

# Competency Development in Urban Local Bodies for Implementing Public Private Partnership Projects in India

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**Abstract:** *Weak competencies in urban local bodies (ULBs) for implementing public private partnership (PPP) projects has been recognized as a major hurdle in uptake of PPP model in India. In this context, a questionnaire survey was conducted to evaluate perception of urban PPP experts and ULB representatives on three aspects related to competency development, including, critical competencies for implementing urban PPP projects, approaches for competency development in ULBs and constraints faced by ULBs in development of competencies. The five critical competencies identified are project identification, project conceptualization, transaction design, PPP process management and contract management. The approach of training programs for municipal staff and elected representatives, and capacity building oriented technical assistance for implementing urban PPP projects have been preferred by survey respondents for competency development. The frequent transfer of municipal decision makers and low motivation among municipal staff have been identified as the most significant constraints for development of competencies.*

**Keywords:** *Urban infrastructure, public private partnerships, competency development, urban local bodies, perception analysis*

## I. INTRODUCTION

In India, there is an unprecedented wave of urbanization across many states (Chandramouli, 2011). The existing urban infrastructure faces increasing strain due to the needs of rapid urbanization. This strain has, in turn, resulted in deterioration in quality of urban services (Mathur *et al.*, 2007; World Bank, 2006). Public private partnership (PPP) model for provision of urban services is gaining prominence in policies related to urban infrastructure development. The importance of PPP model stems from potential of the PPP model to garner finance and efficiencies of private sector.

The outcome of the policy initiatives on urban PPP projects has not been encouraging and mainstreaming of PPP model in provision of urban services has remained a distant dream (Mehta and Mehta, 2010). The urban PPP projects form a small proportion of PPP projects undertaken in India. One of the primary reasons behind untapped potential of PPP model is the weak competency levels in ULBs to implement urban PPP projects (Bonu, 2007; ADB, 2006a).

The 74th Constitutional Amendment Act (CAA), 1992 is a significant step in reforming the urban governance in India, by granting constitutional recognition to a third tier of urban local government. According to the 74th CAA the ULBs are responsible for provision of services like water supply, sanitation, solid waste management, roads and parks (NIUA, 2004). It recognizes the central role of ULBs as a provider of urban services to the citizens, and mechanism for democratic governance. Over the years these ULBs have nurtured competencies in tune with traditional design-bid-build

model of delivery of urban services. These competencies are, however, inadequate for implementing urban PPP projects. As a result the competency development for urban PPP projects has been getting critical attention in the policy frameworks.

A critical challenge in addressing the competency gap in ULBs is the diversity and complexity of competencies associated with urban PPP projects. Competency-based management provides a systematic solution to meet this challenge. Competency-based management is defined as the application of a set of competencies to manage human resources so that performance contributes efficiently and effectively to organizational results (Draganidis and Mentzas, 2006). However, there is a lack of adequate research in the area of competency based management in ULBs specific to the Indian PPP environment. Considering this scenario, a systematic research study was carried out on the subject of competency based management for implementing urban PPP projects in India. This research study was conceptualized to be performed in the following stages: 1) identification of competencies for implementing urban PPP projects, 2) evaluation of the existing competency profile of ULBs with respect to these identified competencies, 3) analysis of the importance of various competencies for implementing urban PPP projects, approaches and constraints for the development of these competencies, and 4) development of a tool for the assessment of competencies in ULBs.

As a first phase of this research study, competencies required for implementing urban PPP projects were identified (Devkar, 2011). These competencies are represented in the form of a PPP competency framework. Subsequently, the performance of ULBs and PPP projects

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was analyzed with respect to this framework. The next logical step is to analyze various aspects related to competency development, including, key competencies for implementing urban PPP projects, important approaches for development of competency and significant constraints faced by ULBs in development of competencies. These aspects are the focus of this paper. The second section of this paper discusses the competency development in the context of implementing urban PPP projects. The methodology adopted for this research study is described in the third section. The fourth section focuses on the identification of key competencies for implementing urban PPP projects. The preference of approaches for development of competencies is discussed in the fifth section. The sixth section describes the constraints in development of competencies.

## II. COMPETENCIES DEVELOPMENT AND URBAN PPP PROJECTS

The PPP model for delivery of urban services has been widely adopted in many countries around the world (Davies and Eustice, 2005; Eggers and Startup, 2007; European PPP Expertise Centre, 2009). The governments of these countries faced competency bottleneck in ULBs while implementing urban PPP programs and initiated steps to formulate programs on competency development for sustainability of the PPP model (Plummer, 2002). The formulation of a program on competency development concentrates on the three dimensions of identification of competencies, designing of approaches for development of competencies and overcoming constraints in competency development (Peltenburg *et al.*, 1996).

The concept of competency is understood from two different perspectives - individual and organizational. The urban PPP projects have certain characteristics that pose challenge for individual competency modelling. These include long term contracts, range of uncertainties and risks associated with PPP contracts, non recourse or limited recourse and off balance transactions, complicated contractual arrangements between project participants, and payment on the basis of delivery, availability and usage (Carlidge, 2006; Iossa and Martimort, 2008). An individual cannot be expected to possess the competence to deal with all these characteristics and ensure effective implementation of urban PPP projects. The individual competency modelling is also critiqued for absence of coherence between competency-based management and factors like context of organization, its culture, market place and surrounding environment (Stuart and Lindsay, 1997). The concept of organizational competencies has advantages of creating linkages between these factors. It has its roots in the term core competency coined by Prahalad and Hamel(1990).

Lampel(2001) studied the core competencies concept in detail and suggested application of this concept in EPC (Engineering, Procurement and Construction) projects by adopting a process approach to organizational competencies. The Construction Industry Institute has developed Owner Contractor Work Structure (OCWS), which defines competency as a project work process that

is composed of functions and associated critical capabilities needed to develop and execute a capital project (CII, 1997).

The process view of organizational competencies has benefits like systematic approach to determining competencies and their sourcing, rationale for evaluating projects skills and resource requirement, forming a basis of organizational change and alignment of work relationship between project participants(Anderson *et al.*, 2004). For the purpose of this research study, the process view of organizational competency has been adopted for identification and modelling of competencies required for urban PPP projects.

