

# The Knowledge Innovation System of Cartography in CAS

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The ***Knowledge Innovation System of Cartography*** is one of the sub-systems of China's knowledge innovation system for Geo-science launched by Chinese Academy of Sciences. There are two levels in this system, one is the *knowledge innovation & increment model*, another is the scheme of Knowledge Innovation System of Cartography. The knowledge innovation & increment of Cartography goes on the way of "mapping practice → experience summarizing and sublimating to theory → creation of new cartographic theory → innovation of mapping technology → development of new map products → application of maps → new needs of cartographic theory & technology research → new circle of knowledge innovation and knowledge increment of cartography". In this model, the knowledge innovation of cartography implies the raising of maps' value, and the application of maps implies the strengthening of maps' social functions.

On the second level, the knowledge innovation system of cartography contains five parts, which are **national aim, knowledge innovation points, knowledge innovation mechanism, technical systems, and industrial basement**. Among the above, the national aim is the extraction, systematic organizing & management, communication and application, of image-symbol model, i.e., maps, from digital earth in global, national and regional levels, whereas the knowledge innovation points include the study of graphic pattern series of geo-objects, the research on map language and map cognition, the study on cartographic generalization, the research on atlas compilation theories and methods, and the study & development of multi-dimensional visualization technology, as well as the technology of map publishing through internet.