CDIA is an international partnership initiative established in 2007 by the Asian Development Bank (ADB) and the Government of Germany, with additional funding support from governments of Austria, Sweden, Switzerland, and the Shanghai Municipal Government.

CDIA provides assistance to medium-sized Asian cities to bridge the gap between their development plans and the implementation of their infrastructure investments.

CDIA supports the identification and development of urban investment projects and links them with potential financiers.
113 Cities supported in 17 Asian countries
49 Prioritization exercises &
PFS reports covering 98 projects completed
51 projects linked to finance
5.8 Billion US$ expected infrastructure investment value

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<th>Ongoing PFS Interventions</th>
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As of May 31 2016
Global Trends

Urbanisation: 2050: ca. 70 %

Climate Change: + 2 °C

Digitalisation: 43% der Welt ist online (2015)

Sustainable Urban Development

Mitigation Adaptation

Digital Competence

Smart Cities
Smart Cities are those cities....

... that deliberately engage in participatory learning and evidence-based policy-making in order to improve their services and infrastructure and, in this process, make use of advanced information and communication technologies.

ICT are used to improve connectivity.

Given the right conditions, this improved connectivity contributes to resource efficiency, hence also to environmental sustainability, as well as to the betterment of governmental services - indirectly at the reduction of social inequalities and increased societal participation.
International Agenda Habitat III and Smart Cities

11.1: Adequate, Safe and Affordable Housing, Basic Services and upgrade slums
- e-government: reduce administration costs, increase access and improve coordination
- smart water systems: capture and track maintenance requests and actions

11.5: Reduce Deaths and the Number of People affected caused by Disasters
- ICT-enabled monitoring of infrastructure, early warning systems;
- ICT-based Adaptation on Climate Change in Cities

11.6: Reduce Environmental Impact of Cities
- ICT-Solutions can reduce global CO2 emissions by 16% by 2020
- energy efficient buildings through smart metering and smart building control;

UN (2015): Issue Paper Smart Cities
Influencing quality and prioritization of services and infrastructure

Cost-efficient management and integration of innovative solutions

Transformation of user behavior and related demand

Figure 1: An ICT Enabling Environment for Cities
Entry Points for Development Cooperation

• **By Sector**
  Transport, Energy, Infrastructure, Environment, Disaster Risk Reduction, efficient and transparent urban governance in planning, budgeting, implementing, and stakeholder participation

• **Strong Emerging Economies:** *Regulation* of sectoral Investment projects (e.g. Smart Grid, Cloud Computing) and integrated urban management systems.

• **Cities of medium development and income level:** technical *Know-How Transfer*, expanding competencies of administrations, environment-friendly construction, resource and waste management, transport- and logistic solutions, smart metering.

• **Cities with low development and income level:** e-Governance, fostering education and health through mobile network technologies, financing of pilot projects.
Triple HELIX Approach

Industry and Companies (private and public sector), incl SME for invention and implementation of urban transformation

Municipalities as steering level in conceptual development and implemention in policies and administration as well as for urban stakeholder participation

Academia for invention, advisory prozesses, knowledge transfer, M&E, and cross-regional learning
Integrated Process of Urban Co-production

Integrated ICT Sustainability Smart Economy
Smart Business
Smart Living
Innovative & experimenting Sustainable living Smart Care

Smart Cities
Intelligent Nation

Smart Mobility
Smart Environment
Smart Transport Electric vehicles Dynamic traffic control
Energy efficiency Reduced emissions Smart meters

Smart Citizen/ Community
Smart Education
Stability Research Supportive Assertive

Smart Utility
Smart Infrastructure
Connectivity Integrated services

Smart Government
e-gov Easy access Transparent

http://www.smartcity.center/en/?p=95
Capacity Bottlenecks in ICT for improved Infrastructure Provision and services

- Digital applications need to be adapted to the local context, e.g. availability of data
- Involved stakeholders are lacking access to interdisciplinary expertise to make use of innovation and digitalization
- Decision makers are insufficiently aware of options and benefits of digital apps in planning and managing infrastructure
- Limited resource capacity of suppliers to approach local and national decision makers
- Limited exposure of suppliers of daily challenges of cities and town in developing countries

...leading to a limited realization of the actual potential of digital solutions in urban infrastructure.
Challenges

• “Gap” in the strategy development-strategy delivery process led to failure to realize essential elements of the Spatial Plan (BAPPENDA) by respective LGUs

• City gov. facing large challenges to effectively manage & control neither the urban sprawl nor the increase in private traffic on its increasingly congested road network

• Shift away from public transport and into private vehicles; declining role of urban transport over the past half-decade, coupled with rapid increase in private ownership rates

• Perception of local community remains that using public transportation is more expensive than having private vehicles
Recommended Short-Term Investment on ICT-based Infrastructures

Intelligent Transport System (ITS) as an integral part of the upgrading and modernization of the transport sector’s management system:

- **Automated Traffic Control System (ATCS)** comprising a number of intersection signals with capacity for real-time monitoring and flexible cycle times
- **Central Control Room (CCR)** assisting in monitoring and manage the operations of bus fleets and of traffic
- **GPS-Based Fleet** enables effective tracking for both management planning purpose and provide passenger with RTPI
- **Real-Time Passenger Information System (RTPI)** providing passenger with up-to-date of estimated time arrival of bus fleets
- **On-Board Ticketing** to replace shelter-based ticketing system

Yogjakarta, Indonesia

Currently in operation to monitor traffic in Yogjakarta

Implemented in pilot project area (only) at Magelang Street

Not implemented due to high investment cost + O&M; City prioritizing on improving quality of services + increase in no. of ridership per day

System developed; However passenger still pays ticket at bus stop/halt
“Our struggle for global sustainability will be won or lost in cities.”

- Ban Ki Moon, UN Secretary General