INTRODUCTION

1. This paper examines the concept of mixed-use developments and provides an overview of its development in the United States. Reference is also made to recent policy initiatives in Singapore for such development. It then reveals the planning debates on this concept and explores the challenges and opportunities for applying such an approach to strategic planning in Hong Kong.

BACKGROUND

2. In North America, a mixed-use development (MXD) can be defined as a development having three or more revenue-producing uses, which are functionally and physically integrated within a coherent plan. Sometimes, office space is the dominant use; sometimes retail, residential or hotel spaces are the dominant uses; sometimes there are no clear dominant uses. MXDs are often characterized by the dramatic design, size, and impact of the developments. They may also include major public spaces and amenities, making them subject of abroad or attention (Urban Land Institute, 1987).

ORIGIN AND EMERGENCE OF THE CONCEPT OF MXD IN THE U.S.

3. Due to the lack of high-speed transportation system, the need for security and travel convenience between destinations, many ancient and older cities exhibit traits of compactness, high density and integration of mixed uses. However, the development of new construction techniques, the invention of the automobile, the tremendous growth of urban area, and the implementation of zoning laws (such as the separation of residential homes from polluting factories), have altered the context for development and planning. The predominant American city planning is characterized by low density and the division of land into different uses with little pedestrian-oriented interaction.

4. In North America, MXDs first appeared in force in the 1960s. They have grown and blossomed significantly in the 1970s and became a mature development type in the 1980s. In terms of location, MXDs took root in downtown areas. They were mostly the centrepieces of downtown revitalization programmes to re-establish downtown diversity by incorporating a number of uses that could expand the functions and generate more activities for the areas. Many of these MXDs incorporate office, hotel and retail uses.

5. Over the years, MXDs have expanded to the edge of downtowns. They are particularly effective in separating commercial uses in downtowns from residential uses in suburbs. Many of these areas are also well connected with mass transit systems, making them more commercially viable.

6. In recent years, MXDs have grown in importance relative to single-use projects, especially in suburban areas. Rising land prices in suburbs mean that higher-quality projects and faster completion are needed. Fittingly, MXDs usually possess these qualities. Furthermore, besides the traditional uses such as office, retail, hotel and residential space, other components such as culture, recreation and entertainment have also been included in MXDs.

7. Generally, three forms of MXDs can be identified:–
   - Multi-towered megastructures - usually include individual buildings joined together by a common platform or atrium;
   - Freestanding structures with pedestrian connections - individual buildings do not share a common base but are joined by connectors at, above, or below grade; and,
   - Multi-use towers - “vertical mixed use developments” which incorporate a number of uses in a single vertical high-rise structure.

8. For example, vertical MXDs can be found in a number of buildings in Chicago, one of which, the John Hancock Center, has 100 storeys. The condominiums occupy the lower and the uppermost levels, offices are in the middle, while other facilities, such as banking, parking, restaurants and commercial operations, occupy various levels in the buildings. Another good example of a very dense downtown project driven by office demand - but including numerous amenities and ancillary uses - is Rockefeller Center in New York City. The integration of numerous office buildings with retail, recreational, and cultural facilities in one development is exemplary, and the project serves as one of the earliest and most important prototypes for the mixed-use developments that sprang up in the 1960s (Urban Land Institute, 1989, p. 10).

SINGLE USE VERSUS MIXED USE

9. During the 1980s and 1990s, the practice of zoning (separation of land uses) has been criticized on environmental, social and
economic grounds. These criticisms have centred around sustainability issues and security issues resulting from depopulated downtowns. It is generally believed that mixed-use developments are more sustainable by reducing the need for transportation, and can help create vitality and diversity in otherwise monotonous urban areas with only single activity cycles.

10. Specifically, planning professionals in the United States advocate MXDs for the following reasons:

- Increasing municipal revenues;
- Creating a better urban environment;
- Treating blight and decay;
- Improving ridership on mass transit;
- Integrating public uses (e.g. arts and cultural facilities with hotels).

