

# Sustainable Development of Freight Villages Based on Knowledge Management

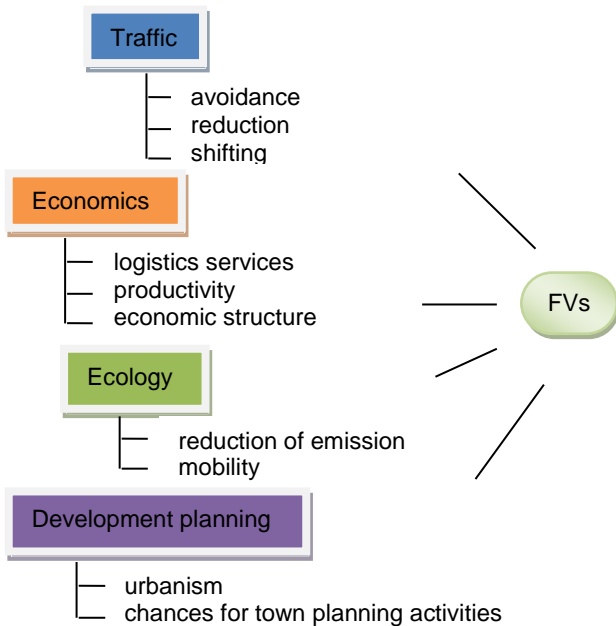
Along with worldwide dynamics in the logistics industry, the importance of Freight Villages (FVs) is growing in order to improve the efficiency of supply chain management. To counteract the growing competition, companies have begun pursuing greater efficiency in logistics and transportation systems. In particular, transportation demands require efficient integrated moves, premium package services, and the best use of available transport modes and FVs. Nowadays, the concept of “FVs” is developed to offer basic services to various transport and logistics companies located within its site, as well as to external users. One of its most important features is the combination of various modes of transport and logistics services.

agement is rooted in the notion of sustainable development. Sustainable development is a major national and international policy issue. Moreover, environmentalism appears to have become a key issue when facing logistics operations. In response to the negative impacts of the operations of FVs (e.g. misuse of land, resources wasting, sewage effluent, automobile exhaust), the implementation of a sustainable development strategy for FVs focuses on balancing these effects of environmental protection, social development and economic efficiency.

Knowledge management (KM) is widely discussed and is becoming a necessity in logistics research. This is due to changes in the environment such as the increasing of globalized competition, of the speed of information and of the rapid aging of knowledge. KM is a process that helps organizations to identify, select, organize, disseminate, and transfer important information and expertise, which are part of the organization’s memory. This knowledge typically resides within the organization in an unstructured manner. KM involves the support of a technological infrastructure, a change in organizational culture and the management of different types of knowledge.

Since logistics companies and international supply chain activities are shaped by a dynamic and information intensive environment, KM is essential for the companies involved. Sustainable development of FVs requires environmental awareness, basic instruments of green logistics, as well as technologies and information that support it. Additionally, it mainly depends on the integration, sharing, application and innovation of knowledge.

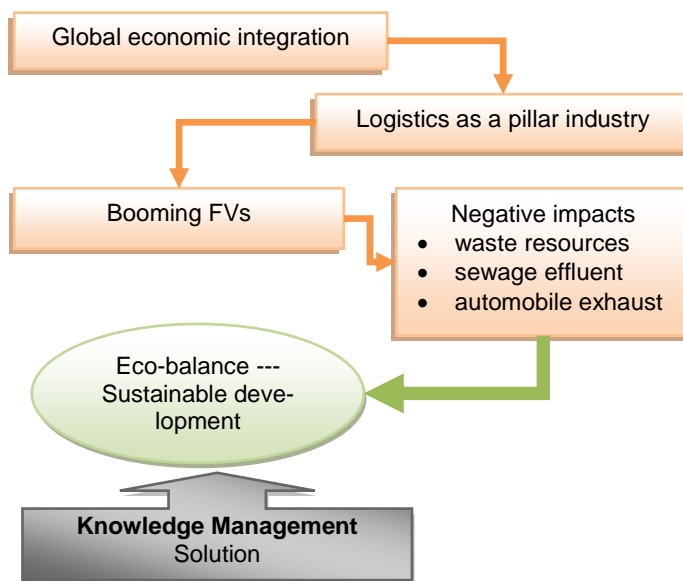
The proposed research attempts to pursue sustainable development of FVs by means of a KM analytical framework, so as to strengthen the environmental awareness, ecological operation optimization, and social influence of FVs.



“Green logistics” is one of the future trends and directions of logistics. It aims at reducing the environmental pollution and resource consumption. Modern green logistics man-



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The main tasks are to work on the following three topics:

*Provide a sustainable development strategy in FVs.* As a critical part of basic infrastructure construction in logistics systems, FVs not only can boost the economic development of the cities where they are located, but can also improve the quality of the urban environment and thus promote their own sustainable development. In order to reduce the negative impacts on the natural environment and the society, the sustainable development strategies are implemented within FVs to enhance the logistics industry's sustainability. .

*Integrate KM ideology into the sustainable development of FVs.* Effective sustainable development of FVs requires: an environmental management system; environmental monitoring and reporting; environmental technology; community consultation; a land use strategy; a compensation and mitigation policy etc. Since logistics activities are shaped by a dynamic and information intensive environment, FVs need to consider KM activities.

*Compare FVs in China with FV's in Germany and propose operating mechanisms.* Since the typical organizational structures of FVs differ in China and Germany, both need different suitable operating mechanisms, which are proposed for the FVs' sustainable development based on KM.

## Primary Methodology

To achieve the tasks mentioned above, the adoption of the following approaches is proposed:

- Integrate interdisciplinary theories – multi-disciplinary theoretical systems relating to management theories (logistics management, KM, supply chain management), ecology theories (sustainable development), and economic theories (externality, social welfare);
- Strategy mapping – design a strategy map combining a sustainability balanced scorecard (SBSC) and a KM process. A strategy map is a diagram that is used to document the primary strategic goals being pursued by an organization or management team. Besides, the SBSC evolves from the analysis of the “standard” BSC and will be changed in terms of the goal perspective - to sustainability perspective;
- Comparative analysis – take into consideration the features of typical organizational structures of FVs in China and Germany, which are respectively the governmental leading mode and the Private Public Partnership (PPP) mode. The operating mechanisms are considered in order to integrate the sustainable development strategy thereby its dominating position in their KM activities.

## Expected contributions

This research will present facts on ecological and social aspects which the logistics industry has to face, and will consider sustainability strategies for FVs, rather than putting the sole focus on aspects of financial growth. It is going to integrate KM ideology into the FVs' sustainable development strategy, aiming at offering an effective solution for the long-term development of FVs. In addition, different suitable operating mechanisms based on KM will be proposed for FVs in China and Germany respectively. Drawing on the successful experience of FVs in Germany, it will make suggestions for improving the development of Chinese FVs.