



URBAN INFRASTRUCTURE NETWORK

**A Report on Urban Infrastructure Development in the APEC Region:  
Best Practice Policy Framework and Proposed Action Plans**

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## INTRODUCTION

As urbanisation continues at an unprecedented rate across APEC, effective and sustainable urban infrastructure policy, planning and implementation stand as a key priority and major development challenge for national and sub-national policy makers.

In its report to APEC Leaders in 2014, the APEC Business Advisory Council (ABAC) recommended the formation of the Asia Pacific Urban Infrastructure Network (UIN) and development of a Best Practice Policy Framework and Action Plans to help drive sustainable urban infrastructure development.

The purpose of this paper is to set out the elements of the Best Practice Policy Framework and associated Action Plans. They are offered as tools for APEC policymakers at national and sub-national levels of government responsible for infrastructure development.

In formulating these tools, the UIN consulted widely to ensure that practical experience of policy makers was combined with expertise in urban development, planning and financing from a wide range of participating institutions. The supporting analysis by key project consultants of the economic, political, social and environmental challenges related to urban development, and of the varying capacities of APEC economies to plan, develop and finance the infrastructure of liveable cities is attached to this report. The analysis highlighted the following considerations:

The requirement for essential and enabling infrastructure – both ‘hard’ and ‘soft’ – to stay up with needs across APEC has reached unprecedented levels. The scale of the challenge is huge. The McKinsey Global Institute (MGI) estimates \$57 trillion in infrastructure investment will be needed between now and 2030 to keep up with projected global GDP growth. Of this, approximately \$17 trillion will be needed for the Asia Pacific region. This figure includes the infrastructure investment needed for transport (road, rail, ports, and airports), power, water, housing, sanitation, education and telecommunications.

Within APEC there is a range of prospects and capacity to improve the condition of domestic infrastructure. Whilst some APEC economies have invested heavily in infrastructure, others are dealing with significant infrastructure deficits. The Asian Development Bank (ADB) estimates the urban infrastructure deficit in Asia to be at least \$60 billion per year.

Many of these economies are grappling with rapid population growth and unregulated urbanisation, featuring megacities, growing second tier cities, sprawling peri-urban fringes, and urbanised clusters merging in corridors between cities. These trends demand significant investment in new infrastructure and types of infrastructure, but these new spatial patterns are overwhelming existing policy, planning and implementation systems as cities extend beyond historic jurisdictions, institutional arrangements, and planning mandates.

Urban infrastructure is key in underpinning local, regional and national economic growth. The IMF estimates 80 per cent of GDP is produced in urban areas. Urban infrastructure determines outcomes not just for city economies but for those of regions and nations. Inefficient and uncompetitive cities are a drag on economic growth at all levels, as well as an impediment to inclusive development. Unmanaged infrastructure gaps are sources of exclusion, limit access to opportunity, cause social displacement and environmental degradation.

At a local level, issues need to be managed in a responsive and inclusive fashion to maintain social conditions for growth. Well-designed, sustainable and resilient infrastructure enhances the liveability of urban dwellers and their social and cultural environment. It can enhance economic growth and increase productivity and provide significant positive flow-on effects including improved access to markets, job creation and manufacturing growth. It is critical for the resolution of the once-rural poverty that is now concentrating within city boundaries on marginal land. UN-HABITAT in its

paper on Pro Poor Land and Housing suggests that if “preventative policies” that offer the poor a better option to squatting are not implemented, the number of people living in slums will grow to an estimated one billion by 2020.

Rapid unmanaged development in cities also comes at an environmental cost with a rise in environmental risks. Without coordinated policies of responsible industrial development and the development of environmental infrastructure, the natural environment is significantly impacted. Cities occupy only 2 per cent of the world’s land, but consume 75 per cent of its resources. They produce a similar percentage of the world’s waste with devastating results on the environment and the health of citizens. The ambient air concentration of particulate matter in most Asian cities now exceeds World Health Organisation (WHO) health and safety norms, often by dramatic margins. Many, perhaps most, of APEC’s cities do not have effective wastewater treatment systems. About 75 per cent of solid waste generated in urban areas in Asia is collected, according to estimates, and less than 60 per cent finds its way to a disposal site. For most cities, disposal remains a serious problem, since finding suitable sites, appropriate technology, and finance for a citywide facility is difficult. Such cities are increasingly vulnerable to natural disasters.

Contemporary cities require the capacity to respond to global issues such as climate change. Asian cities are likely to contribute more than half the rise in Green House Gases (GHGs) over the next 20 years. They are highly vulnerable to the consequences of climate change, including flooding, landslides, heat waves, and shortages of water. Design approaches need to enhance resilience to withstand natural disasters and deal effectively with carbon emissions. Investing in infrastructure which builds resilience, or at the very least does not create additional vulnerability, should be a critical decision making factor in any investment evaluation.

At a regional level, well managed cities can be the locus of regional development, fostering rural-urban linkages. Almost all economic activity relies on inputs or outputs that travel through a city at some point and as economies are increasingly interconnected by trade and technology, infrastructure projects become integral nodes in much larger networks.

National economic development is heavily reliant on a competition system of cities that are balanced, well connected managed and have efficient urban systems. Infrastructure investment is likely to have a significant impact on gross domestic product (GDP). The World Bank estimates that a 10 per cent increase in infrastructure provision raises growth by 1 per cent in the long-term.

Meeting the above issues and challenges requires action across three fronts: planning, project implementation and financing, with rigorous governance across all three. Identifying Best Practice Policy in these areas, alongside an analysis of current practice within APEC can assist in identifying the way forward.

The Best Practice Policy Framework presented in Chapter 1 of this report collates principles categorised around the themes of:

- policy development and planning processes;
- project development, management and implementation systems
- financing; and overall governance of all these categories of activity.

These principles are offered as a reference, rather than prescription, for stakeholders in the field of urban development, with potential application to promote the development of effective and strategic urban plans, more capable local institutions, improved financing and better oversight arrangements. They offer a guide for APEC and regional policymakers as they devise new approaches to meet the mounting challenges of urban infrastructure development and investment.

In the development of the proposed Action Plans in Chapter 2, APEC economies were assessed to identify a number of actions that could potentially enhance the quality and delivery of infrastructure. The assessment criteria and results are presented in Appendix 2. Like all work of this nature, and while the criteria and assessments have been carried out in an objective and rigorous analytical manner, there is a degree of subjectivity in interpreting the data which was derived from public sources and UIN experts. UIN welcomes any clarifications regarding practice in any economy. Where relevant, support from international agencies and specialist organisations that would be beneficial have been indicated in the Action Plans. In this way the Action Plans seek to complement existing urban and infrastructure activities underway in international organisations such as the Multilateral Development Banks (MDBs) and United Nations urban programs.

