

From Standards to Streets: Turning Digital Public Infrastructure into Real Smart City Outcomes

Presented by:

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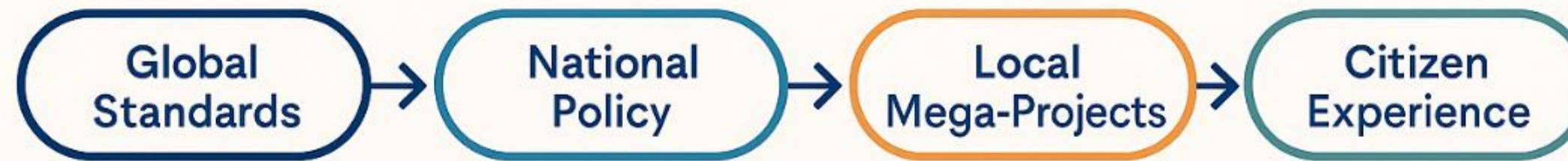
U4SSC Thematic Group on Digital Public Infrastructure for cities

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From Global Frameworks to Local Realities

- DPI = foundation for inclusive, sustainable smart cities
- ITU & U4SSC define global standards and principles
- Today's focus:
 - Policy and global frameworks
 - Implementation in giga-projects like Jeddah Central



Global DPI & Smart City Frameworks



DIGITAL PUBLIC INFRASTRUCTURE

- ITU: systems enabling public and private service delivery
- DPI model: digital ID, payments & data exchange



SMART SUSTAINABLE CITIES

- ITU focus on inclusion, sustainability & resilience
- U4SSC: international guidance, measurement efforts

Why Implementation Matters

- Global frameworks risk staying abstract
- City leaders ask: *“How do we implement this in real, complex environments?”*
- Mega-projects = testbeds for inclusive, scalable DPI



Saudi / MENA Context



Vision 2030 Mandate KSA
Digital Transformation

Key Enablers



Digital Id - PDPL



Neutral Host Telecom
Infrastructure



Security Network Backbone



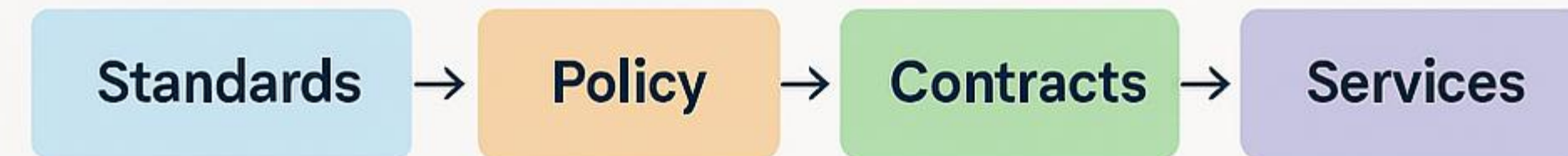
Jeddah Central Development

- Mixed-use mega-project on Red Sea coast
- Objectives:
 - Inclusive access (residents, tourists, businesses)
 - Carrier-neutral ICT & payments
 - Smart mobility & security integration
- JCD = “living lab” for DPI implementation in the Gulf



