Chapter XIV
Emerging Middle Eastern Knowledge Cities: The Unfolding Story

Ali A. Alraouf
University of Bahrain, Kingdom of Bahrain

ABSTRACT
Examination of the knowledge cities’ contemporary status reveals tangible developments and collective efforts for declaring and building such cities around the globe. On the contrary, Middle Eastern cities are building technologically isolated entities with the hope that they are promoting the knowledge city concept. An analysis of projects like Egypt’s Smart Village, Dubai’s Internet City and Knowledge Village, and Qatar’s Educational City and Science and Technology Oasis is insightful in the evaluation of emerging Middle Eastern Knowledge Cities. The purpose of this chapter is to explore the knowledge city concept in depth to relate it to the ongoing processes of creating knowledge-based economy developments in major Middle Eastern cities, particularly in Arab Gulf Cities. It discusses the principles of a knowledge city, and portrays its distinguishing characteristics and processes. In addition, the chapter introduces the concept of urban creativity engines in the context of the Middle East, and presents examples of various types of creativity engines. Although this concept and its related terminologies are relatively new, the chapter proves that there are many historical examples of knowledge cities and creativity engines both regionally and internationally. A focus on the traditional built environment of the Middle Eastern cities is included to support the main argument of the chapter.

INTRODUCTION
“In the knowledge economy, human development depends not on having more but by being more-becoming a co-creator to the future of humanity”
Dr. Thomas F. Malone (1989, p. 9).

The world’s growing cities are a critical fact of the 21st century and represent one of the greatest challenges to the future. By the year 2050, cities with populations over 3 million will be more than double; from 70 today to over 150 (Wagner, 2001; Dvir, 2003). When knowledge is, perhaps,
the most important factor in the future of a city’s economy, there is a growing interest in the concept of the knowledge city (KCs). Hence, what are the qualities of future cities becomes a crucial question and its answer creates a challenge for architects, urban designers, planners, developers, and decision makers around the world. In addition, another explosion of cross-boundary Internet activities took place. It creates a modern city management landscape that defies traditional geographical limits. It also creates a highway of networked knowledge operating in the best interest of our common good, but not on the expense of individual development. Globally, there has been an explosion of worldwide initiatives to reconsider contemporary cities as hubs of knowledge and all its related activities. It seems that the challenge of human kind in the third millennium and in a post-globalized world is how to increase the innovation capacity and performance of human settlements by creating an active community of knowledge-sensitive cities or regions that will rapidly learn from each other.

Middle Eastern cities are struggling to be part of this mechanism of change and development. Major economic changes are taking place within these cities. For instance, the wealthy Arab countries, basically located around the Arabian Gulf are becoming fully aware of the necessity for diversifying their economical bases. They have been trying to move from an oil-based economy toward a more multi-dimensional one that will help them survive the inevitable dry up of their oil resources. Other cities that are located in the rest of the Middle East also have realized that a new paradigm is approaching where the typical production of physical commodities is replaced by the knowledge production, which is based primarily on the power of human capital and the unlimited creativity. While acknowledging that coping with this new paradigm is inevitable, obviously a major confrontation with the contextual realities of these cities is a fundamental challenge.

BACKGROUND: CITIES OF THE NEW MILLENNIUM

Cities, Technology and Digital Revolution

Technological advances have shaped and continue to shape the economic and physical development of cities all over the world. During the 19th century, industrialization gave rise to manufacturing plants and factory towns, while the steam engine led to the growth of seaport cities and a system of railroads that linked cities and towns. During the 20th century, advances in transportation technology—notably the internal combustion engine and the jet airplane—contributed to the dispersion of the world’s population to suburban areas and to urban growth in new directions. Public and private sectors’ policies that financed the construction of airports and the development of interstate highways have reinforced these technological trends as well. And, of course, air-conditioning has contributed to the growth of year-round populations in what were once seasonal communities.

Today, new and emerging telecommunications technologies are transforming the economic role of cities and their pattern of physical development. Many cities have lost their roles as corporate headquarters and manufacturing centers, while others have attracted information-intensive activities, such as back offices, customer service centers, and research and development laboratories. Furthermore, rapid advances in information and communication technologies (ICTs) pose a major challenge to city-based financial, healthcare, and educational institutions, and to cities’ roles as centers for commerce and culture. ICTs are inevitably transforming societies and cities increasingly knowledge-based. The nature of city development changes accordingly as activities in the knowledge sector that are becoming more important, and they require conditions and environments that are different from commodity-based manufacturing activities (Knight, 1995).