In June 2016 APEC member economies announced the adoption of the Ningbo Initiative at the APEC High-Level Urbanization Forum, seeking region-wide partnerships to promote inclusive and sustainable urbanization policies. Delivering concrete outcomes of practical value for cities to meet the most important needs of our region will require action by policy makers in APEC economies on many fronts in coming years. The Ningbo Initiative calls for sharing experiences and best practices to address challenges by urbanization. In the development of the Best Practice Policy Framework and Action Plans presented in this report the UIN will contribute to realising the goals of Ningbo Initiative and continue to be a forum for APEC economies to collectively, frankly, and objectively address contemporary issues related to urban infrastructure.

## CHAPTER ONE: BEST PRACTICE POLICY FRAMEWORK

This chapter outlines the Best Practice Policy Framework developed following UIN discussions of activities, capabilities and challenges associated with developing sustainable urban infrastructure. These principles are a major outcome from work of three UIN working groups around the themes of: promoting integrated urban planning; effective project and program development systems; and improving urban financing systems. The Framework was further informed by expert analysis of trends, issues and learnings from best practice examples.

In most APEC economies, urban areas are already generating a very large per cent of Gross Domestic Product (GDP) and have emerged as ‘engines of growth’. It is imperative that this growth is accelerated in increasingly sustainable and inclusive ways to ensure just and equitable societies.

Early analysis of the key constraints to sustainable urban economic development suggested that, while policy goals were clear – as articulated initially in the Millennium Development Goals (MDGs), in relation to environmental sustainability, then more comprehensively in the Sustainable Development Goals (SDGs) – limited institutional capacity and ineffective governance were causing underinvestment in the economic and social, ‘soft’ and ‘hard’<sup>1</sup> infrastructure needed to meet these goals. Disseminating and implementing already established best practice emerged as a key objective.

The UIN sought to identify elements of ‘best practice’ in the design and operation of institutions which were implementing effective infrastructure from economic, social and environmental perspectives and to develop a network of stakeholders across APEC to work together in this field.

Specific systems for operationalising the SDGs (in particular SDG 11 relating to making ‘cities inclusive, safe, resilient and sustainable’ but including almost all of the SDGs) requires active investment in soft and hard infrastructure by effective urban institutions. The first requirement was to understand what makes urban institutions effective. The Best Practice Policy Framework presented here defines the organisation of existing best practice responses to key challenges confronting regional economies in handling urban infrastructure development in the following areas.

*Promoting integrated urban planning*  
*Effective project and program development systems*  
*Improving urban financing systems*

Critically important to efficient and effective urbanisation is the governance that applies across and within all sectors of government policy and administration. Best practice governance arrangements encompassing planning, project development, implementation and financing are included in the following sections with some generic comments in a section at the close of this chapter.

The Best Practice Policy Framework is designed to assist various levels of government to enhance their management of issues relating to development, planning and financing of urban infrastructure and governance arrangements. It is not a prescription. It is offered as a generic reference for urban development stakeholders with potential application to promote the development of effective and strategic urban plans, more capable local institutions, improved financing and better oversight arrangements. It will act as an effective anchor for the development of individual economy Action Plans covering the above areas to address SDGs and promote inclusive and environmentally sustainable growth.

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<sup>1</sup> ‘Soft’ infrastructure being the IT and other systems needed to implement successful investments and the ‘hard’ infrastructure being the actual physical investments in water supply, health care facilities etc.

## Promoting integrated urban planning

Policy development and planning need to focus on providing the infrastructure required to maintain an environment where citizens can enjoy a fulfilling and diverse life-style – a liveable city - which provides jobs, opportunities to grow skills, innovate, and be attractive for investors.

Planning should provide an environment that is safe, sustainable and resilient.

### ***Best Practice Policy Principles - Promoting integrated urban planning***

**A flexible form:** Detailed proscriptions on the types of development are not good practice. A performance-based approach setting out the objectives sought from development is best. Plans need to be regularly updated in a participatory manner with minimum of legalistic process in order to reflect changing circumstances.

**Coordination across jurisdictions and levels of government in planning:** The hierarchy of different plans: regional, metropolitan, city level, sub-plans etc. need to be mutually consistent and be drawn up through participative processes. Plans need to be 'nested' so that they do not conflict with and actively support the plans made by higher and lower levels of government and in adjacent jurisdictions.

**Clear cut areas of responsibilities:** Lines of responsibility need to be clear and agreed across different level of governments and for managers of different sectors so that there is no overlap or gap in implementation of an agreed urban plan.

**Cross-sectoral coordination:** Plans need to actively incorporate all relevant infrastructure sectors (both 'soft' social sectors such as health, housing and education and 'hard' physical infrastructure sectors such as energy and public transport) with mechanisms to ensure coordination of provision and operation.

**Integrate specific national strategies with spatial elements:** Planning needs to ensure that local governments incorporate existing national policy priorities with infrastructure implications, e.g. example climate change and PPP strategies. Poor planning limits the scope for efficient PPP structures and investments.

Planning institutions should seek to achieve the above and enforce plans using fair and transparent processes which are efficient and not subject to undue delay due to complex legal processes.

## Promoting integrated urban planning - Sustainable Development Goals (SDG) aspects

The pursuit of the SDGs requires efficient, inclusive and environmentally sustainable investment in urban infrastructure. Institutions need to embody specific mechanisms, key elements of which are well understood, summarised under the following dimensions of sustainability.

### **Economic efficiency**

- Understand the current composition of the urban economy (including its tributary hinterland), the opportunities and threats to the key industry clusters – and the place of lower income groups in the economy.
- Develop strategies to respond to opportunities for inclusive growth, understand the infrastructure constraints to implementing these strategies and the priority projects and performance outcomes for development of this infrastructure.
- Develop resourced plans which identify competent and mandated institutions to implement the priority infrastructure program.

### **Inclusiveness**

- Understand the economic and physical circumstances of the poor and vulnerable in the city and its tributary hinterland.
- In the context of the development scenario for the urban economy and available resources, develop strategies to respond to shortfalls in housing, education and health infrastructure to bolster human capital and to respond to shelter, transport and neighbourhood infrastructure shortfalls in order to address poverty and vulnerability issues.
- Understand the constraints to implementing these strategies and the priority projects and performance outcomes for development of this infrastructure.
- Develop resourced plans which identify competent and mandated institutions to implement the priority infrastructure program.