FACTORS FAVOURING MXDS

11. As mentioned above, various factors have played key roles in supporting the MXDs and the more important factors include (Urban Land Institute, 1989, p. 17)

a. The many single-purpose developments, such as automobile-oriented residential subdivisions, shopping centres, and office parks that were competitive with the central business district (CBD) but better located to serve a growing suburban population, were characterized as "reducing cities and countryside alike to a monotonous, unnourishing gruel.” Mixed use can be seen as an answer to anonymity, through focused development in large increments and with a special sense of identity.

b. As a result of many large corporations’ and financial institutions’ becoming involved in real estate development, capital was available for large-scale real estate projects. This factor was part of a general shift in the flow of capital resources, particularly in large-scale, highly visible projects.

c. Developers sought ways to build greater "supportable values" through higher density and mixed-use development. These higher costs also encouraged builders to complete projects faster on larger parcels through diversified uses.

d. Some communities relaxed single-purpose zoning to permit a mix of uses. Initially reflected in some renewal plans, such relaxation of single purpose zoning increasingly has taken the form of a planned unit development (PUD)-type ordinance. More recently, special district zoning was initiated in New York City - under which several mixed-use projects have been developed - and mixed-use zoning was introduced in 1974 in Washington, D.C.

e. The real estate development community has grown more sophisticated, and more firms tend to tackle larger and more complicated projects. Numerous firms now are national in scope and have developed substantial track records in MXD.

f. Influential planners and urban critics like Victor Gruen and Jane Jacobs championed the concepts of dense, multifunctional environments and the diversity of true urban environments.

LOCATION ATTRIBUTES

12. Locational attributes for MXDs have been identified (Urban Land Institute, 1987, 52; The Royal Institute of Chartered Surveyors, 1996, 3), They are:

- Proximity to adjacent activity centres and neighboring uses;
- Access to, and visibility from highways, transit systems and pedestrians;
- Site characteristics such as size, shape, topography and soils;
- Availability of utilities, roads, and public facilities and services;
- Land use control regime such as zoning, subdivision regulations, building codes and local government attributes;
- Potential use, including the type and quality of use and the timing and size of the market for it;
- Land cost, in relation to the above attributes;
- City or town centres comprising the commercial and civic core of towns and cities;
- Inner city areas and on brownfield sites comprising derelict, vacant or built-up land needing regeneration;
- Suburban or edge-of-town locations; and
- Greenfield locations where planning policy permits.

PUBLIC FACILITATION

13. In the United States, the public sector's interest and participation in MXDs have taken a variety of forms, from non-interest and conflict to active encouragement and involvement with development. The public sector can facilitate MXDs in the following ways (Urban Land Institute, 1989, p. 127):

- Assembling land with its power of eminent domain;
14. Regarding land use control, PUD has been increasingly popular, particularly in suburban communities, as a means to achieve a better and efficient layout. This allows for integration of different land uses at a proper scale. (Urban Land Institute, 1989, p.128).

The PUD process allows a much freer placement of buildings on the land than conventional lot-by-lot systems. The total parcel rather than a single lot is the unit of regulation, and controls apply to entire developments. Densities may be calculated on a project basis, allowing the clustering of buildings to create useful open spaces and preserve natural site features. Increased flexibility allows project elements - housing, transportation systems, open spaces, non-residential uses - to be complimentary and interrelated with one another. Traditionally tight controls over use districting are also relaxed, permitting mixtures in dwelling unit types and land uses within the same project (American Society of Planning Officials, 1973, as quoted in Urban Land Institute, 1989, p. 130).

15. For developed areas, many local authorities have reviewed their zoning ordinances to include mixed-use classification so as to accommodate the diversified but compatible land uses. For example, Oakland in California, Quebec in Canada, and Washington, D.C. have used commercial districts that allow housing.

16. Another example is the Special Long Island City Mixed Use District in New York City. In July 2001, the City Authority proposed to rezone Queens Plaza Subdistrict from a light manufacturing area to a mixed-use area. This would allow light manufacturing and other industrial uses, as well as commercial, residential, and community facility uses, in the Subdistrict as of right. However, to ensure land use compatibility and achievement of urban design and planning objectives, the Authority also imposes restrictions on developments within the area. For example, glazing and non-residential uses would be mandatory on the ground floor of most of the developments so as to create a lively and pedestrian-oriented environment. Under the development scenario outlined in the Environmental Impact Statements, approximately 5.0 million square feet of office development and 300 housing units, in addition to retail and institutional developments could be provided. To avoid unnecessary disturbance to residents, non-residential uses above domestic units in the same building would be restricted. There are also off-street parking requirements specified in the rezoning proposal. Relaxation of these restrictions would require planning permission from the Authority.

POLICY INITIATIVES IN SINGAPORE

17. As a response to the New Economy and new work processes (which transcend the conventional working hours and the blurring of business and industrial processes), the Urban Redevelopment Authority (URA) in Singapore encourages more MXDs to optimise land use. In the current strategic planning review of the Concept Plan, the Singapore URA proposes that more industrial sites could be designated "industrial white" zone or "Business Park-White" zones and relax development control (the use quantum of the white zone could exceed 15% of the total GFA) for business park, industrial and warehouse development.