The weak competencies in ULBs to implement urban PPP projects has resulted in creation of diverse approaches for competency development. These approaches have gradually transformed from relatively simplistic training programs for ULB officials to more complex approaches like formation of PPP nodal agencies, PPP cells and panel of transaction advisers (Dutz *et al.*, 2006; World Bank, 2007; Jooste and Scott, 2009; IDFC, 2010). While designing approaches for competency development, it is equally important to consider roadblocks in terms of constraints faced by ULBs in competency development for urban PPP projects.

The competency development system comprises of two components: a demand side and a supply side (Peltenburg *et al.*, 1996). The demand side consists of ULBs whose competencies need to be developed. The supply side includes the developmental organizations, private advisory firms, and research institutions involved in formulation and implementation of policies pertaining to competency development, for implementing urban PPP projects. Various research studies have highlighted the need for creating an interface between the demand and supply side for developing competencies and have also underscored the importance of the shift from the supply side to demand-led initiatives for competency development.

Aijaz (2010) points out that the efforts taken towards consultation with ULB officials and duly considering local issues of governance during formulation of capacity building initiatives leads to favorable results. According to Peltenburg *et al* (1996), the formulation of capacity building strategies require clarity on the goals and objectives for development to be achieved. In this context, there is an urgent need to improve the interface, understanding and co-operation between those in demand of capacity building services and potential suppliers.

The views of these two sides on key competencies for implementing urban PPP projects could shed light on the priority areas to be considered during the lifecycle of urban PPP projects. Investigation into approaches preferred by the demand and supply side of competency development system would provide the inputs for aligning the competency development system with the requirements of urban PPP projects. The cooperation between the demand and supply side of competency development system for overcoming constraints in development of competencies could be improved by

creation of interface between these two sides. In India, there is growing enthusiasm over the PPP model for improving delivery of urban services and various measures are being taken to address weak competencies in ULBs. However, minimal effort has been reported on creation of an interface between demand and supply side of competency development system. In this context, this research study has evaluated the perception of demand and supply side of competency development on aspects related to competency development, including, key competencies for implementing urban PPP projects, important approaches for development of competency and significant constraints faced by ULBs in development of competencies.

### III. METHODOLOGY

The methodology adopted for this research study includes 1) literature review in the area of competency development for urban PPP projects, 2) unstructured interviews and discussions with urban PPP experts and officials of ULBs, and 3) all India survey among urban PPP experts and ULBs. Many research studies in the area of competency development have adopted questionnaire survey research approach (Yang *et al.*, 2009; Odusami, 2002; Brown and Potoski, 2003).

The questionnaire survey has been designed carefully based on extensive literature survey, with focus on aspects like scope, content and purpose of the question, choosing the format for obtaining response from the respondent and wording of the questions to completely tap the issue of interest. The preliminary questionnaire was circulated among urban PPP experts and officials of ULBs in the field, and their suggestions with respect to content, structure, format and sequencing of the questions were incorporated in the final questionnaire. The respondents to this questionnaire were urban PPP experts and ULB representatives; these two categories of respondents represent the supply and demand side of competency development system respectively.

The urban PPP experts play an important role for implementing urban PPP projects in the capacities of providing advisory services to ULBs, designing PPP policy frameworks and researching in the area of competency development. These urban PPP experts are associated with developmental organizations, private advisory firms and research institutes.

In 2005, the Central Government of India launched an ambitious programme in the urban sector, named Jawaharlal Nehru National Urban Renewal Mission (JNNURM). This program has identified 63 cities across India for showcasing improvement in the provision of urban services (Ministry of Urban Development, 2005). The JNNURM is a reform-driven initiative with slew of reforms, including encouragement to PPP in provision of urban services. Owing to these developments, responses from representatives of ULBs that come under JNNURM program (JNNURM ULBs) were collected in this research study. The municipal commissioners of these JNNURM ULBs are at the helm of affairs relating to the delivery of urban services. Hence, municipal commissioners of

JNNURM ULBs were requested to provide responses to the questionnaire. In case of unavailability of municipal commissioners owing to administrative reasons, responses were sought from ULB officials who can provide a holistic view on competency development for implementation of urban PPP projects. The respondents of this questionnaire from the ULBs are henceforth denoted as ULB representatives.

Questionnaires were mailed to urban PPP experts and ULB representatives, which included 63 questionnaires to JNNURM ULBs and 50 questionnaires to urban PPP experts. Regular email and telephonic follow-ups were carried out to increase the response rate. At the end of this exercise, 51 responses were received. Of these, 26 and 25 responses were from ULB representatives and urban PPP experts respectively. The response rate of 45% percent is considered very good for this kind of a mail survey.

### IV. IDENTIFICATION OF KEY COMPETENCIES FOR IMPLEMENTING URBAN PPP PROJECTS

The competencies required for implementing urban PPP projects were identified by a two step process. In the first step, an extensive literature review of the relevant published literature was carried out. The literature review explored broadly three types of publications on urban PPP projects – academic journals, country specific guidelines and best practices guidelines by developmental organizations.

The second step involved conducting qualitative in-depth semi-structured interviews with the stakeholders associated with urban PPP projects. The interviews were recorded and then transcribed. The transcripts of these interviews were analysed using Atlas ti software (Muhr, 2004). The interview transcripts were analysed at two levels, the textual level and the conceptual level (Strauss and Corbin, 1998). At the textual level, the open coding of transcripts was carried out to identify the concepts discovered in the transcripts. The process of defining the characteristics of the concepts evolved during the coding process by constantly making comparisons with the empirical evidences reported in literature pertaining to a particular concept. In that sense, the two steps involved in the research methodology were not necessarily sequential.

At the conceptual level, the axial coding was carried out to relate various categories to subcategories. The linking between various categories and in some instances formation of new subcategories resulted into more precise and complete explanations of the concept. Repetitive analysis of transcripts at the textual and conceptual level were carried out in line with the process of ‘moving between induction and deduction’ (Strauss and Corbin, 1998). The outcome of the process of coding, recoding, formation of categories & subcategories and analysis of literature resulted in the formation of competencies framework for implementing urban PPP projects. The framework consists of twelve competencies grouped under four categories based on phases of urban PPP projects - project appraisal, procurement, service management and project lifecycle. The case study research was carried out with five urban PPP projects to

empirically ground the PPP competency framework (Devkar, 2012). The PPP competencies identified are described in the Appendix 1.