### **Fostering climate positive and resilient development**

- Understand the current pollution, energy and greenhouse impacts of the urban economy (including its tributary hinterland) and urban form, the challenges for resilience – particularly in relation to the vulnerabilities of lower income groups.
- Develop strategies for climate positive and resilient development.
- Understand the infrastructure constraints to implementing these strategies and the priority projects and performance outcomes for development of this infrastructure.
- Develop resourced plans which identify competent and mandated institutions to implement the priority infrastructure program.

In developing detailed policy and planning action plans, consideration should be given to including actions to build detailed governance arrangements capable of addressing the issues raised in above three areas into policy and planning systems. Building such systems will also provide a basis for cross-sectoral prioritisation and the implementation the SDGs.

### **Effective project and program development systems**

Project and program development must foster innovative solutions to urban problems and the design of effective implementation vehicles which encourage community and private participation.

#### ***Best Practice Policy Principles - Effective project and program development systems***

**Project concept development** should be done in the context of a comprehensive assessment of the contribution of the project to the economic functioning of the city.

Such a context should provide the basis of performance criteria for the project and the development of investment options should be done in a ‘technology agnostic’ manner.

***Best Practice Policy Principles - Effective project & program development systems (cont'd)***

A **prefeasibility study** should be done to assess investment options and potential implementation and financing structures.

The **feasibility study and due diligence process** should preserve the potential for options for innovative project solutions from contractors and financiers.

**Market sounding and bid preparation** process should be responsive to market conditions including appropriate consideration of changes in ownership and financing structures post-construction.

**Bid processes** should be efficient and effective, ensuring competition but providing incentives for physical and financial innovation.

**Bid assessments** should be transparent and based on defined criteria based on well-articulated performance measures including cost benefit analysis.

Given an economically rational, inclusive and environmentally sound policy and planning context, the pursuit of the SDGs requires the development of efficient, inclusive and environmentally sustainable urban infrastructure. Action plans for building project development institutions will need to embody specific mechanisms to meet these objectives.

**Effective project and program development systems - Sustainable Development Goals (SDG) aspects**

As in the policy and planning area, key elements of such mechanisms are well understood and can be summarised under the three dimensions of sustainability. They are:

**Economic efficiency**

- Provide the legislative, procedural and incentive structures required to ensure that the project design and bidding processes enable the participation of those with skills and technologies to maximise outcomes on the performance criteria set in the planning process – not just to best fulfil technical specifications of a predetermined solution.

**Inclusiveness**

- Design projects to be inclusive by considering, and responding to, the economic and physical circumstances of the poor and vulnerable in the city and its tributary hinterland.
- Within the context of a project first avoid environmental and income impacting these groups, and proactively design to counter shortfalls in livelihood opportunities, in education and health infrastructure, and in shelter, transport and neighbourhood infrastructure. Incorporate such measures into bidding documents as above.

**Fostering climate positive and resilient development**

- Design projects to be climate positive and resilient by considering the environmental issues of the urban economy, the physical form of the city, and its impact on its tributary hinterland.
- Within the context of a project first ensure that no environmental disadvantage accrues to the community, in particular the poor and vulnerable, and proactively design to reduce energy usage and carbon emissions, on the one hand, and to increase resilience of infrastructure investments on the other hand as appropriate to the project.

## Improving urban financing systems

Financing systems must use appropriate and sustainable government funding modalities, encourage community and private sector financing and ensure the effective use of mobilized and invested funds.

### *Best Practice Policy Principles - Improving urban financing systems*

**Intergovernmental fiscal transfers should be responsive to the infrastructure funding needs of each level of government.** They should be based on mutually agreed transparent criteria evolved to enable different levels of governments to undertake efficient urbanisation. For example, covering gaps in funding requirements and local resource generation, based on demonstrated capacity for efficient absorption of resources. The objective should be to ensure that all citizens within a jurisdiction have an equitable access to urban services, including housing.

**State/ provincial and local governments should fully utilise their revenue base** (i.e. collect all taxes due). They should develop policies to leverage this base by tapping community, private sector, and development banks resources to allow investors to earn reasonable returns.

The development of the **skills base of local governments** necessary to administer procurement processes that will lead to good quality bids offering value for money should be encouraged as well as in the skills required in the transaction of relevant financial arrangements.

APEC governments should work with Multilateral Development Banks (MDBs) and international investors to facilitate **direct engagement with local governments**. This could include a policy framework for sovereign guarantees that provides clear consistent guidelines about infrastructure investment that would be supported by the state.

Policy should **encourage the flow of long term finance to infrastructure from pension, insurance, sovereign wealth funds and private sector investors by removing constraints** to their activity. This could include:

- removing constraints to international capital flows (private and MDB) for urban infrastructure investment;
- encouraging debt and equity funds for infrastructure investment;
- the development of project bond markets;
- loan pooling mechanisms for weaker local governments; and
- support for PPP models which are fair and transparent and share risk on an acceptable basis with private investors.

Building the required structures for urban financing to **leverage government investment** at state, provincial and city levels and secure private investments through the use of grants, loans, equity participation and guarantees.

The establishment of city funds and funding instruments to **leverage private investment** through the use of government grants, loans, equity participation and guarantees, and through contribution/ lease of local government assets should be encouraged.

## **Improving urban financing systems - Sustainable Development Goals (SDG) aspects**

Projects to achieve the SDGs cannot be implemented without complimentary funding and financing mechanisms in place. Both sources of funding and financing systems need specific mechanisms for each dimensions. The principles governing the operation of such mechanisms are well understood but integrated practice is rare. Summarised under the three dimensions of sustainability, they are:

### **Economic efficiency**

- Ensure government finance is allocated only on the basis of a coherent planning context (set out above) and of a transparent cost benefit analysis using a rational hurdle rate.
- Government finance should also be allocated as appropriate to projects which will leverage private sector investment. In respect of project financial structuring and procurement, provide the legislative, procedural and incentive structures required to ensure that the project development and bidding processes enable the participation of those with financial capacities and technologies to maximise outcomes on the performance criteria set in the planning process – not just to best fulfil the funding quantum in a predetermined manner.

### **Inclusiveness**

- Understand the financing needs and constraints of the poor and vulnerable in the city and its tributary hinterland.
- In the context of the development scenario for the urban economy and available resources, develop strategies to respond to these constraints in relation to financing for family livelihood development (especially in relation to infrastructure investments), education and health maintenance, and for affordable shelter, transport and neighbourhood infrastructure.
- Build the financing capacities of the institutions implementing these strategies and priority projects. Ensure that projects are financed so that the safeguards measures (land acquisition, resettlement etc.) are adequately provided for.