18. In this respect, multi-purpose blocks integrating housing, community and commercial facilities should be developed in future. For example, compatible use such as showrooms, dormitory housing and institutional uses should be allowed within industrial/business park developments. Planning guidelines should also be relaxed to allow for mixed uses where offices can be integrated with high-tech industries, institutional uses and living space. In addition, recognising the trend toward 24-hour and living space - "work-live" environment, URA supports review of zoning regulations to cater for such need (the use quantum of the white component could exceed 15% of the total GFA subject to evaluation on a case-by-case basis). However, it considers that there should be a need to protect residential areas from possible disamenities generated by the work component.

19. This is a new attempt and the impacts have yet to be studied by URA. However, it has been recognised that matching of the provision of infrastructure and community facilities would be a valid planning concern. At present, the pilot scheme is still confined to small-scale development of usually not more than 5 ha.

APPLICABILITY TO HONG KONG

20. Like other cities around the world, Hong Kong is facing economic restructuring and globalization which are reshaping its urban system. Through the advancement of information technology, there are new ways of doing business (e.g. through e-commerce and telecommuting) resulting in a new "work-live" relationship which creates a need for supportive residential cum work environments (such as a flexible built form and regulation). With Mainland's imminent entry into the World Trade Organization and our current economic restructuring, we may need to provide greater flexibility in our planning system including the established regulations governing the conversion of uses within buildings to facilitate foreign and local investments in order to maintain our competitiveness. There is also an urgent need to arrest decay of our old urban areas and create a "dynamic" and "living" urban environment. It is timely to review some of our efforts in this area and consider whether we are moving in this direction.

21. As Hong Kong is a very compact city, developments with mixed uses (though in different scale and magnitude) are not uncommon in close proximity to the urban areas. Under the existing land use zoning mechanism, mixed uses are already allowed for as long as they are compatible with the planned land uses and cause no environmental nuisances. For instance, under the sites zoned "Commercial/Residential" (C/R), "Comprehensive Development Area" (CDA) and the lower three floors of...
Residential (Group A). Therefore, many residential and office towers were built above retail podiums or industrial/office buildings with retail facilities on the lower floors. Clusters of mixed uses could also be found near the transport interchanges like rail station. Examples include International Finance Centre in Central, Pacific Place in Admiralty, Island Place in North Point, CDA development at MTR Kowloon Station.

22. In line with the principle of providing flexibility in our land uses, the "Other Specified Uses (Business)" zone has also been introduced recently by the Town Planning Board (TPB) to allow maximum choices in the uses of existing industrial and industrial-office buildings, as well as in the development of new buildings for both commercial and clean industrial uses. To further facilitate development of IT and telecommunications industries, the TPB also sees the need to expand the scope of uses to be permitted in the "industrial" ("I") zone to accommodate such industries as they are considered as compatible with the industrial uses. However, in view of the fire safety consideration, general commercial and offices will still be subject to planning control in the "I" zone.

23. Regarding the provision of flexibility in converting uses within old buildings. There are also some constraints in the local context especially for the conversion of obsolete "I" buildings. Owing to the compact clustering of industrial buildings/developments in Hong Kong's industrial areas, 'obsolete' industrial buildings are often located amidst or by the side of other industrial buildings still in use. It is difficult to allow mixed uses with residential components and conversion of old industrial buildings to residential uses without resolving the interface problems with the neighbouring industrial buildings with active industrial operation. However, to allow commercial uses in industrial building, statutory planning control has been relaxed in the past few years, evolving for Industrial / Office use to "OU (Business)" use which was introduced last year. Unlike other western cities such as New York or London, the conversion of industrial buildings for residential use can normally take place after a large industrial area has become obsolete and industrial activities have all moved out at about the same time.

24. If we were to allow mixed uses or encourage reuse of old buildings, there are some very fundamental issues to be addressed which are set out below:

- We need to consider the compatibility of the proposed uses and the resultant environmental impacts arising from any interface problem either within the same development or with the neighboring uses;
- If conversion of non-domestic units for domestic uses is involved, we need to address the differences in plot ratio control;
- We need to consider whether indiscriminate flexibility may create infrastructural capacity problems in the local transport network/junction and sewerage system;
- We need to consider the adequacy of the provision of community facilities; and
- We need to consider the implications of fire safety aspect and the necessary amendments of the Buildings Regulation.

25. The implementation of MXDs requires rethinking of the role of the public sector and requires a more pro-active approach by various government departments. The implications on lands matters, the Buildings Ordinance, the fire safety regulations and the Town Planning Ordinance would also require further examination and we have started some preliminary discussions with departments concerned with a view to addressing the issues mentioned above.

REFERENCES


PLANNING DEPARTMENT
JANUARY 2002