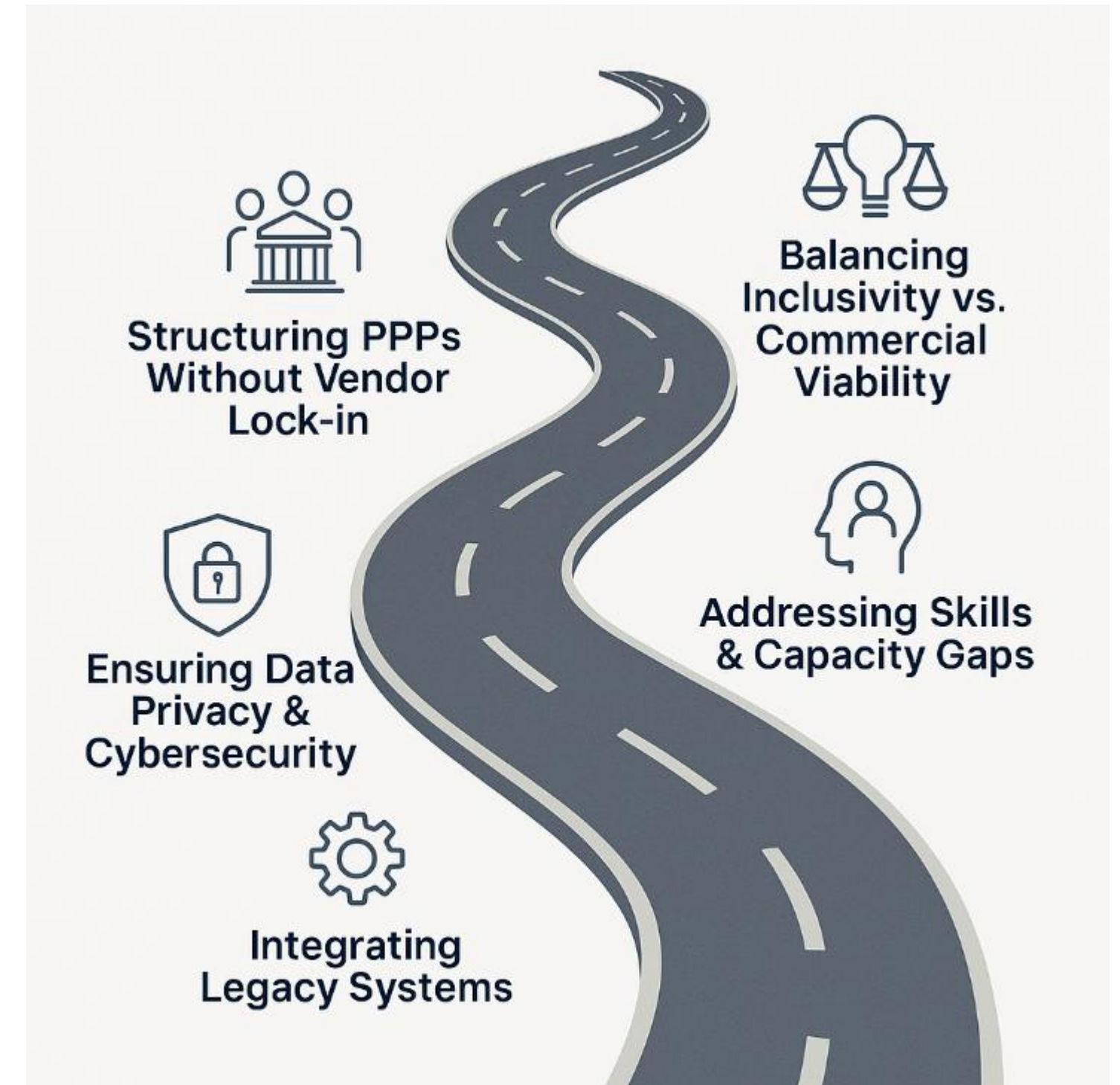
From Standards to Implementation

- Standards → Practice
 - ITU-T Y.4200 → system architecture
 - ITU-T Y.4903 → KPI Alignment
 - OECD/IEEE AI principles → smart mobility, surveillance
- Translation gap: policies must become contract clauses, SLAs, and KPIs



Key Implementation Challenges

- Integrating legacy systems
- Structuring PPPs without vendor lock-in
- Balancing inclusivity vs. commercial viability
- Ensuring data privacy & cybersecurity
- Addressing skills & capacity gaps



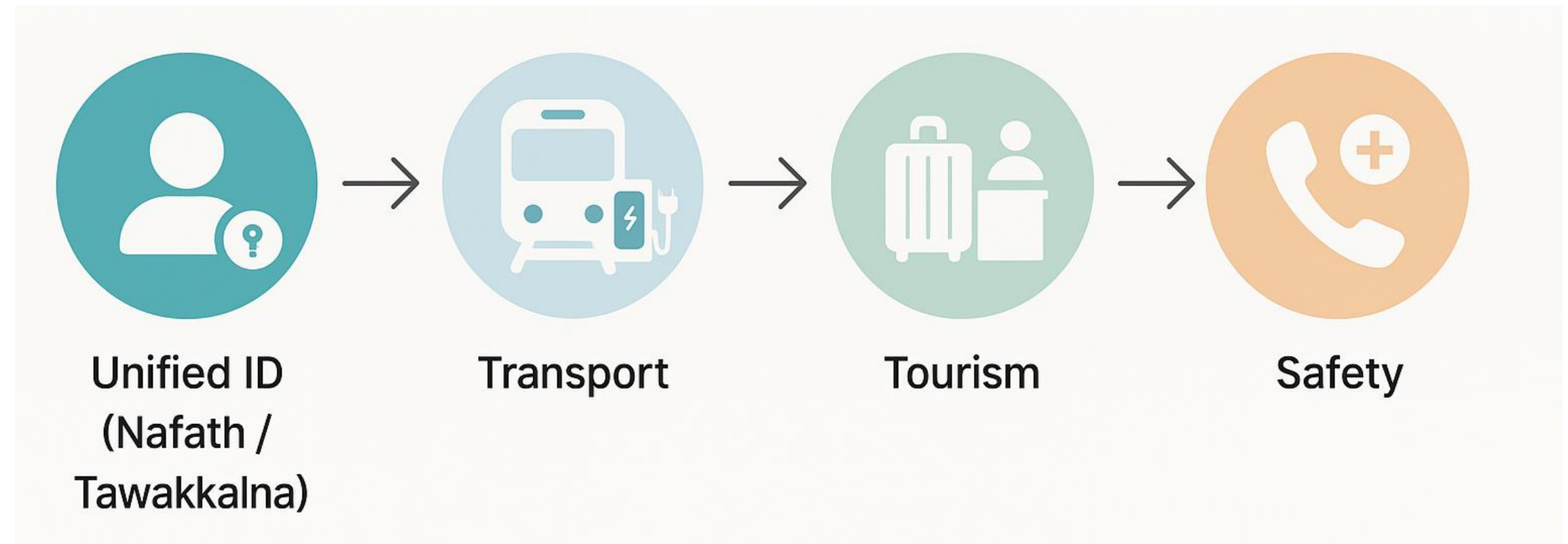
Digital Identity

- Unified ID (Nafath / Tawakkalna) powering services

Applications:

