-Bjorvika, all of which have been upgraded and extended into lively urban quarters. In these projects, the implications of MUDs for the development of both the scope and image of the urban space are made manifest. As urban destinations, they seem to mirror all facets of everyday urban life. The combination of housing with local and international commerce allows a certain interface between high-end city centres and lower density areas.

As soon as business and commerce leave the confines of the traditional office block or shopping mall to encompass entire districts or neighbourhoods, the urban design strategies increase in complexity. The socio-economic aspects of MUDs imply multiple actors beyond the individual property owners or corporations in question, and their scale and prominent location demand elaborate private and public strategies. They therefore become strategic planning tools for governments in the framework of public-private partnerships. While the objective of private investors and developers is maximization of profit, the public's aim is to stimulate local development as well as to satisfy the citizen's growing demand for social responsibility and social experiences. It is therefore in both their interests to create an attractive urban ambiance. This common goal is what binds the corporations and the city together. Through the merging of commerce with social experiences, underused or blighted areas can be revitalized and acquire a new image.

With their high density, their 24-hour rhythm of human activity, their function as urban meeting place and the friction between different social networks, hubs have always been dynamic and versatile spaces. Dynamic places require equally dynamic urban design strategies and tools. In order to become lively and viable urban places, hubs need to be able to respond to and integrate the ever-changing set of demands from private and public stakeholders, while at the same time generating urban quality. How these developments might be shaped and steered for the sustainable development of the urban environment, can be illuminated by some of KCAP's projects.

KCAP's dynamic urban design strategies and tools

KCAP conceptualizes the creation of comprehensive urban environments as social hubs by incorporating their inherent qualities from the very beginning of the design and planning process. They have developed dynamic strategies and design rules for identifying four major urban elements: a permeable network of public spaces, a meaningful morphology, a modular programme and phased development. Examples of the deployment and impact of these urban rules and tools are the master plans for Groningen CS, Stadtraum HB Zurich and Bishopsgate Goods Yard, London.

Permeable public spaces

In all three projects, the public space constitutes the most essential design element. In each case, it is defined as a series of squares integrated into a network of streets that is based on the extension of existing roads through the site. These 'connective tissues' increase the number of potential destinations within walking and cycling distance. They also allow the continuation of axial views through the new area. This high degree of physical and visual permeability at the strategic level is mainly ensured through the provision of main thoroughfares which enable city-wide connections and serve as backbones for the areas, such as the diagonal at Stadtraum HB or Braithwaite Viaduct at Bishopsgate.

These civic spaces, which are open and accessible to all, provide the setting for high-quality buildings, offering places not only to consume, but more particularly to sit and relax. They also connect the city centres with revitalization areas such as southern Groningen, Zurich Aussersihl, and East London, repairing the existing urban fabric fragmented by previously autonomous infrastructural hubs. The role of the MUD as social condenser is especially important at Goods Yard which simultaneously faces London's wealthy City and one of its poorest boroughs.

Meaningful morphology

Those more or less stable street grids serve to direct any future development and, in conjunction with height and density regulations, are the starting point for defining plots and envelopes within which to build. Architectural quality within the envelopes is ensured by an established set of criteria and rules based on several parameters such as sight lines, shadow impact, programmatic needs, appearance, circulation and so on. With the help of such rule sets the height, form and position of the building volumes, which are dynamically interrelated, can be regulated. They allow for a wide variety of options since the building volumes inside the envelopes are not predetermined, but flexibly shaped in accordance with the programme and other emerging needs.

All three KCAP projects are based on similar rule sets which entail two main aspects: a 'block rule' that regulates the boundary of the buildings in relation to the surrounding urban structures, and a 'tower rule' that allows maximum

exploitation of each plot without disturbing the urban fabric at ground level. This is achieved by a setback rule coupled with regulations for shadows cast on neighbouring buildings. The objective of the rule sets is to avoid monolithic megastructures and to allow instead 'anarchistic ensembles' that can develop an independent character while naturally evolving out of and/or enhancing the existing urban structure. Though the basic rule set is the same in all three cases, the outcome is quite different, depending on the local context in which they are embedded.