The survey respondents were asked to rate the importance of these twelve competencies based on their perception and experience with urban PPP projects. A five point scale from ‘Not Important’ to ‘Most Important’ was used for rating the importance of these competencies. The mean, standard deviation and relative importance index (RII) based on importance rating of each category of respondents was evaluated for each competency. The RII is calculated as follows (Kumaraswamy and Chan, 1998):

$$RII = \frac{\sum w}{A \times N}$$

where w = weight as assigned by each respondent in a range from 1 to 5, where 1 implies ‘not important’ and 5 implies ‘most important’; A = the highest weight (5); N = the total number in the sample.

The competencies within each respondent category were ranked on the basis of RII. t - test was carried out to analyze the degree of agreement on importance rating among urban PPP experts and ULB representatives at 5% significance level.

The results presented in Table 1 show the ranking, based on RII, of competencies for implementing urban PPP projects. The combined perception of all respondents, as well as differences in perception between urban PPP experts and ULB representatives are also shown in the

table. There is a high degree of agreement (at 5 % significance level) on importance rating of competencies among the respondents. The high degree of agreement shows that the respondents have a common understanding of the competencies for implementing urban PPP projects in India. Since there was no statistically significant difference in importance rating among the two categories of respondents, the identification of important competencies were done on the basis of combined RII.

A. Discussion of the Findings

Based on combined perception of all respondents, the RII values range from 0.84 to 0.64. The competencies having RII greater than 0.8 are categorized under the ‘High Important’ category, between 0.71 to 0.8 under ‘Medium Important’ category and between 0.61 to 0.7 under ‘Low Important’ category respectively.

The project appraisal competency category has been rated high, with two competencies (project identification and project conceptualization) rated as high and one competency (project development process management) rated as medium. The procurement and project lifecycle competency categories are rated medium, with each of them having one competency rated as high and two competencies rated as medium. The service management competency category is rated relatively low, with two competencies (service handover management and relationship management) rated as low and one competency (contract management) rated as medium. These competencies based on importance rating are discussed below.

TABLE I  
IMPORTANCE OF COMPETENCIES FOR IMPLEMENTING URBAN PPP PROJECTS

Competency Category	Competency	Urban PPP Experts		ULB Representatives		Combined		T test	
		RII	Rank	RII	Rank	RII	Rank	T value @	Sig.
Project appraisal	Project identification	0.82	4	0.85	3	0.84	2	- 0.442	0.661
	Project conceptualization	0.82	2	0.85	1	0.84	1	- 0.530	0.598
	Project development process management	0.76	7	0.8	6	0.78	6	- 0.559	0.579
Procurement	Transaction design	0.85	1	0.82	4	0.83	3	0.765	0.448
	Evaluation competency	0.76	8	0.79	7	0.78	7	- 0.545	0.589
	Project marketing	0.71	10	0.75	8	0.73	10	- 0.660	0.512
Service management	Contract management	0.82	3	0.75	9	0.78	5	1.093	0.280
	Service handover management	0.67	11	0.7	11	0.69	11	- 0.417	0.678
	Relationship management	0.63	12	0.64	12	0.64	12	- 0.096	0.924
Project lifecycle	Stakeholder management	0.79	5	0.74	10	0.77	9	0.981	0.331
	Project governance	0.74	9	0.81	5	0.77	8	- 1.485	0.144
	PPP process management	0.77	6	0.85	2	0.81	4	- 1.628	0.110

@ H<sub>0</sub>: There is no significant difference in importance rating by different category of respondents

\* H<sub>0</sub> Rejected at 5% significance level H<sub>1</sub>: Significant difference in importance rating among different category of respondents

RII: Relative Importance Index

- *Need for greater clarity on potential of urban PPP projects*

The *project identification* (Rank 2, RII 0.84) and *project conceptualization* (Rank 1, RII 0.84) competencies focus on investigating the potential opportunities for delivering urban services with PPP model in terms of rationale for PPP, legal framework, tariff sustainability, macroeconomic factors, critical risks, institutional capacity and contracting options (Vives *et al.*, 2006). These competencies are rated considerably higher by the survey respondents. In the past, many urban PPP projects in India have faced bottlenecks owing to proceeding towards advanced stages of urban PPP projects, without sufficiently defining the potential project and creating project ownership within the ULB. The result of this practice was lack of properly analyzed and structured PPP projects, which consequently led to lukewarm response from private players to potential PPP projects (Ministry of Finance, 2006). Therefore, the ULBs should gain clarity about potential of urban PPP project, before committing resources for detailed project preparation studies.

The preliminary work carried out by ULBs as part of project identification and project conceptualization competencies improves the outcome of project development process. The survey respondents have attached medium importance to *project development process management competency* (Rank 6, RII 0.78). Policy makers have already initiated steps for improvement in project development process of urban PPP projects such as PPP nodal agencies, panel of transaction advisors and empanelled consultants for preparation of city development plan and detailed project report under JNNURM program.

- *Emphasis on rules of partnerships and search for capable private partner*

After the appraisal of potential urban PPP projects with technical, socioeconomic and financial analysis, the ULBs approach the PPP marketplace for forging partnership with private partner. The transaction design is a critical component of urban PPP project. It lays the foundation for selection of suitable private partner by designing bidding process, prequalification documents and concession agreement and charts out the contractual relationship between partners over the course of the project. Therefore, considerable effort is needed for designing transaction during implementation of urban PPP project. In this context, the survey respondents have rated the *transaction design competency* high in importance (Rank 3, RII 0.83). The survey findings are in line with the ongoing policy initiatives in India such as creation of panel of transaction advisors and state level PPP nodal agencies, which assist the ULBs in shaping the transaction as per the needs of the project (Dutz *et al.*, 2006).

Apart from transaction design competency, the procurement competency category consists of evaluation and project marketing competencies, which have equally important roles to play in the process of selection of private partner for implementation of urban PPP projects.

The survey respondents have attached medium importance to the *evaluation competency* (Rank 7, RII 0.78). The quality of transaction design makes the task of evaluating responses received from the private parties at various stages of procurement process much easier.

- *Urban PPPs are 'more about steering and less about rowing'*

The implementation of urban PPP projects includes distinct processes and the management of these processes becomes a complex endeavor owing to factors like inter organizational relationships, cultural differences between public and private sector, difference in views of stakeholders on problem definitions and preferred solutions and sourcing of diverse competencies across of urban PPP project lifecycle (Edelenbos and Klijn, 2009). The process management style provides a means to deal with this complexity, which makes government role 'more about steering and less about rowing' (Grimsey and Lewis, 2004). It involves features like greater time devoted to promoting support for project among interested parties, developing and identifying common knowledge needs as well as the way in which shared needs can be satisfied, adjusting quickly to the changing circumstances surrounding the project and steering the project according to competencies of people.

