Integration of Knowledge Management Approach to the Planning Stage of Freight Villages: Towards Sustainable Development

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ABSTRACT

Freight village (FV) is a logistics phenomenon with broad economic, social and environmental consequences. A well organized and knowledge-based planning process is critical to realize sustainable development of FVs, due to its capability to avoid negative phenomena (e.g., unnecessary FV projects, high vacancy rates, unsuitable sites, disturbance to local residents, air and water pollutions) from the beginning. Sustainability-oriented FV planning depends largely on the identification, interpretation, creation and use of involved knowledge. Knowledge management (KM) is a planned, structured approach of systematically and actively managing knowledge for achieving the expected objectives. Thus, this paper aims at integrating KM approach to FVs planning stage for sustainable development. This paper starts with the research background. Then, it proposes a schema for FVs planning steps towards sustainable development. In particular, “sense-making KM model” is used as a guide for FVs planning process following the route: sense making - knowledge creation - decision making.

Keywords: Freight Village (FV), Knowledge Management (KM), Planning Stage, Sense-Making KM Model, Sustainable Development

INTRODUCTION

Along with the worldwide progressive development of logistics industry, the importance of freight village (FV) is growing rapidly. Due to the provision of freight transfer facilities (intermodal connections), warehouses, distribution centers, and related freight services within the same boundary, FVs are thought to be able to maximize logistics efficiency, while minimizing externalities such as urban congestion and negative impacts on air quality (ESCAP, 2005). Furthermore, FVs contribute to the improvement of economic activities and

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employment, as well as the income enhancement at the regional level (Holtgen, 1995; Kapros & Joignaux, 1996; Tsamboulas, Kapros, et al., 1997). Nowadays FV is often pointed out as a way for green logistics and sustainable urban traffic. In addition, FVs attract and cluster a wide range of freight and logistics companies. Corporate social responsibility encourages these located companies to add the considerations of environmental protection and social benefits to their economic activities. However, in fact, FVs in many cases are far away from sustainable development, which are resulted from their only focus on the rapid economic growth. In detail, FV concept is often mistaken for “Economic Development Zone” or “Industrial Centre”, and some FV projects fall to the exploitation of real estate. FV developers in some cases have no mindset of adopting “intermodal connection” when taking over FV projects. Even in some cases, bigger size and the quantity of FVs are regarded as governor performance factors for local government officials. Thoughtless site selections of FV projects have brought troubles to their neighborhood - both the residents and the ecological environment.

The realization of a FV project is similar to a risky venture since it is too large and complex, and especially due to the bigger investment but longer payback period comparing to other general business activities. Thus the planning stage is essential for the success of these ventures, regardless of different ownerships or management structures. Facts have indicated that making adequate preparation during FVs planning can probably avoid “wrong journeys” in actual development. For instance, the Bremen FV project spent millions of dollars and more than 10 years in research and development before breaking ground, and the Rungis facility began as a private investment effort that failed before it achieved success with a redirected plan and new capital (Weisbrod et al., 2002).

FV planning has high levels of embedded knowledge. As Lopez and Donlon (2001) noted, “knowledge is an organized collection of facts, rules, and heuristics as well as how and when to apply them to solve a problem”. Knowledge is an immaterial potential factor along with creativity, good-will, image, capacity for problem solving or other factors which are hard to quantify (Maier, 2007). For the purpose of sustainable development, FV planning is a technical and political process characterized by knowledge intensive activities, which concerns the optimal use of land, proper design of infrastructure and buildings, and effective layout of functional zones etc. A good FV plan depends largely on the well-managed knowledge, which is usually processed with research and analysis, strategic thinking, public consultations, policy recommendations, solutions designs, implementation and management. Knowledge management (KM) just plays a managerial function to create and locate knowledge, manages the flow of knowledge and ensures that knowledge is used effectively and efficiently for the long-term benefits of an organization (Darroch & McNaughton, 2002). Consequently, KM is becoming a guiding business philosophy influencing strategies undertaken by managers of an organization or a project, and FV is not an exception.

This research aims at exploring a KM approach to FV planning stage for the purpose of sustainable development. The structure of this paper is as follows. The second section, following this introduction, exposes the research background concerning aspects of FV and its planning stage, sustainable development orientation, KM approach. The third section provides a schema of planning steps for sustainable FVs realization. The fourth section applies the “sense-making KM model” to FV projects planning following the route: sense making-knowledge creation-decision making.

RESEARCH BACKGROUND

FV and its Planning Stage

FV connects to transportation, logistics and distribution in established geographical coverage. As an intermodal interface and logistics services cluster, FV is gaining wide acceptance in worldwide countries. A FV is a defined area
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