# A Framework of Local Geospatial Data Infrastructure for Sustainable Urban Development

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**SUMMARY**

Amongst the issues that concern the urban areas is the increase in population due to mass migration from rural to urban areas. The implication of this phenomenon results in many factors including degradation of environment, pollution, lack of housing, transportation, waste disposal, increased crime rate and poverty. These issues should be addressed in a holistic manner to ensure the cities as engines of economic growth, continue to be sustained and strengthened. Cities should be administered efficiently and effectively in order to create a sustainable and comfortable environment to live, work and play in. At the same time, the uniqueness of a city must be preserved to maintain its unique image and identity. However, sustainable management of cities requires ample information to be made available to decision makers to solve many issues related with sustainable urban development. Many developing nations, particularly those in the Asian region, now have their own successful National Geospatial Data Infrastructure (NGDI). However, these cities currently are not able to cater for the need at the local level. This paper addresses the need to develop a Local Geospatial Data Infrastructure (LGDI) for sustainable urban development. This research will highlight the effective and efficient framework for the development of local infrastructure. This paper presents a framework (a combination of domain based and goal based frameworks) for developing a Local Geospatial Data Infrastructure. The basis of this research is on a case study conducted on a Malaysian city. The main focus of the case study was on measuring and assessing sustainability. Six conceptual frameworks were produced based on 6 key dimensions of sustainability. The developed framework consists of 6 conceptual data models and 6 conceptual data structures. It was concluded that 30 spatial data layers are needed of which 12 data layers are categorized under point shape, 17 data layers are categorized under polygon shape and 1 data layer is under line shape category.