

# **Drivers and Challenges of Developing Urban Diplomacy Based on Emerging Technologies and Artificial Intelligence**

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## **Abstract:**

In recent years, the proliferation of modern technologies and information technology-based tools has significantly transformed urban governance practices worldwide. In Iran, urban diplomacy, as a critical dimension of urban governance, faces challenges in adapting to these technological advancements. The utilization of modern technologies and artificial intelligence (AI) in urban diplomacy and strategic decision-making has not yet realized its full potential. The present study aims to identify the drivers and challenges associated with the adoption of modern technologies and AI in the development of urban diplomacy in Iran. A mixed-methods approach was employed. In the first phase, domestic and international literature and documents were reviewed to identify indicators relevant to the development of urban diplomacy. Subsequently, the structural relationships among these indicators were examined using the Cross-Impact Matrix (CIM) methodology, based on the opinions of 30 experts, and analyzed using MICMAC software. In the second phase, a Likert-scale questionnaire was designed and administered to the same group of experts to identify the principal challenges, focusing on their criticality and frequency. The results indicated that the main challenges in leveraging emerging technologies for urban diplomacy in Iran include the absence of appropriate executive guidelines, insufficient capacity and experience, limited infrastructural resources, and the lack of regulations aligned with AI functionalities. Conversely, the key drivers identified include the enhancement of technological infrastructure and equipment readiness, heightened citizen expectations of government adoption of innovative solutions for service delivery, and the implementation of data-driven approaches in urban diplomacy. These drivers underscore the importance of stakeholder engagement and the management of inter-stakeholder relationships. Overall, the findings suggest that the advancement of urban diplomacy in Iran necessitates strengthening technological infrastructure, revising existing policies, and enhancing the competencies of specialized human resources. These insights

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provide a robust foundation for urban policymakers and the country's foreign policy authorities to utilize emerging technologies more effectively.

**Keywords:**

Iran, Futures studies, Drivers, Urban diplomacy, new technologies, Artificial intelligence.