- Ticketless mobility & EV charging
- Seamless tourism check-in
- Emergency response & public safety

Lesson: ID must work across *residents, tourists, and businesses*



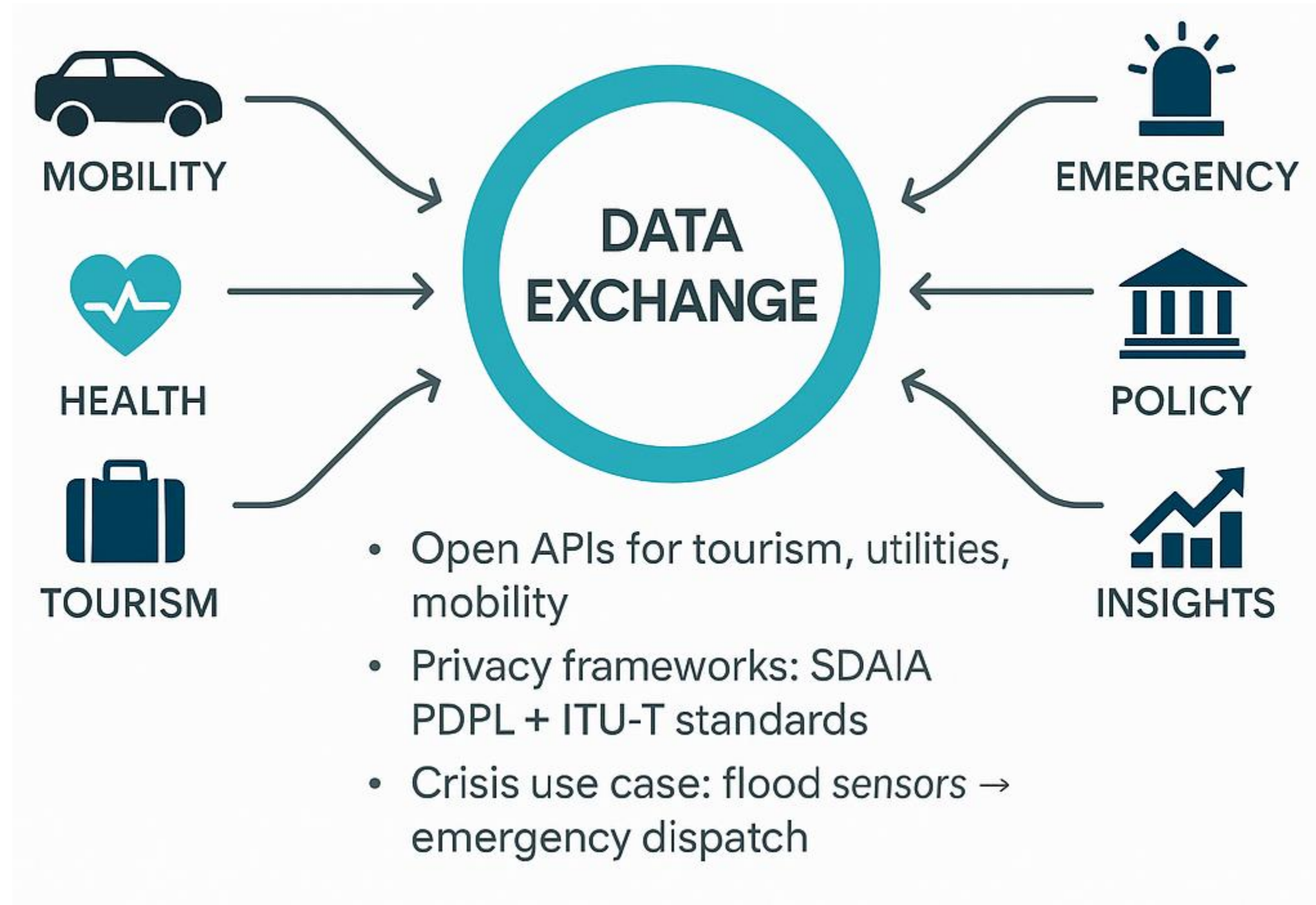
Interoperable Payment

- MaaS integration with national payment rails
- Supports mobility, parking, retail, and hospitality
- Enables dynamic pricing & loyalty schemes

Lesson: ensure inclusivity (unbanked, elderly, tourists)



Secure Data Exchange



The Road Ahead

- Giga-projects as global DPI “living labs”
- Integrate climate resilience & ESG KPIs
- Promote inclusivity: vulnerable groups, migrants, tourists
- Saudi & MENA → contributors to global DPI standards



Closing

- DPI = the **operating system** of future cities
- Success requires *bridging policy with practice*
- “From standards to streets” → inclusive, trusted, scalable DPI



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Thank you!