The rule set is most freely applied in Groningen CS. The block and tower formations can be designed without reservation to generate a strong and identifiable urban expression that can radiate into the underdeveloped, fragmented surrounding areas and give them a new image.

The Bishopsgate project attempts to integrate the area's diverse surroundings. To guide this integration, three distinct zones were defined, their height limited chiefly by London's strategic viewing corridors. The zones range from a high-density area with primarily commercial uses akin to the surrounding Liverpool Street Station, to a finer grain, lower density mixed-use scale akin to the area north of the Goods Yard and Brick Lane.

For Stadtraum HB, KCAP originally proposed a series of towers as setbacks on a 19 metre-high block structure, continuing the surrounding urban pattern. Given the proximity of Stadtraum HB to existing and enhanced transport infrastructures, the site has a potential for high-density development. Kees Christiaanse: 'As a social condenser for the whole of Switzerland [and even beyond], Stadtraum HB can absorb any density.'(2005) High density and taller buildings of up to 100 metres would be beneficial, not only allowing private investors to maximize commercial activities on the site, but more especially providing the critical mass necessary to generate a vibrant public realm with landmark qualities. However, for ideological and legal reasons the public and private stakeholders imposed a building height of 40 metres. With this limitation, the blocks had to be enlarged to achieve a viable and profitable floor area. Not only is the resulting density less than KCAP had wanted, but the 'inflated' blocks and stunted towers interrupt the surrounding urban pattern and tend to form a monolithic island, the very thing the planners had wanted to avoid.

This outcome shows that the rule sets do not cover all conditions for securing urban quality. The system's shortcomings could be counteracted by defining more rules. However at a certain point, this would lead to fixed master plans and a loss of the desired flexibility.

Modular programme

All the projects illustrated here comprised a diverse mix of functions – residential, office, retail, leisure, cultural, and public spaces – in accordance with local needs and demands. Nowadays, the lifespans of building uses and programmes are becoming shorter and shorter. It is therefore essential that both the urban structure and the morphology of buildings provide a certain level of flexibility for future changes. This calls for a highly modular configuration and distribution of programme, which can be regulated by rule sets.

Though the differentiation of functions is freely adaptable to market demands in all cases, for certain sensitive or critical types of use minimum and maximum quantities are defined. For example, in Stadtraum HB a minimum of 11% housing, 6% cultural, educational and non-profit institutions and a maximum of 14% commercial spaces had been fixed. It is very doubtful whether 11% housing would be sufficient to generate a lively urban quarter, especially after office and retail hours. Fortunately, the enduring housing shortage in Zurich will exert pressure for an increase in these numbers. Moreover, such regulations will avoid the creation of large mono-functional ensembles.

Additional rules allocate certain uses to specific locations. For example in all three projects, commercial spaces have to be placed along street fronts in order to enliven public spaces and pedestrian areas, while housing is to be distributed across the sites in order to guarantee a lively, safe and viable urbanity.

Phased development

The realization of the three projects is a fairly long-term process. The phasing of development is therefore critical to their success. Phasing is determined by a series of factors not the least of which are the economic and political realities of implementing such large-scale revitalization schemes.

At Goods Yard, the development of new transportation infrastructure (the ELLP and associated station) and the need to conserve heritage sites such as the Braithwaite Viaduct, have to be taken into account. At Groningen CS, the fragmented ownership, the fact that the area is surrounded on all sides by existing buildings, and the presence of a sizeable railway station constitute difficult preconditions. In the case of Zurich, the individual properties will become vacant at different times and the temporary Sihlpost station is required to remain functional until the new Löwenstrasse metro station is completed.

Because the projects have to be able to respond to unpredictable scheduling and to difficult urban preconditions, a complete re-evaluation of these conditions will be carried out after each phase of development. In order to achieve a gradual and continuous speed of development the design must avoid mutual dependencies as well as half-finished situations. This is not easy considering the complex infrastructures above and below ground. However, the proposed urban design schemes allow for several different phasing scenarios. In this way, the implementation of the design concept can respond dynamically to the pace of realization. The phasing strategy allows for the opening of buildings and places immediately following their completion. This facilitates a gradual impact on the revitalization of the sites and their integration into their surroundings.

