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## A University-City Complex, a Model for Sustainable Development: a Case Study in Vietnam

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### Abstract

In modern ages, universities have shaped the civilized society and contributed to its knowledge base by educating the workforce, and providing consultation to government and businesses. In the wake of globalization, it is necessary to establish mutual beneficial relationships between universities and their urban areas; hence, the university - city complex model. In the context of Vietnam, most universities are located in urban areas; none of which, however, has fully engaged in the local community in meaningful ways. With the core idea of “Building an intelligent and ecologically friendly city”, this paper proposes the design of a university - city complex in Hung Yen province, Vietnam. This design will stimulate sustainable development of the local community through green architecture, spatial planning of university complex, and careful design of education programs and services. This paper will also present the conceptual knowledge of the subject, potential factors driving the development, and successful case studies of university - city complexes.

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### 1. Introduction

The development of universities has been considered evidence of civilization in countries around the world. Universities have contributed in many ways to modernize urban societies: they are the cultural centers that contribute to the physical landscape of cities, serving as permanent features of the urban environment in today’s era of sustainable development. They also play a key role in urban economies, and act as a moral force that shapes the “civilized” society [1]. Universities are the nucleus of their surrounding communities, with symbiotic links to all

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residential, commercial, and industrial areas. For these reasons, the authors decided to research the university-city complex model - a model in which a university demonstrates strong commitment to serve the intellectual needs of its surrounding communities, and to fulfil its missions through developing a better society.

Many concepts (e.g. urban university [2], metropolitan university [3,4]) have been developed to define the terms “university-city complex model”. These concepts share a common theme, whereby such complex model provides its internal and external communities with education services (e.g. higher education programs, teaching, research), and public services and values (e.g. campus, health-care, power/water supply networks, civic engagement, ethical development of students); all of which interact and reinforce one another. The university-city complex model has been a major contributor to the social, cultural, and economic life of modern cities.

Urban development in Vietnam has been strongly influenced by the simple structure of its ancient villages: cities have been developed along the main roads, and urban activities have occurred spontaneously. These development trends have affected the formation of universities in Vietnam. In fact, almost all Vietnamese urban universities are located in city centers; their campuses located separately in different districts, within adequate facilities and little association with the surrounding community. These factors have negative effects on students’ social life, reducing the effectiveness of education programs. In such context, this paper proposes the application of the university-city complex model in Hung Yen province, Vietnam, developed based on local economic, cultural, social conditions, and following the trends of urban universities in the world. This model will involve the application of sustainable urban development and metropolitan university theories, focusing on the core idea of “Building an intelligent and ecologically friendly city”. One thousand hectares have been reserved for the complex in Hung Yen city; of which three hundred hectares will be used for urban development, and the remaining for education and research facilities: 10 - 12 universities serving 80,000 students, 10,000 staff, faculty and other workers [5]. The proposed university-city complex will act as an urban open space, offering a way to spread knowledge and improve the human condition.

## 2. Literature review

### 2.1. The concept of university-city complex model

The terms ‘urban university’ and ‘metropolitan university’ have frequently emerged in literature reviews to describe the concept of university-city complex model. More than three decades ago, [2] first articulated a concept of urban university that focused on urban-oriented education, research, service strategies and community responsibilities. In 1994, [3] proposed a model for higher education that dealt with the concept of community involvement. His model ‘involves undergraduates in social issues, extends classrooms into communities, balances theory and practice, promotes an integrated view of knowledge, and expands the nature of scholarly work’. His model has spurred researches on the influence of community engagement on the faculty work, learning and teaching, campus mission, and the quality of life in communities [6].

Metropolitan university has community engagement as its central mission. This model emphasizes the community involvement throughout the work of its faculty: teaching, research, and services (Declaration of Metropolitan Universities, n.d., as cited in [7]). Metropolitan universities are committed to their cities and regions. They focus on education, basic and applied research that are “creating interdisciplinary partnerships for attacking complex metropolitan problems” (Declaration of Metropolitan Universities, n.d. as cited in [7]; [4]). Metropolitan universities provide services that solve local problems, support the community and stimulate economic development. [8] emphasized the important role of metropolitan university in responding to the twenty-first century challenges.

In summary, the terms university-city complex model will be used throughout this paper to describe a higher education model in the context of Vietnam. This model inherits the characteristics of metropolitan university: one diverse group of institutions with strong community engagement that provides education and other services to students, teachers and the community. Education, economic growth, social and civic engagement will be the core concerns in the development of the university-city complex model.

### 2.2 Potential Factors Driving the Development of University - City Complex Model

#### *Urban growth*

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