The management of the processes according to these features could be an area of concern for survey respondents; as a result the *process management competency* (Rank 4, RII 0.81) is rated high in importance by them. These findings are more relevant to the current scenario on urban PPP projects in India, wherein the management of these processes in a fragmented manner affects the outcome of urban PPP projects.

- *Reorientation in role of ULB from provider to manager of urban services*

The role of ULB transforms from provider to manager of urban services with adoption of the PPP model (Bloomfield, 2006). Therefore the management of roles and responsibilities of parties to the contract during construction and operation phase becomes a critical dimension of urban PPP projects. The prevailing practices in ULBs indicate inefficiencies in service delivery management even under traditional procurement models, resulting in quality of urban services well below the norm (Mathur *et al.*, 2007). As a result the ULBs will have to take a quantum leap in contract management competency to play a meaningful role in provision of urban services with PPP model. However, the survey respondents have accorded medium importance to the *contract management competency* (Rank 5, RII 0.78). These findings are relevant for the design of policy initiatives for facilitating PPP in provision of urban services. The ongoing initiatives primarily focus on processes involved until selection of private partner. However, it is important for policy makers to realize that the efforts expended in the appraisal of PPP projects and selection of suitable partners

could bear fruit with *contract management competency* (Richter, 1993).

While playing the role of manager in provision of urban services, the ULB has to focus equally on development of spirit of cooperation and trust between the public and private partners. This is essential for delivering services with long term arrangements like PPP projects (Campbell and Harris, 1993). The contract document can not account for all possible scenarios which the project may face in the future, leading to incompleteness of contract (Turner, 2004). Therefore, the ULB has to strike a balance between contract and relationship management approach (Poppo and Zenger, 2002). However, the *relationship management competency* which helps in development and management of relationship is rated considerably lower (*Rank 12, RII 0.64*) in importance among competencies for implementing urban PPP projects. This reflects the environment of urban PPP projects in India, wherein the need for building a strong relational architecture around the urban PPP project in a more formal manner has not been recognized. The urban PPP projects in India are at the nascent stage, and are currently redefining the traditional roles of ULBs and private partners in provision of urban services. During this phase of learning and experimentation, the functioning of urban PPP projects within the partnership framework enshrined by concession agreement will gain priority.

#### V. PREFERENCE ABOUT APPROACHES FOR DEVELOPMENT OF COMPETENCIES

As the lack of competencies in ULBs has emerged as one of the primary bottlenecks in mainstreaming PPP model for provision of urban services, there is a need for identifying the appropriate approaches for competency development in ULBs. In this context, a two step process was followed. In the first step, a literature review covering academic journals, country specific documents and best practices guidelines by developmental organizations was conducted for identifying these approaches. The review covered varied disciplines like public management, public policy, construction management, economics, political science and sociology. In the second step, the preliminary list developed of approaches for competency development was discussed with urban PPP experts and officials of ULBs.

The urban PPP experts were associated with developmental organizations, private advisory firms and research institutes. The ULB officials were from ULBs focusing efforts in the direction of competency development, urban infrastructure financing, urban PPP projects, citizen participation and administrative reforms. These urban PPP experts and ULB officials were top level experienced officials in their respective organizations and have long term association with the urban infrastructure sector. The final list consists of the following eleven approaches:

1. Training programs for municipal staff on urban PPP projects (Plummer, 2002; Peltenburg *et al.*, 1996).

2. Training programs for elected representatives of ULBs on urban PPP projects (Plummer, 2002; Peltenburg *et al.*, 1996).
3. Recruitment of personnel in ULBs for managing urban PPP projects (Plummer, 2002).
4. Appointment of external advisors for providing specialist competencies (Plummer, 2002; Peltenburg *et al.*, 1996; Jooste, 2009).
5. Establishment of PPP nodal agency at state level for supplementing competencies in ULBs (Dutz *et al.*, 2006).
6. National PPP unit to assist state governments in implementing urban PPP projects (ADB, 2006a).
7. Capacity building oriented technical assistance for implementing urban PPP projects (Plummer, 2002; Mengers, 2000).
8. Reorganizing the municipal personnel system in tune to urban PPP projects (Plummer, 2002).
9. Creation of network among ULBs for cross learning and knowledge sharing on urban PPP projects (Peltenburg *et al.*, 1996).
10. Secondment of skilled staff from state level PPP nodal agency to municipal level.
11. Development of ULB officials through working with other ULBs (Steinberg and Sara, 2000; Jones and Blunt, 1999).

In the survey research, the respondents were asked to rate the importance of these approaches by using a five point scale from “Not important” to “Most Important”. The RII, discussed in the earlier section, was used for summarizing the importance of each approach. These approaches within each respondent category are ranked on the basis of RII. T-Test was carried out for analyzing the degree of agreement on importance rating among urban PPP experts and ULB representatives at 5% significance level.

#### A. Discussion of the Findings

The results presented in Table 2 show rankings, based on RII, of approaches for development of competencies to implement urban PPP projects. The perceptions of the two groups, i.e. Urban PPP experts and ULB representatives, as well as the combined perception of all respondents are shown in the table. It can be seen that there is agreement between the two groups (at 5 % significance level) on importance ratings in the case of seven of the 11 approaches identified for developing competencies. The approaches where there is a difference in perception include, *training programs for municipal officials, training programs for elected representatives, capacity building oriented technical assistance and creation of network among ULBs for knowledge sharing.*

It can be seen from the RII values of approaches for competency development that all approaches, except for appointment of external advisors, are rated higher in importance by ULB representatives as compared to urban PPP experts. The mean value RII for the survey respondents-urban PPP experts and ULB representatives is 0.64 and 0.75 respectively. There is, on an average, a

shift of 0.11 in RII of the approaches between these two categories of respondents.