### **Fostering climate positive and resilient development**

- Develop, and provide incentives for maximising the use of, a full range of financing instruments for investments in pollution abatement, energy efficiency and greenhouse mitigation, and in building resilience into the infrastructure on which economic activity and communities depend.
- Enhance the enabling environment (legislature and regulatory framework) to build the financing capacities of institutions implementing these strategies and priority projects.

In developing infrastructure finance action plans for economies, suggested financing systems should embody best practice in governance arrangements that provide for initiatives addressing the issues raised in the three areas above. Such systems are an essential element in implementing the SDGs

## **Governance**

The UIN considered governance as a major cross-cutting issue.

Government actions to reform incentives and enabling frameworks remain critical to improved governance. APEC fora need to continue to engage with the sovereign entities but in respect of urban issues, the sub-sovereign governments need to be recognised as important partners.

There are a variety of models of metropolitan governance in developed and developing economies, in Asia and elsewhere. While APEC should be open to, and support, processes that work to improve urban governance in its developing member economies, it is important to note that the two

conventional models of consolidating metropolitan governance do not work well in some APEC economies. For example, annexing adjacent local governments, and raising the level responsible for metropolitan governance to state/provincial level.

These fundamental issues can be addressed over time, but likely not in time to effectively manage the current wave of rapid urbanisation. A more effective model is likely to be voluntary formation of metropolitan councils and secretariats, incentivised by additional resources from higher levels of government only forthcoming if effective management systems are in place. These higher level arrangements would have to be complimented by metro-wide service providers managed on a corporatised or concession basis under the regulation of the metro body.

The metropolitan council would prepare and be guided by a Strategic Plan and the service utilities would implement the investment plan. Precedents for both forms (voluntary councils and metropolitan boards) exist in most countries and can largely occur under existing legislation.

## CHAPTER TWO: THE ACTION PLANS

The Action Plans stem from initial research undertaken in 2014-15 under the auspices of the UIN. This foundation research identified and charted the structure, interrelationships, organisation, and basic funding flows related to public-sector agencies (from national down to local levels of government, in 21 APEC member and comparator economies<sup>2</sup>) involved in three evaluation areas related to urban infrastructure: urban planning/policymaking, project preparation, and financing<sup>3</sup>. From the institutional analysis and reviews of current practice in each economy (as far as publicly available data on these matters could be identified), the research made initial recommendations regarding best practices in each of the three evaluation areas. The research was desk-based and drew on the knowledge and expertise of participants in the UIN. All 21 APEC economies were assessed and non-APEC economies Bangladesh, Cambodia and India were included for comparison.

The study comprised the following broad steps:

- Developing a system of scoring for the economies on 29 criteria (11 in policy and planning, 10 in project development, and 8 in finance);
- Scoring the economies on these criteria, based on the earlier and additional research into current structure and practice (The criteria and results from the research are outlined in Annex 2);
- Grouping of economies based upon these scores and organising three Tiers of economies
- Testing for correlations between these scores and characteristics such as urban density, national density, population, land area, etc., as well as Gross Domestic Product (GDP) and Human Development Index (HDI) data.<sup>4</sup> Local-currency credit ratings for each economy are included as a proxy for the development stage of current practice in public-sector financial management.

The groupings of economies were as follows:

**Tier 1:** Cambodia, Bangladesh, Indonesia, PNG, Philippines, India and Vietnam.

**Tier 2:** Brunei Darussalam, Malaysia, Mexico, Peru, Russia, and Thailand.

**Tier 3:** Chile, People's Republic of China, Hong Kong China, New Zealand, Chinese Taipei, and South Korea, Australia, Canada, United States and Singapore.

The results of this research (shown in Appendix 2) placed economies below and above the median score. No economy measured perfectly against all criteria but the assessment showed variations of significance such that some economies below the median measure ought to consider seriously reviewing their existing practices and processes to improve in a major way their approaches to urbanisation. Conversely, economies above the median have relatively less to do to move up the curve of good practice but even among the higher scoring economies there would be considerable value to be gained in terms of efficiency and effectiveness in improving their practices and policies.

For those economies below the median, UIN classified them into two tiers as the results highlighted more significant shortcomings in existing practices and policies. Of those below the median, economies in Tier 1 have the most work to do to improve their performance in the three categories

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<sup>2</sup> Economies covered in the initial research included the following: APEC members: Australia, Brunei, Canada, Chile, China, Hong Kong China, Indonesia, Japan, Republic of Korea, Mexico, New Zealand, Papua New Guinea, Philippines, Russia, Singapore, Chinese Taipei, Thailand, the United States and Vietnam. Non-APEC economies Bangladesh, Cambodia and India were included for comparison.

<sup>3</sup> Results were published in August 2015 as [UIN Policy Framework Report](#) and presented at a special meeting of the UIN, held in Melbourne on 10 August 2015.

<sup>4</sup> GDP and HDI data were chosen as objective indicators of the economies' degrees of economic and social development; data used was from the World Bank databank.

and recommended Action Plans were developed accordingly. Those economies in Tier 2 fell below the median line against some criteria in the three categories. Some economies in Tier 2 may have varied little from that in Tier 1 or indeed to Tier 3. However, the results were significant enough in some criteria to influence the overall scoring and UIN considers that specific proposed Action Plans for economies in Tier 2.

For economies scored above the median line (grouped in Tier 3), the UIN believes that while there are differences in the results measured against the criteria used to measure the three categories, there is less differentiation between the economies and therefore reduces the value of having specific Action Plans to address those differences. Beyond that Tier 3 economies have experience and expertise in their urban policies and they could therefore be involved in building the capacities of Tier 1 and 2 economies.

It is important to note that the modeling was based on one city in an APEC economy or three comparator economies. Had the modeling been based on another city in an economy the assessment might have shown greater or lesser existing capabilities in managing infrastructure. However, UIN tends to the view that reference to another city would have been unlikely to lead to any material change in eventual scoring. The UIN welcomes any clarifications regarding practice in any economy.

Suggested Action Plans for each Tier are summarised in tabular form in Chapters 3, 4, and 5. Each chapter provides three tables covering:

- the promotion of integrated urban planning;
- effective project and program development systems; and
- financing urban infrastructure.

Each table for economies in Tiers 1 and 2 outlines recommended actions, and indicates the agencies most likely to take the lead responsibility for implementing said actions. In recognition of the varied arrangements across different APEC economies, agencies are identified in general terms. The tables include reference to possible support for capacity building from multilateral agencies and through official bilateral assistance. The Action Plans are designed to help drive integrated and effective project approaches by state, provincial and municipal level of governments in APEC economies as they set their objectives based on particular circumstances. The Action Plans for Tiers 1 and 2 in particular identify areas where improvements in capacities would add significantly to performance in urban infrastructure over time. An order of priority in tackling issues is shown in the Action Plans. Some actions will require a staged approach in policy and practices. The implementation of Action Plans would be ongoing and timing will vary from economy to economy, reflecting differing circumstances, constraints and resourcing.

