

FINANCING PUBLIC
INFRASTRUCTURE IN SMALL
CITIES:
DATA GAPS AND IMPACTS

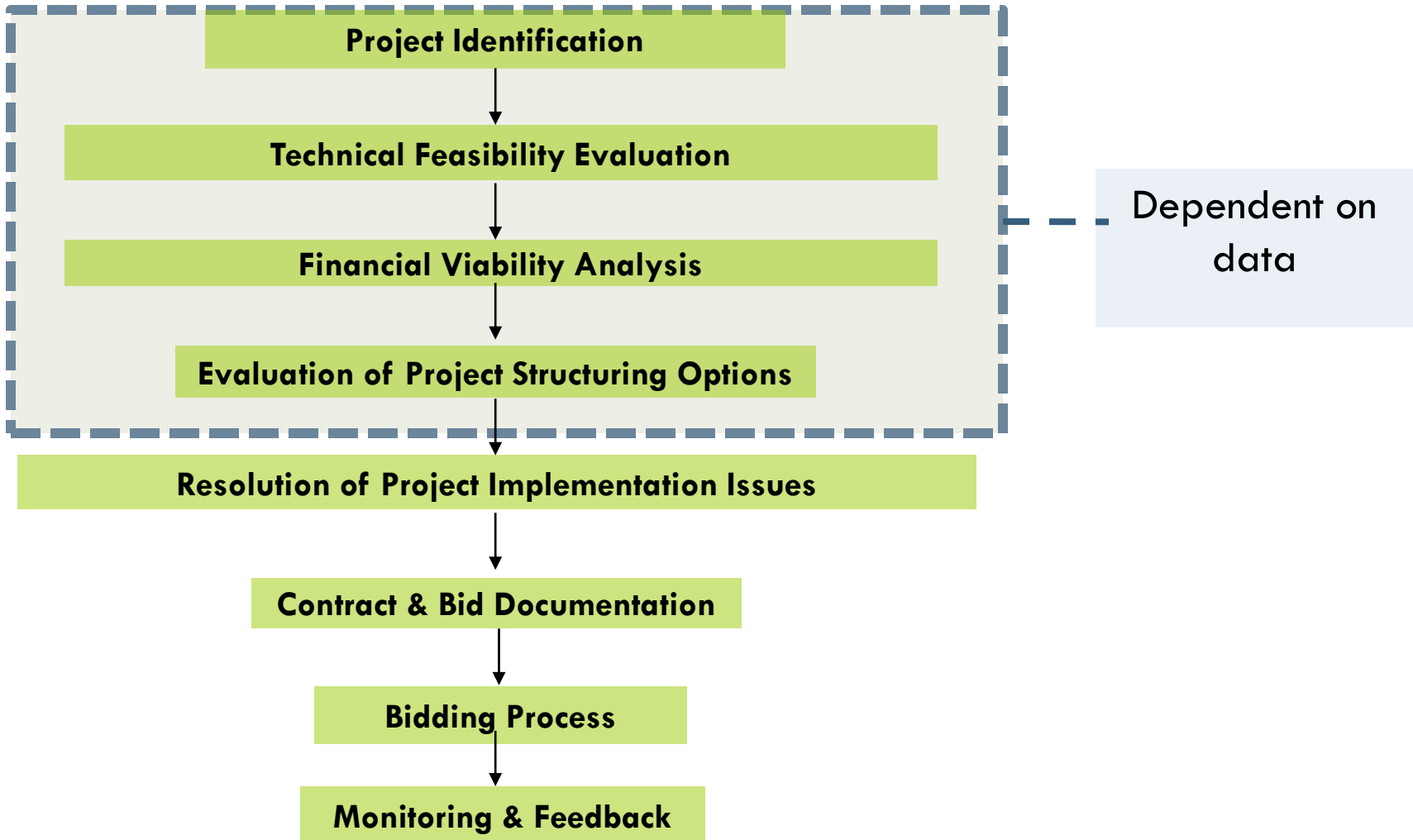
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Infrastructure Projects

- Financing infrastructure projects
 - ▣ Public – analysis on economic benefits
 - ▣ Private – diligence on financial returns
 - ▣ Public-private – robustness of revenue model and operating framework (risk management and allocation)

- Pre-requisites
 - ▣ Project components – description/ standards, exhaustiveness
 - ▣ Project costs- Capital and O&M - accuracy
 - ▣ Assessment of Revenues/ Project Returns – reasonableness and stress tests

Infrastructure Project Development Activities



Data Needs

Timing

- Past Trends (largely absent for most sectors – a few like airline passenger traffic available)
- Baseline Information (crucial, but inadequate – water supply, solid waste management)
- Projections – (traffic, financials)

Nature

- Surveys and investigations (project specific investigations – DPRs for various infrastructure projects)
- Empirical studies / benchmarks (Broader, more generic assessments – used for extrapolation in project specific circumstances)

Extent of Availability

- No data – compost sales
- Outdated – traffic surveys
- Inaccurate – water distribution networks
- Not in form – complex to use – city financials

Why don't we have appropriate data?

- No generic systems for data management
 - ▣ Single entry accounting, asset registers, number of properties
 - ▣ Lack of know-how on existing/ available data – very few cities can produce an updated water distribution network diagram or demonstrate the quantity of waste generated
 - ▣ Retrieval of existing data – difficult
- Perception: “No articulated purpose; required sporadically”
 - ▣ When driven by exigency, compromises are made on data quality and exhaustiveness
- Lack of appreciation / funds for project development
 - ▣ Driven by events elsewhere
- Lack of coordination between departments
 - ▣ Duplication of work and inconsistencies remain
 - ▣ “Road length - Different answer based on who is demanding the data”

Limited Baseline Data

- SWM
 - Trivandrum- over estimation of waste generation
 - “Landfill looks like an airstrip”
 - “Use Black-Scholes model to predict compost prices”

- Water Supply projects
 - Bijapur, Madhya Pradesh- no data on underground utilities
 - extremely difficult to estimate investments and phasing

- Roads/ Highways
 - Over/ under estimation of traffic – Sandur, NHDP programme
 - KRDC- no traffic studies to identify viable projects

- Airports
 - BIA- under estimation of traffic
 - Minor airports - clearances and land related data

Financial Strength of Proponent

- Payment Guarantee mechanisms crucial in long term projects
- How does one project revenues/ expenses if one simply doesn't know how many units are there to be charged?
 - Number of properties – property tax
 - Number of connections and type – water demand
- Projections and fallacies
 - “Cities and development authorities have unlimited supply of land”
 - “ Roads have throughput capacities beyond design limitations”
- How much of fiscal burden is passed on to future generations?

Impact of Data Gaps

□ Public Entity

- Inadequate project planning
 - Inadequate capacity or over designed capacity
 - Capacity augmentation within a short span or
 - High capital and subsequent high O&M expenditure
- Under/over estimation of project costs
- Higher payouts to contractors/ private developers (annuity)
- Under/over estimation of project revenues
 - Non-sustainable projects

□ Private Entity

- Inaccurate investment requirements
- Assumes higher risks, leading to higher payments by Govt.
- Inaccurate estimation of project implementation schedule
- Difficulty in project appraisal by lenders
- Delay in implementation of projects

Initiatives

- Data management needs to be dynamic – GIS systems to be updated
- Attitude change - bottom up approach
 - ▣ Needs concerted and repetitive efforts
 - ▣ ad hoc interventions may not yield desired results
- To demonstrate a strong link with the purpose
 - ▣ Charters of agencies and individuals – public disclosure
 - ▣ Set in place systems and demonstrate periodically the utility of effective data base