Responsive MUDs as urban catalysts

In our contemporary society which attempts to be democratic, neither urban design as pure art or 'public gift', nor a laissez-faire economically driven architecture seems viable. As mediators between private and public values, urban designers and planners are forced to acknowledge the importance of the market in order to use it to their best advantage and developers are in turn obliged to create more sustainable alternatives.

KCAP attempts to integrate the commercial mechanisms and production conditions of corporate urbanism in order to develop responsive design strategies. The office attributes great importance to urban design and aims to integrate it into the economic and political power game, whereby market principles and political and legal constraints are appropriated in a proactive, yet critical manner.

With the design of dynamic rule sets, the office is able to coordinate criteria at a high level of architectural complexity. These rule sets allow for a creative integration of socio-cultural values and pragmatic requirements such as economic and functional parameters. They provide feedback for the generation and evaluation of the urban design. In this way, a high degree of freedom is created, enabling the practice to respond optimally to market demands and allow for a multiplicity of architectural interpretations. Urban scenarios and building volumes can be generated in accordance with specific constraints and rules, where the results, though not based on predetermined forms and programmes, still fulfil given requirements and secure overall urban quality.

The projects discussed here are examples of how responsive urban design strategies can achieve urban revitalization by reconciling corporate promotion and the creation of social spaces. In most cases, it can be demonstrated that the consideration of some of the more ephemeral characteristics of urban neighbourhoods and their socio-cultural context is invaluable to the creation of long-term sustainable development. This benefits both the private investors and the public, chiefly because the MUD's integration into the city significantly enhances its viability and impact on the surrounding urban context.

All three projects enhance the status and image of their respective cities both as global centres and as local neighbourhood communities. By providing a connective network of streets and making the projects landmark sites in their own right, they allow for a high degree of physical and perceptual permeability. In this way, they become integrators of the urban tissue and catalysts for regeneration within and around the area. However, the extent to which the strategies and rule sets are actually able to foster such responsiveness remains critical.

The strength of the rule sets is undoubtedly their ability to be used as a mediation platform, allowing for non-hierarchical discussions between the public authorities, private investors and potentially even the neighbourhood community. By this means, interests and conflicts can be identified and negotiated in iterative cycles from the inception of the design process. But even when the rule sets are 'good' and appreciated by all stakeholders, there is still a need for engaged directors with the competence and will to make the design guidelines effective. The prevailing short-term legislative periods would seem to be an obstacle in this regard, especially in view of the long-term development of the projects. Moreover, the continuous tuning of the rules in accordance with changing conditions requires design supervision throughout the realization process in order to guarantee urban quality.

As shown above, urban quality can be facilitated through the design of specific rules to regulate such things as the balance between large and small scale, programmatic differentiation of complementary uses, the selection of individual architects by a competent jury committee and the design of public spaces. However, with increasing refinement, the rule set will at a certain point become a fixed master plan, losing the responsiveness and catalytic impact aspired to in the first place. The ideal, therefore, is a mixture of 'controlled' and 'laisser-faire' urban design and management.

Another major task in the design and implementation of the rule sets is to make them understandable to urban leaders, experts and the wider public. In some cases, the local culture is resistant and the urban laws are not yet geared to handling the freedom and potential provided by the rule sets. Normally, urban design becomes fixed with the master plan. In contrast to this rigidity, the rule sets allow for later modifications which must then pass through all the legal processes. The challenge is to overcome and respond to these conventions. For now, KCAP freezes the dynamic design at specific stages in order to reduce its complexity and make it communicable via specific scenarios. The fact that KCAP is concerned about advancing the rule sets and their implementation raises hopes for more responsive urban designs in the future, facilitating important impulses for the sustainable development of the urban environment.

Literature: **Christiaanse, Kees** 'Der Weg zur lebendigen Stadt', in: *Stadtraum HB: Eine neues Stadtquartier für Zürich.* Special supplement to *Hochparterre, 4*, 2005. **Höger, Kerstin** 'Brandhubs: Catalysts for responsive urban design', in: *Entwurf und Strategie im urbanen Raum.* ETH Zurich Institute for Urban Design, 2004. **KCAPML** *Bishopsgate Goods Yard Development Strategy.* KCAPML, April 2005.