Recommended actions for economies in Tier 3 are included in this report but without references to external agencies. Most of these economies are considered as more likely to contribute to sharing expertise and experiences with economies in Tiers 1 and 2. Economies in Tier 3 generally have well-structured measures to meet the challenges of planning, project and financing though some areas have been identified for enhancement.

The Action Plans are by nature broadly based and economies wishing to utilise them in guiding their own approaches to enhancing capabilities in the three areas of urban planning, project preparation and development, and financing may well need to modify them after assessing the capabilities against the criteria set out in the Best Practice Policy Framework.

## **Action Plan: Tier One Economies - Cambodia, Bangladesh, Indonesia, PNG, Philippines, India, Vietnam**

*Key points from the UIN assessment of Tier 1 economies. Governance flows across all categories.*

**Promoting integrated urban planning:** Tier 1 economies have systems but these provide a weak basis for infrastructure provision even for infrastructure currently being implemented. They fall short of providing the planning basis for sustainable development and the relatively complex legal and financial structuring and procurement processes to attract private sector participation.

**Effective project and program development systems:** Most Tier 1 economies have sectoral ministries responsible for developing the types of projects that constitute 'business as usual' infrastructure investment, financed entirely from the public budget for their sector. Some however, do utilise PPP models to link public funding and private finance. The challenge, as a first step towards making APEC cities more sustainable, is to make projects better and more integrated, so as to address shortfalls in current urban systems. After current shortfalls are priorities and made up, more complex, transformative, projects for sustainability can be developed.

The proposed actions address the need to focus on large scale projects that determine the direction of urban development and the urban form, or 'determining projects'. It is nevertheless very important that projects which are less 'determining' are improved in quality. ALL projects should be developed in the context of a publicly-accessible physical plan which will enable their impact on the local community and their contribution to the sector outcomes to be assessed. From a technical viewpoint, their priority for implementation should be based on an asset management plan.

Medium sized projects should be subject to basic cost-benefit or cost effectiveness analysis. Such systems can be introduced into existing sectoral agencies and utility companies without changes in mandates and require low levels of investment. Central agencies and international organisations supporting projects should propose that such systems be mandated by government.

**Financing urban infrastructure:** All Tier 1 member economies have a functioning hierarchy of fiscal agencies distributing public revenue across levels of government. The key issues are: first, the appropriateness and adequateness of the distribution itself; and second, the efficiency with which existing revenue sources are tapped and the proceeds used. There are often few effective incentives for governments, particularly local governments, to raise the revenue they are due and to utilise that revenue as effectively as possible. The challenges, then, are first to maximise the efficiency of the existing system, second, to reform the system to be more effective, and third, as part of the reform process, to provide resources for investment projects which foster sustainability in urban systems.

### Tier 1: Promoting integrated urban planning

<i>Recommended Action</i>	<i>Likely Lead Agencies</i>	<i>Capacity Building and Support</i>	<i>Outcome</i>	<i>Timing</i>
Formulate a national infrastructure strategy, detailing all “soft” and “hard” infrastructure proposals and projects.	National planning agencies and/or infrastructure ministries.	Support from international agencies and specialist organisations.	Guide for the implementation of activities by agencies across each level of government.	Phase 1
Assess cities’ role in relation to national strategies with spatial elements, e.g. climate change and PPP, to ensure activities are mandated and resourced.	National planning agencies and/or infrastructure ministries in consultation with specialist ministries (e.g. Environment) and state/ provincial and local authorities.	Support from international agencies and specialist organisations.	Integrate national priorities in local plans. Effective cross sectoral and inter-agency coordination of infrastructure planning, provision and operation. Establish clear cut areas of responsibility.	Phase 1
Establish/ strengthen vertical and horizontal communication channels and coordination mechanisms between national, state/ provincial and local infrastructure agencies.	National planning agencies and/or infrastructure ministries. State/ provincial and local authorities.	Support from international agencies to build/ strengthen a ‘cities’ unit to oversee this activity.	Effective cross sectoral and inter-agency coordination of infrastructure planning, provision and operation. Transparency and accountability.	Phase 1
Map key constraints including budgetary constraints. Devise activities to strengthen institutional capacity to develop and implement infrastructure projects and funding in an integrated and participatory way.	National planning agencies and/or infrastructure ministries. Consultation with state/ provincial and local authorities.	Support from international agencies and specialist organisations.	Performance based approach. Coordination across jurisdictions and levels of Government in planning.	Phase 1
Replicate infrastructure strategy at state/ provincial levels, especially in respect of metropolitan areas. Establish appropriate mandates and resources for the lead city/ metropolitan agency.	State/ provincial level agencies in charge of infrastructure planning and provision.	Support from international agencies and specialist organisations.	Coordination across jurisdictions and levels of Government in planning. Establish clear lines of responsibility. Capacity to enforce plans using fair and transparent processes.	Phase 1
Establish formal coordination mechanisms at city level for sector-specific departments (e.g. water, transportation, power, heating, etc.).	Planning agency of the lead city in a metropolis or of the metropolitan government.	Support from international agencies and specialist organisations.	Drive cross-sectoral coordination at local level. Establish clear cut areas of responsibility.	Phase 1
Ensure a flexible format and organisational structure in planning agencies.	Primary actors remain the same as the above.		Performance-based approach. Update plans with a minimum of legal processes.	Phase 2