Spearman’s rank correlation technique was used to compare the relative rankings of the approaches by the two different categories of respondents. The Spearman’s rank correlation coefficient is 0.536 at a significance level of 0.089. It can be seen from Table 2 that the rankings of

the approaches by the two groups of respondents vary by a rank difference of greater than 2 only in the case of two approaches, ie. *Appointment of external advisors* (difference =8) and *Creation of network between ULBs*(difference = 5). If these two approaches are

TABLE II  
IMPORTANCE OF APPROACHES FOR DEVELOPMENT OF COMPETENCIES IN ULBs

Approaches	Urban PPP Experts		ULB Representatives		Combined		T - test	
	RII	Rank	RII	Rank	RII	Rank	T value <sup>@</sup>	Sig.
Training programs for municipal staff on PPPs in delivery of urban services	0.7	2	0.85	1	0.77	1	- 2.866	0.006*
Training programs for elected representatives of ULBs on PPPs in delivery of urban services	0.69	3	0.81	4	0.75	2	- 2.179	0.034*
Capacity building oriented technical assistance in implementation of urban PPP projects	0.67	4	0.82	2	0.75	3	- 2.833	0.007*
Appointment of external advisors for providing specialist competencies based on requirement of urban PPP projects	0.74	1	0.72	9	0.73	4	0.456	0.650
Creation of network between ULBs for cross learning and knowledge sharing on urban PPP projects	0.62	8	0.82	3	0.72	5	- 3.686	0.001*
Recruitment of personnel in ULBs for managing implementation of urban PPP projects	0.67	5	0.74	6	0.71	6	- 0.921	0.362
Reorganizing the municipal personnel system in tune to the PPP in delivery of urban services	0.65	6	0.73	7	0.69	7	- 1.232	0.224
Establishment of PPP nodal agency at state level to supplement competencies at ULB level	0.64	7	0.74	5	0.69	8	- 1.362	0.179
Development of municipal staff through working with other ULBs	0.58	9	0.72	8	0.66	9	- 1.968	0.055
Secondment of skilled staff from state level PPP unit to municipal level	0.57	10	0.65	10	0.61	10	- 1.278	0.207
A national level PPP unit to assist state government	0.51	11	0.62	11	0.57	11	- 1.305	0.198

@ H<sub>0</sub>: There is no significant difference in importance rating by different category of respondents

\* H<sub>0</sub> Rejected at 5% significance level H<sub>1</sub>: Significant difference in importance rating among different category of respondents

RII: Relative Importance Index

removed and the Spearman’s rank correlation is recalculated, it is 0.933 at 0.00024 significance level, showing a high level of agreement between the two groups with respect to relative rankings.

From the above analysis, taking into consideration both the RII values and relative rankings, it can be seen that the ULB representatives in general tended to rate at a higher level on the importance scale. However, the relative rankings, except in case of two approaches, were similar.

The results are discussed below based on the combined perception of all respondents. However, where there is a difference in importance rating based on RII values (statistically significant) or based on relative ranking these are discussed.

- *Training programs – a logical site of competency development interventions*

The training activities are often considered the logical site of the competency development interventions in the

public sector (Merilee and Mary, 1995). A similar scenario is observed in India, wherein training programs are becoming part of capacity building policy initiatives for enabling urban PPP projects. The survey respondents attached highest importance to *training programs for municipal staff (Rank 1, RII 0.77)* and for *elected representatives (Rank 2, RII 0.75)*.

As the weak competencies in administrative wing of ULBs to undertake urban PPP projects is emerging as an primary bottleneck, the competency development initiatives often concentrate their immediate efforts towards training municipal officials in related areas.

The administrative wing of ULB is in charge of provision of urban services as per policies formulated by the elected wing of ULB (Chopra, 2005). The elected representatives of ULBs wield considerable influence during lifecycle of urban PPP projects (Plummer, 2002). Therefore, the dissemination of knowledge *within the elected wing by training programs on urban PPP projects* could assist in various ways such as clearing doubts on role of private sector, realization of benefits from PPP



model, communicating information about urban PPP projects in the right manner to urban citizens and faster decision making. Past experience has shown that politicians could either become enabler or roadblock in implementation of urban PPP projects; therefore empowering the elected representatives, by training them in areas related to urban PPP projects, to play a proactive role in the lifecycle of urban PPP projects is a critical area (Zerah and Eaux, 2000; Klijn and Koppenjan, 2000; Fernandez *et al.*, 2008; Devkar *et al.*, 2009).

- *External advisors have important role in bridging capacity gaps faced by ULBs*

There is substantial difference in the ranking of the approach – *appointment of external advisors* by the survey respondents. The urban PPP experts have ranked it as first among approaches for competency development as compared to ninth by ULB representatives. The urban local bodies often face competency bottlenecks in performance of various tasks associated with urban PPP projects such as bid process management, financial structuring, design of policy frameworks and institutional structures and so on. In this scenario, the urban PPP experts feel that the role of external advisors is critical in overcoming competency gaps faced by ULBs in implementation of urban PPP projects. One of the reasons for highest ranking to this approach by urban PPP experts is that they are often involved in various capacities such as transaction advisers, financial consultants, capacity building experts etc. to provide advisory support to the ULBs. However, the ULB representatives are cautious about the efficacy of this approach to overcome competency gaps in long run. In the short run, the external advisors can play a critical role by bridging competency gap in line with the requirements of urban PPP projects, but it still raises questions on the internalization of these competencies in urban local body and reduction in dependence on advisors over a period to time.

- *Capacity building oriented technical assistance for urban PPP projects*

Traditional approaches to competency development like training programs and appointment of external advisors highlight immediate response to weak competencies in ULB. Although the adoption of these approaches face less political, administrative and institutional constraints, they have limited impact in terms of internalization and sustenance of competencies in the long run. The *capacity building oriented technical assistance* has potential to overcome the limitations associated with the traditional approaches for competency development. This approach is widely adopted in the area competency development in ULBs for urban infrastructure development, which involves creation of learning opportunities in the workplace through improvement in organizational systems and procedures (Mengers, 2000; Steinberg and Sara, 2000). The survey respondents have recognized this potential and therefore given relatively higher ranking to *capacity building*

*oriented technical assistance* (Rank 3, RII 0.75). As part of this approach, the competency gaps in the ULBs can be investigated and appropriate mechanisms can accordingly be designed which not only provides specific competency directed at a urban PPP projects but also aims at ensuring sustenance of these competencies in ULBs.

