To plan and build smart cities and territories, information technologies must be renovated with the support of knowledge technologies, in particular geographic knowledge engineering.

This book studies the specific nature of geographic knowledge and the structure of geographic knowledge bases:

– Geographic objects are redefined giving emphasis to the concept of ribbons to model linear objects such as rivers or roads.

– Geographic relations, ontologies, gazetteers and rules are detailed as the basic components of such bases.

– Geographic rules are defined to develop our understanding of the mechanisms of geographic reasoning.

Various problems linked to geovisualization, chorems, visual querying and interoperability are examined to shape knowledge infrastructure for smart governance.

Robert Laurini is a world-renowned specialist in geographic information systems on which he has written several books and more than 200 papers. His research focuses on geographic knowledge and rule engineering for smart cities and territorial intelligence.

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