### Tier 1: Effective project and program development systems

<i>Recommended Action</i>	<i>Likely Lead Agencies</i>	<i>Capacity Building and Support</i>	<i>Outcome</i>	<i>Timing</i>
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<p>Develop projects against an understand the spatial distribution of economic activity and the infrastructure constraints to that activity. Prioritise projects for new infrastructure to remove these constraints.</p> <ul style="list-style-type: none"> <li>Develop a work plan to develop institutions/ capabilities.</li> <li>Ensure investment priorities of sectoral agencies contribute to supporting the efficient development of the city as a whole.</li> <li>Develop projects and performance criteria in the context of a comprehensive assessment of the functioning of a city economy.</li> </ul>	<p>State/ provincial ministries of economic development and planning. Metropolitan/ city planning agencies.</p>	<p>Capacities for undertaking such analysis may need to be built in metropolitan agencies.</p> <p>Some external assistance may be needed to help develop internal capabilities and institutionalise this capacity.</p>	<p>Project concept development should be done in the context of a comprehensive assessment of the contribution of the project to the economic functioning of the city. The context of a comprehensive assessment of the contribution of the project to the economic functioning of the city should provide the basis of performance criteria for the project.</p>	<p>Phase 1</p>
<p>Projects should include:</p> <ul style="list-style-type: none"> <li>Feasibility studies to assess implementation, investment and financial options.</li> <li>Cost/benefit analysis.</li> </ul> <p>Agencies should be held to account on studies for large then smaller projects.</p>	<p>National and state/ provincial infrastructure agencies. Finance Ministries re accountability and rejection of non-compliant projects.</p>	<p>Principles are well understood and can be implemented with a planned approach.</p>	<p>Utilise Cost /benefit analysis. Development of investment options should be done in a 'technology agnostic' manner.</p>	<p>Phase 1</p>
<p>Develop Guidelines governing the application of such analysis for city/ sectoral agencies, with a clearly defined timeline for rolling out the Guidelines. Establish appropriate mandates. Implement training programs to build internal capabilities and institutionalise these practices.</p>	<p>State/ provincial ministries of economic development and planning and metropolitan/ city planning agencies.</p>	<p>All economies have consultants capable of undertaking such analysis. Support may be necessary to build internal capabilities and institutionalise these practices.</p>	<p>Bid processes should be efficient and effective, transparent and based on defined criteria.</p>	<p>Phase 1</p>
<p>Establish a dedicated and properly mandated PPP project development entity.</p>	<p>National and state/ provincial infrastructure agencies.</p>	<p>Donor support from international agencies.</p>	<p>Encourage the flow of long term finance to infrastructure.</p>	<p>Phase 1</p>
<p>Review basic procurement processes and implement outstanding/ existing legislation/ administration procedures. Develop a roadmap for any necessary institutional strengthening and capacity development.</p>	<p>State/ provincial ministries of economic development and planning with metropolitan/ city planning agencies.</p>	<p>for institutional strengthening and capacity development.</p>	<p>Increase the competitiveness and transparency of bid processes.</p>	<p>Phase 1</p>
<p>Use performance criteria to allow assessment of a project on a technically agnostic manner. Improve efficiencies and effectiveness of bid processes ensuring competition but providing incentives for physical and financial innovation. Build responsiveness to market conditions including changes in ownership and financing structures.</p>	<p>Contingent on establishing the roadmaps for institutional strengthening and capacity development but primary actors remain the same as the above.</p>	<p>Support may be necessary to build internal capabilities and institutionalise these practices.</p>	<p>Bid processes should be efficient and effective, transparent and based on defined criteria.</p>	<p>Phase 2</p>

### Tier 1: Financing urban infrastructure

<i>Recommended Action</i>	<i>Likely Lead Agencies</i>	<i>Capacity Building and Support</i>	<i>Outcome</i>	<i>Timing</i>
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Develop/ mandate Guidelines for the full exploitation of revenue sources and the efficient utilisation of this revenue. Develop policies to incentivise this i.e. matching- and challenge-based transfers.	Ministries for local government and finance.	Capacity building for the state/ provincial and local institutions involved can largely be carried out in country using national institutions.	State and local governments will utilise their revenue base to encourage effective exploitation of revenues.	Phase 1
Establish clear PPP legislation and guidelines to facilitate the tapping into community, private sector, and development banks resources and allow investors to earn reasonable returns.	Ministries for local government and finance with (in respect of PPP actions) ministries responsible for economic development or planning.	Support should be a focus of development cooperation.	State/ Provincial and local governments should leverage their revenue base. This policy will encourage leverage of this base.	Phase 1
Re-invigorate the role of national challenge funds and other funding institutions and instruments such as guarantees designed to leverage effective government investment at state, provincial and city levels.	Ministry of Finance and the central bank in consultation with local government and technical ministries.	Specialised support to develop: <ul style="list-style-type: none"> <li>• assessment systems / due diligence;</li> <li>• financing instruments; and</li> <li>• build access capabilities of local governments.</li> </ul>	Stronger framework for DFIs, national, state funds and commercial banks to lending for infrastructure locally.	Phase 1
Develop roadmaps to remove restrictions on institutions, MDBs and international investors to engage with local governments in infrastructure financing. Include a national government policy framework for sovereign guarantees that provides clear consistent guidelines.	Ministry of Finance and other monetary authorities and regulators i.e. pension regulators.	Support technical input on <ul style="list-style-type: none"> <li>• regulate limits on borrowing/ contingent liabilities</li> <li>• build due diligence capabilities</li> <li>• structure private finance/ PPP projects.</li> </ul>	Develop the capacity for long term finance.	Phase 1
Develop structures and measures to share revenue and expenses across metropolitan jurisdictions for: <ul style="list-style-type: none"> <li>• land acquisition,</li> <li>• resettlement costs determinations and</li> <li>• disbursement.</li> </ul>	Primary actors will be the National Ministries of Local Government and Finance. In respect of PPP actions, Ministries of Economic Planning.	Should be a focus of development cooperation. Capacity building for the state/ provincial and local institutions can largely be carried out in country using national institutions.	Share revenue and expenses across jurisdictions.	Phase 1
Assess fiscal transfers to ascertain whether they correspond to the urban infrastructure funding needs of each level of government, based on agreed transparent criteria.	Contingent on establishing the roadmaps for institutional strengthening and capacity development but the primary actors remain the same.	Capacity building for the state/ provincial and local institutions involved can largely be carried out in country using national institutions.	Take measures to further encourage the flow of long-term finance for infrastructure.	Phase 2
Develop project bond markets, and loan pooling mechanisms for weaker local governments to encourage debt and equity funding. Remove constraints on capital inflow to facilitate infrastructure finance by MDBs and the international private sector.	Contingent on establishing the roadmaps for institutional strengthening and capacity development but the primary actors remain the same.	Support should be a focus of development cooperation.	Take measures to further encourage the flow of long-term finance for infrastructure.	Phase 2

## **Action Plan: Tier 2 Economies - Brunei Darussalam, Malaysia, Mexico, Peru, Russia, and Thailand**

*Key points from the UIN assessment of Tier 2 economies. Governance flows across all categories.*

**Promoting integrated urban planning:** All Tier 2 All economies generally do coordinate infrastructure strategy and development at national, state and local levels of government.

Of the countries in Tier 2, with the exception of Malaysia, this category was the weakest in the assessment. All countries have planning systems, but they more effective processes for planning for sustainable development are needed.

Some economies (Mexico, Peru and Russia) do not have integrated multiple sector planning processes or are lacking in meeting development imperatives such as responding to climate change, comprehensive planning for economic development and spatial coordination. All economies in this category have less well developed cross-jurisdictional and cross-sector agency coordination and do not specify project implementation arrangements and the assignment of implementation responsibilities. With the exception of Brunei Darussalam, economies do not fully exercise enforcement over approved plans.