- *Need for creation of platform for knowledge sharing and cross learning between ULBs*

The provision of urban services through the PPP model is a new approach for most of the ULBs. In these circumstances, the *creation of network between ULBs for knowledge sharing and cross learning* would reduce common pitfalls in urban PPP projects and avoid reinventing the wheel. It would also pave the way for evolution of best practices and continuous organizational learning on urban PPP projects. There is substantial difference in ranking this approach by survey respondents. The urban PPP experts have ranked it eighth among approaches for competency development as compared to third by ULB representatives. There is growing recognition of the importance of knowledge sharing among private sector organizations involved in implementation of PPP projects (Carrillo *et al.*, 2008; Liyanage *et al.*, 2008). But it is a relatively new approach for competency development in the ULBs. Recently, the Ministry of Urban Development has launched PEARL programme to create network between JNNURM ULBs for knowledge sharing on urban reforms and city governance (Ministry of Urban Development, 2007).

- *Encouragement of approaches addressing development and sustenance of competencies in long run*

There are many ongoing competency development initiatives in India for urban PPP projects. However, their effectiveness will be limited unless steps are taken to improve broader organizational settings within which the municipal officials operate and infuse new talent in ULBs in accordance to changes in model for urban service delivery. This directs attention to need for approaches to reinvigorate competencies in ULBs for implementing urban PPP projects, namely, *reorganizing municipal system and recruitment of personnel*. These approaches imply changes in the organizational culture and procedures and therefore require substantial political and administrative commitment as well as painstaking efforts from both the state government and urban local body.

The survey respondents have rated the approach-*reorganizing municipal system* (Rank 7, RII 0.69) low in importance. There are practical challenges ahead in reorganization of municipal personnel system, but in long run, the reforms in this direction are inevitable. The survey respondents have attached low importance to *recruitment of personnel in urban local bodies for managing implementation of PPP projects* (RII 6, RII 0.71). The recruitment process often faces bureaucratic and political hassles, both at the local and state government level, which often results in undue delays and



appointments without systematic assessment of human resource needs.

- *Design of PPP nodal agency has to take into consideration surrounding institutional environment*

Currently, there is a growing enthusiasm among the state governments for creating PPP nodal agencies to deal with the multifaceted issue of competency development in state government departments and urban local bodies (Dutz *et al.*, 2006; ADB, 2006b). These PPP nodal agencies are touted as the one-stop solution to deal with governmental failures faced in implementation of PPP projects such as lack of competencies, lack of coordination in government machinery, high transaction costs, poor procurement incentives and lack of information (World Bank, 2007). The survey respondents have rated the *establishment of PPP nodal agencies at state level for supplementing competencies (Rank 8, RII 0.69)* and *secondment of skilled staff from state level PPP nodal agency to municipal level (Rank 10, RII 0.61)* lower in importance among approaches for competency development. As the establishment of PPP nodal agencies is a recent institutional trend, there is a lack of adequate evidence on performance of these PPP nodal agencies in the project environment. Therefore the survey respondents are cautious about banking on this approach to a considerable extent now. It also indicates that the survey findings are not in line with ongoing policy efforts towards replicating the institutional model of PPP nodal agencies across different states. Therefore if the policy makers expect the PPP nodal agencies to play a prominent role in addressing competency development in ULBs, they will have to design PPP nodal agencies taking into account administrative culture, ULB's needs and political environment.

#### VI. CONSTRAINTS IN DEVELOPMENT OF COMPETENCIES FOR IMPLEMENTING URBAN PPP PROJECTS

Policy makers have been formulating competency development programs for addressing weak competencies in ULBs to implement urban PPP projects. However, the outcome of competency development programs is affected by various constraints. In this context, a two step process was followed. In the first step, a literature review covering academic journals, country specific documents and best practices guidelines by developmental organizations was conducted to identify the constraints in the development of competencies for implementing urban PPP projects. The review covered varied disciplines like public management, public policy, construction management, economics, political science and sociology. In the second step, the preliminary list of constraints identified were discussed with urban PPP experts and ULB officials for content and wording and refined accordingly.

The urban PPP experts were associated with developmental organizations, private advisory firms and research institutes. The ULB officials were from ULBs focusing efforts in the direction of competency development, urban infrastructure financing, urban PPP projects, citizen participation and administrative

reforms. These urban PPP experts and ULB officials were top level experienced officials in their respective organizations and have long term association with the urban infrastructure sector. The final list of constraints after revision is as follows:

1. Lack of understanding on sourcing of specialized competencies from external advisory services (Akintoye *et al.*, 2003).
2. Lack of power over recruitment of professional staff in ULBs (Plummer, 2002; United Nations, 2008).
3. Absence of study on implications of PPP on municipal personnel management (Domberger and Jensen, 1997; Amirkhanyan *et al.*, 2007).
4. Low motivation among municipal staff due to lack of incentive system to reward staff performance (Plummer, 2002).
5. Lack of interest among municipal officials on PPP in delivery of urban services (Plummer, 2002).
6. Frequent transfer of municipal decision makers (Ministry of Finance, 2006; Zerah and Eaux, 2000).
7. Absence of state level PPP unit for supplementing competencies at municipal level (ADB, 2006b).
8. Lack of funds to meet the cost of external advisory services (Plummer, 2002).
9. Lower deal volume of PPP projects in ULBs affecting gaining experience with PPP model (Brown and Potoski, 2003; Miller and Hobbs, 2005).
10. Lack of institutions providing training and HRD support to ULBs on PPP in provision of urban services (Ministry of Urban Development, 2006).
11. Absence of human resource development plans in ULBs (Ministry of Urban Development, 2006).
12. Lack of funds to meet HRD interventions in ULBs (Peltenburg *et al.*, 1996).
13. Lack of opportunities for HRD interventions in ULBs in relation to urban PPP projects (Peltenburg *et al.*, 1996).

During the survey, the respondents were asked to rate the significance of these constraints by using a five point scale from "Not Significant" to "Most Significant". The relative importance index, discussed in the earlier section, formed the basis for summarizing the significance of each constraint. The ranking is carried out for all constraints within each respondent category based on relative significance index (RSI). t-test was carried out for analyzing degree of agreement on significance rating among urban PPP experts and ULB representative at 5% significance level.

#### A. Discussion of the findings

Table 3 shows the ranking, based on relative significance index, for constraints faced by ULBs in development of competencies in ULBs for implementing urban PPP projects. The combined perception of all respondents as well as differences in perception between urban PPP experts and ULB representatives are shown in the table. There is a high degree of agreement (at 5%

significance level) in significance rating of constraints faced by ULBs among the two groups. This shows that the respondents have a common understanding of the constraints faced by ULBs in development of competencies. Hence, the results are discussed based on the combined perception of all respondents.

Out of the thirteen constraints listed in the questionnaire, the constraint “*frequent transfer of municipal decision makers*” has been rated highest in significance (Rank 1, RSI 0.74). Two constraints, *low motivation among municipal staff and lack of power over recruitment of professional staff*, were rated at medium significance level (Rank 2, RSI 0.68 and Rank 3, RSI 0.67 respectively). The remaining ten constraints were rated at

a lower significance level, with RSI values ranging from 0.64 to 0.55.

- *Frequent transfer of municipal decision makers*

Both categories of respondents have rated the *frequent transfer of municipal decision makers* highest in significance among constraints for competency development in ULBs. Presently the PPP model for provision of urban services is a novel concept in India and adoption of this model changes the role of ULBs from provider to manager of urban services. The process of role transition brings many challenges to the ULBs.

TABLE III  
SIGNIFICANCE OF CONSTRAINTS FOR DEVELOPMENT OF COMPETENCIES IN ULBS

Constraints	Urban PPP Experts		ULB Representatives		Combined		T test	
	RSI	Rank	RSI	Rank	RSI	Rank	T value <sup>@</sup>	Sig.
Lack of understanding on sourcing of specialized competencies from external advisory services	0.65	4	0.62	8	0.63	6	0.479	0.634
Lack of power over recruitment of professional staff in ULBs	0.7	2	0.64	7	0.67	3	0.914	0.365
Absence of study on implications of PPP on municipal personnel management	0.53	13	0.58	12	0.55	13	- 0.728	0.470
Low motivation in municipal staff due to lack of incentive system to reward staff performance	0.7	3	0.67	3	0.68	2	0.439	0.663
Lack of interest among the municipal officials on PPP in delivery of municipal services	0.64	5	0.62	9	0.63	5	0.34	0.735
Frequent transfer of municipal decision makers	0.79	1	0.69	1	0.74	1	1.474	0.147
Absence of state level PPP unit for supplementing competencies at municipal level	0.57	10	0.57	13	0.57	12	- 0.017	0.986
Lack of funds to meet the cost of external advisory services	0.61	7	0.59	4	0.6	11	0.329	0.743
Lower deal volume of PPP projects in ULBs affects gaining experience with PPP model	0.61	6	0.62	10	0.61	9	- 0.116	0.908
Lack of institutions providing training and HRD support to ULBs on PPP in delivery of urban services	0.6	8	0.68	2	0.64	4	- 1.2	0.236
Absence of human resource development plans in ULBs	0.59	9	0.65	5	0.62	7	- 0.715	0.478
Lack of funds for HRD interventions in ULBs	0.55	12	0.67	11	0.61	8	- 1.721	0.092
Lack of opportunities for HRD interventions in ULBs	0.56	11	0.65	6	0.61	10	- 1.410	0.165

@ H0: There is no significant difference in significance rating by different category of respondents

\* H0 Rejected at 5% significance level H1: Significant difference in significance rating among different category of respondents

RSI: Relative Significance Index

Generally, a few proactive ULB officials, a municipal commissioner or a key official from service delivery department of ULB, spearhead the formulation and implementation of policies pertaining to urban PPP projects. These key decision makers have been referred to as “deal kings” (Ministry of Finance, 2006).

The appointment and transfer of municipal officials comes under the purview of state government (Narayan, 2006). Under the prevailing transfer policies followed by the state governments, the officials are transferred every three years or so. Further, the changes in the political equations between state government and ULB, or strained relationship between elected wing and administrative wing of ULB may lead to transfer of municipal officials more frequently. Hence, the officials are transferred

during lifecycle of urban PPP projects (The Hindu, 2004; Ray, 2009). This leads to inconsistencies in implementation of policies, and transfer of competencies acquired pertaining to urban PPP projects across organizational hierarchies in ULBs. There is a need for creating appropriate organizational procedures for effective succession planning in urban local bodies to provide a constancy of purpose. In view of the long duration of PPP projects, an environment has to be created for good working relationships between municipal officials and private partners.

- *Low motivation and lack of interest among municipal staff*

The municipal personnel system of urban local bodies in India has been plagued with a number of weaknesses such as inability to attract qualified and competent personnel, employee stagnation due to inadequate promotional opportunities, influential role of state governments in matters of municipal personnel administration, paucity of resources for training of municipal officials, and lack of clear roles and responsibilities of municipal officials (Narayan, 2006). These weaknesses have the possibility of posing a significant constraint for competency development in ULBs, namely, *low motivation in municipal staff*. This has been ranked second (*RSI 0.68*) among the constraints identified indicating the importance of improving the incentive system and its impact on competency development. While designing incentive system for municipal officials, policy makers have to take into account the peculiar features associated with public services such as: public service may involve several activities, some of which are harder to measure than others; public officials involved in delivering public services may be answerable, financially or otherwise, to multiple governmental agencies; and public service production may be measurable only at a team level (Grout and Stevens, 2003).

The work performance revolves around two factors - differences in ability or skill and differences in motivation to use that ability or skill. In the second scenario, the roots of lack of motivation could be traced back to municipal personnel system and attitude of municipal officials (Narayan, 2006). The range of ideological, political, economic and financial reasons may lead to *lack of interest among municipal officials on urban PPP projects*. This constraint has been ranked fifth (*RSI 0.63*) by the survey respondents. The effectiveness of competency development initiatives depends on the interest among municipal officials to embrace the new role as a manager of urban services under PPP model. It is necessary to structure a process of attitudinal change of ULB officials with respect to PPP model in delivery of urban services.

- *Lack of power over recruitment of professional staff*

This constraint is ranked third in significance (*RSI 0.67*) by survey respondents. The current organizational competency profile of ULBs highlights the lack of competencies in the areas related to implementation of urban PPP projects such as performance monitoring, advisory management, risk management etc. In this situation, the ULBs can infuse fresh talent by recruitment of professional staff to deal with this new mode of urban service delivery. However, the state government wields influence on the recruitment of personnel in ULBs and prevailing rules for recruitment of municipal officials may hinder the appointment of professional staff on attractive remuneration to fill the competency gap in ULBs. The United Nations handbook on good governance in PPP projects has pointed out that the public sector faces difficulties in recruiting and retaining PPP talent due to rigid recruitment systems, salary differentials with the private sector and frequent intra-departmental transfers

(United Nations, 2008). Therefore there is an urgent need to modify the existing recruitment procedures of the ULBs to enable them to function as efficient units of planning at the local level (NIUA, 2004).