**Effective project and program development systems:** Generally, Tier 2 economies should focus on processes that will improve urban sustainability by addressing shortfalls in current systems. Actions are required to address “concept development” where projects are developed in the context of a comprehensive assessment of the contribution of the project to the economic functioning of the city. This approach determines the direction of urban development and the urban form – “determining projects”.

**Financing urban infrastructure:** Relatively, Tier 2 economies have sound intergovernmental fiscal frameworks which enable the financing of infrastructure. They also have adequate provision for funding the basic infrastructure needs of sub-national governments and incentives for them to adequately utilise their revenue base.

The economies do not have loan pooling arrangements for supporting projects in the weaker (financially) local levels of government. The actions outlined in the Action Plan if implemented would enhance financing.

## Tier 2: Promoting integrated urban planning

<b>Recommended Action</b>	<b>Likely Lead Agencies</b>	<b>Capacity Building and Support</b>	<b>Outcome</b>	<b>Timing</b>
Establish/ strengthen mechanisms to coordinate cross-jurisdictional <b>and</b> cross-sectoral planning for both “soft” and “hard” infrastructure	Planning agencies at this level and/or ministries in charge of infrastructure planning and provision.	Capacity building for the state/ provincial and local institutions involved can largely be carried out in country using national institutions.	Effective cross sectoral and inter-agency coordination of infrastructure planning, provision and operation.	Phase 1
<p>Adopt flexible formats and structures in planning agencies to ensure that they have the capacity to:</p> <ul style="list-style-type: none"> <li>• specify project implementation arrangements</li> <li>• assign implementation and budget responsibilities</li> <li>• enforce plans using fair and transparent processes which are not subject to undue or capricious delays or deliberately complex in legal processes</li> </ul> <p>Such institutions may include specialised courts for adjudication of disputes related to planning.</p>	<p>Planning agencies at this level and/or ministries in charge of infrastructure planning and provision.</p> <p>Priority should be given at the relevant government level above metropolitan level – usually state or province – to providing appropriate institutional structures, mandates and funding for cross-jurisdictional and cross-sectoral metropolitan planning.</p>	<p>Support from the international community to establish or strengthen planning legislation and/or specialist courts.</p> <p>Structures for auditing planning performance – for example, average time to determine a development application – may be needed at the supervisory level of government.</p>	Performance based approach setting out the objectives sought from development.	Phase 1
<p>Initiate national strategies focusing on the role of cities in economic development and spatial coordination: e.g. climate change and PPP strategies.</p> <p>Articulate a national cities strategy. Build a consensus on what is expected of cities and their role in national economic development. Establish mandates and resources to fulfil that role.</p> <p>Such strategies should be replicated at state/ provincial levels, especially in metropolitan areas.</p>	National planning agencies and/or ministries in charge of infrastructure planning and provision.	Principles are well established and can be implemented in-country with a planned approach.	Integrate national priorities in local plans and projects.	Phase 2

## Tier 2: Effective project and program development systems

<b>Recommended Action</b>	<b>Likely Lead Agencies</b>	<b>Capacity Building and Support</b>	<b>Outcome</b>	<b>Timing</b>
Subject all projects to cost/benefit analysis. Projects without rigorous cost/benefit analysis should not be considered for financing. State/provincial government to develop guidelines, and mandates, for such analysis, preferably for all projects, beginning with major projects.	Ministries of local government and finance at this level. In concert with: <ul style="list-style-type: none"> <li>national ministries of finance (to ensure consistency across states/ provinces)</li> <li>ministries for infrastructure planning and provision and PPP</li> </ul>	Principles are well understood and can be implemented with a planned approach.	Bid processes should be efficient and effective, transparent and based on defined criteria.	Phase 1
Ensure bid assessment based on well-defined criteria based on performance measures, analysis and transparency. Develop guidelines for, and mandating, such performance-based bidding for all projects starting with major projects.	Ministries of local government and finance at this level. In concert with: <ul style="list-style-type: none"> <li>national ministries of finance (to ensure consistency across states/ provinces)</li> <li>both national and state/ provincial ministries in charge of infrastructure planning and provision and PPP units.</li> </ul>	Principles are well established and can be implemented in-country with a planned approach.	Improve efficiencies and the effectiveness of bid processes to ensure competition but providing incentives for physical and financial innovation.	Phase 1
Develop project concepts in the context of a comprehensive assessment of the contribution of the project to the economic functioning of the city. State/provincial government to develop guidelines, and mandates, for such analysis.	Ministries of planning and local government at this level. In concert with national ministries of infrastructure planning.	Capacities for undertaking such analysis may need to be built in metropolitan agencies. Some external assistance may be needed to help develop internal capabilities and institutionalise this capacity.	Provide the basis of performance criteria for projects.	Phase 2
Incorporate the concept of utilising pre-feasibility studies to assess investment options and potential implementation and financing structures. Use performance criteria in a way that allows assessment of a project on a technically agnostic manner. Develop guidelines, and mandates, for such studies and performance criteria in bidding – starting with major projects.	The lead agencies will likely be the ministries of local government and finance at this level in concert with national ministries of finance (to ensure consistency across states/ provinces) and both national and state/ provincial ministries in charge of infrastructure planning and provision and PPP units. Government level above metropolitan level to develop Guidelines and mandates.	Capacities for undertaking such analysis may need to be built in metropolitan agencies.	Transparent and rigorous bid assessments based on defined criteria.	Phase 2
Some economies – Thailand, Brunei, Malaysia and Mexico – could implement market sounding arrangements in bid preparation processes, including taking into account changes in ownership and financing structures post-construction.	Activities in this area are contingent on establishing the institutional strengthening and capacity development described for the above first priority actions, but the primary actors remain the same as the above.	Capacities for undertaking such analysis may need to be built in metropolitan agencies.	Responsive market sounding and bid preparation processes.	Phase 2