- *Lack of institutions providing training and HRD support to ULBs*

Over the years, the ULBs have neglected human resource management, which has hampered delivery of urban services with traditional procurement model. In future, these ULBs are expected deliver urban services with PPP model and this leapfrogging requires assistance in the form of training and HRD support to ULBs. As the ULBs would tread the path of PPP model in provision of urban services, the demand for assistance would show a quantum jump. The supply side of competency development system has to be geared to meet this demand. The constraint - *lack of institutions providing training and HRD support to ULBs* has been ranked fourth by survey respondents. The study conducted by Ministry of Urban Development has pointed that there are only a handful of institutions providing training and HRD support to urban sector and capacity of these institutions vary considerably (Ministry of Urban Development, 2006). This study has suggested improvement in this scenario by establishment of institutions in different parts of country, energizing the competencies of existing institutions to support urban sector and designing of training programs in line with changes in delivery model of urban services.

- *Lack of understanding on sourcing of competencies*

The constraints - *lack of understanding on sourcing of specialized competencies from external advisory services* has been ranked sixth (*RSI 0.63*) by the survey respondents. Even though competencies needed for project structuring, performance monitoring, financial backing of PPP project are readily available in the market, the sourcing of these competencies to fulfill specific requirement of the project is in itself a special task. The lack of understanding on carrying out this task poses a constraint in competency development. Ongoing policy initiatives have recognized this constraint and have initiated a slew of measures like empanelled consultants for preparation of city development plan and detailed project report of JNNURM ULBs (Ministry of Urban Development, 2005), panel of transaction advisors created for PPP projects, and creation of PPP cells and PPP nodal agencies at state level (Dutz *et al.*, 2006; ADB, 2006b) to assist ULBs in sourcing of competencies.

## VII. CONCLUSIONS

In India there have been growing initiatives for adoption of PPP model for provision of urban services. The weak competency in ULBs, to implement urban PPP projects, has been one of the major constraints in realizing the potential of this model. Competency development in ULBs is thus an oft-heard refrain in the policy making process. The effectiveness of competency development

programs depend on creation of interface between demand and supply side of competency development system. In this context, an all India questionnaire survey was carried out to evaluate the perception of urban PPP experts and ULB representatives with respect to competencies for implementing urban PPP projects, approaches for development of competencies, and constraints in development of competencies in ULBs.

The relative importance of twelve competencies associated with urban PPP projects was evaluated. The top five competencies identified were project conceptualization, project identification, transaction design, PPP process management and contract management. Most of the urban PPP projects in India are in the project appraisal, procurement or early part of operation phase. Out of top five competencies identified, four competencies are associated with these phases. The appropriate policy framework will have to take into consideration the key competencies identified in this research study, which highlight immediate concerns in implementation of urban PPP projects. However, there is a need to lay groundwork for managing the operations phase of the urban PPP projects and ensuring sustainability of partnerships by focusing on competencies such as project governance and relationship management.

The perception of respondents on the approaches for development of competencies was evaluated. The survey respondents feel that the training programs are the logical site of competency development interventions and can play an important role in competency development of municipal staff and elected representatives. The urban PPP experts are of the opinion that the competency gaps faced by ULBs can be bridged by appointment of external advisors in implementation of urban PPP projects. However, the ULB representatives are not confident about efficacy of this approach to develop competencies in long run. The ULB representatives have preferred creation of networks between ULBs for knowledge sharing and cross learning as an approach for competency development. Recently, there have been initiatives to establish PPP nodal agencies at state level. However, the survey respondents have not given preference to the PPP nodal agency as an institutional mechanism, for competency development in ULBs.

The survey respondents are of the opinion that the frequent transfer of municipal decision makers poses a significant constraint in competency development in ULBs. The urban PPP projects are generally championed by a few proactive elected representatives and/or ULB officials. Therefore, transfer of these officials during lifecycle of urban PPP project leads to disconnect in implementation of policies and ineffective use of competencies developed in ULBs. The survey respondents have drawn attention to the two significant constraints related to municipal personnel system - low motivation in municipal staff and lack of interest among municipal officials on urban PPP projects. This highlights the need for designing of incentive systems for municipal officials and process for attitudinal change in line with requirements of urban PPP projects. The influence of the

state government over the matters pertaining to municipal personnel was highlighted, with survey respondents rating the lack of power over recruitment of professional staff in ULBs as a significant constraint in competency development.

The findings of this research study are relevant for both the policy makers and researchers. Further research can be carried out to analyze the influence of key competencies in implementation of urban PPP projects and investigate effectiveness of approaches for competency development.

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APPENDIX

APPENDIX - 1: DESCRIPTION OF COMPETENCIES

Competency	Brief Description
<b>I. Project appraisal competency category</b>	
1. Project identification	Ability for identification of service requirement in the municipal area which can be delivered on PPP mode
2. Project conceptualization	Ability to sufficiently define the proposed project for deciding whether to commit resources for project development and maximize the chances of implementing the project on PPP mode.
3. Project development process management	Ability to undertake project preparation studies for informed decision making about implementation of project.
<b>II. Procurement competency category</b>	
4. Transaction design	Ability for designing the PPP bidding process as well as associated documents to be used in a procurement plan
5. Project marketing	Ability to promote the PPP project among private participants and ensure development of marketplace of urban PPP projects in long run
6. Evaluation	Ability to assess the responses received from private parties at various stages of procurement process for selection of sound strategic private partner.
<b>III. Service management competency category</b>	
7. Contract management	Ability to ensure that the respective roles and responsibilities of parties to the contract are fully understood and fulfilled to the contracted standard during the operation phase of the project
8. Relationship management	Ability to develop and manage the relationships between ULB and private operator involved in the project
9. Service handover management	Ability to facilitate transfer of service to the ULB or other parties for continued delivery of services satisfactorily.
<b>IV. Project lifecycle competency category</b>	
10. Stakeholder management	Ability to plan and facilitate a process of stakeholder consultation that leads to transparent and inclusive decision making at various phases of PPP project
11. PPP process management	Ability of planning and monitoring the various processes in PPP project to achieve project objectives
12. Project governance	Ability to provide strategic direction to the project by ensuring adoption of principles of participation, decency, transparency, accountability, fairness and efficiency in implementation of PPP project.