## Tier 2: Financing urban infrastructure

<i>Recommended Action</i>	<i>Likely Lead Agencies</i>	<i>Capacity Building and Support</i>	<i>Outcome</i>	<i>Timing</i>
Implement metropolitan and sector structures to share revenue and expenses across metropolitan jurisdictions, corresponding to infrastructure funding needs. Provide as a priority the institutional structures, mandates and funding for such revenue and expenditure sharing. This may include mechanisms for adjudication of disputes related to funding.	Ministries of finance at this level. In concert with: <ul style="list-style-type: none"> <li>national ministries of finance; and</li> <li>ministries in charge of infrastructure planning and provision.</li> </ul> Government level above metropolitan level to develop Guidelines and mandates.	In-country support delivered by national agencies and involving MDBs in advisory roles	Effective inter-governmental fiscal transfer systems.	Phase 1
Consider introducing city funding instruments in Malaysia and Russia to leverage government funding with private investment through the use of grants, loans, equity participation and guarantees and the leasing of local government assets. Provide as a priority the institutional structures, mandates and funding for such revenue mobilisation.	Ministries of finance at this level. In concert with: <ul style="list-style-type: none"> <li>national ministries of finance</li> <li>the ministries in charge of infrastructure planning and provision and PPP units.</li> </ul> Government level above metropolitan level to develop guidelines and mandates.	In-country support for provincial and municipal agencies by national institutions and key private financial sector groups	Required structures for urban financing to leverage government investment.	Phase 1
Provide finance to support land acquisition, disbursements and resettlement costs. Provide as a priority the institutional structures, mandates and funding to ensure adequate and timely provision of budgets for these activities. This may include mechanisms for rapid, fair and binding adjudication of disputes re compensation.	Ministries of local government at this level. In concert with: <ul style="list-style-type: none"> <li>ministries in charge of infrastructure planning and provision.</li> </ul>	In-country support for provincial and municipal agencies facilitated by national institutions	Revenue sharing and expenses across jurisdictions.	Phase 1
Consider further development of the capacity for long-term finance via for example sovereign wealth funds, pensions and insurance, by removing unnecessary constraints on funds' activities develop (Peru, Russia). Amend, as a priority, legislation unduly restricting local institutional finance – including pension funds and life insurance companies – from investing in infrastructure. In parallel, examine structures of bidding and financing infrastructure for compatibility with requirements of institutional investors and adjusted accordingly.	Ministries of finance and relevant regulators at the national level and the ministries in charge of infrastructure planning and provision. National government level to amend legislation.	Nationally organised programs drawing on expertise of MDBs and key private sector wealth funds	Policy framework that will encourage the flow of long term finance.	Phase 2
Remove constraints of capital flows to facilitate infrastructure finance by MDBs and the international private sector. Amend, as a priority, legislation unduly restricting local international finance – including MDBs, pension funds and life insurance companies – from investing in infrastructure. In parallel, the structures of bidding and financing infrastructure need to be examined for their compatibility with the requirements of such investors and adjusted accordingly.	Ministries of finance and relevant regulators at the national level and the ministries in charge of infrastructure planning and provision.	Nationally organised programs drawing on expertise of MDBs and international private sector financiers	Guidance and removal of constraints on investment by MDBs and international investors.	Phase 2

## **Action Plan: Tier 3 Economies - Australia, Canada, Chile, China, Hong Kong China, Japan, New Zealand, Chinese Taipei, Korea, United States**

*Key points from the UIN assessment of Tier 3 economies. Governance flows across all categories.*

**Promoting integrated urban planning:** All Tier 3 economies formulate strategic urban planning and co-ordination at all levels of government, national, provincial and municipal and most of them undertake comprehensive spatial planning (New Zealand is an exception with planning and coordination at national and city level). However, Tier 3 economies generally do not effectively incorporate integrated multiple infrastructure sectors in their planning processes and nor do they incorporate integrated approaches to other development imperatives, such as climate change.

Chile is an exception and does not integrate multiple cross-sector infrastructure planning and integrated responses to development imperatives such as climate change and coordination between sector specific agencies. Hong Kong China and New Zealand do not coordinate cross-sector planning by their sector agencies and as in Chile, there is no one agency or institution responsible for overseeing specificity in project planning or for assigning responsibility and budget allocations.

At the municipal level, cross-jurisdictional issues are generally addressed, at least at the sector level, and systems for coordination among specific agencies exist and operate with some degree of effectiveness. The existence of these processes, and the infrastructure they produce, goes a long way to explaining why cities in this category of economies generally meet some of the criteria that describe “liveable cities”. Although best practice is far from uniformly applied, the experience of these countries in the provision of a high quality city environment illustrates the importance of urban infrastructure in the building of sustainable urban areas.

With the exception of Singapore, Tier 3 economies do not provide, within their planning documents, specifics of project implementation arrangements and budgeting. In general, mechanisms exist, although they are not always effective, for amendment to plans according to changing circumstances. The degree to which approved plans can be enforced is generally high but the more effective enforcement of powers would be beneficial, especially in Chile.

**Effective project and program development systems:** Tier 3 economies generally incorporate projects into physical urban development plans, including asset management planning and budgetary allocations. However, planning sometimes lacks a “deterministic” approach where projects are considered in the context of their role in a comprehensive assessment of the value of a project to the economic functioning of a city. While, projects are generally assessed on a technology agnostic basis, benefits would accrue from a more open and flexible approach to technology in the urban planning process.

All Tier 3 economies incorporate projects within an urban physical infrastructure plan. They differentiate themselves from other economies because they utilise asset management planning and budgeting and provide for cost/benefit assessments in project development.

Some economies are perhaps less effective than others in not undertaking comprehensive assessments of a project’s contribution to the economic functioning of a city.

Prefeasibility studies do not always provide for the opportunity to assess investment options and financing structures although, at the feasibility study, and due process stage, economies do consider innovative project solutions from contractors and financiers.

Performance criteria is specified and in the project assessment process opportunities are provided for technology innovation.

Economies do take market soundings in the bid preparation process and this is a distinguishing feature of this category of economies. Mostly, bid procedures are efficient, effective and transparent but often do not always provide for financial and technological innovation by bidders – judged against defined criteria and performance measures.

***Financing urban infrastructure:*** Enabling national financing structures for urban development are generally in place in Tier 3 economies, including arrangements for budgetary allocations, subject to national economic and budgetary financing circumstances. Broadly, provincial and city administrations utilise their revenue base to contribute to urban infrastructure financing needs and utilise private sector funding sources.

However, the further exploitation of revenue raising opportunities at provincial and city level should be pursued as well as innovative ways to incentivise private sector financing. All economies should take steps to develop conditions that would provide long-term investment in infrastructure by relevant long-term savings institutions such as pension funds, life and general insurance funds and wealth funds. Similarly, the development of municipal capital markets should be pursued and developed with the objective of mobilising funds into city urban infrastructure projects.

At metropolitan levels of government, institutional arrangements are generally in place including sector level structures to share revenue and expenses across jurisdictions in metropolitan areas. Local pooling arrangements for weaker local governments including local debt and equity instruments should be developed.

### Tier 3: Promoting integrated urban planning

<b>Recommended Action</b>	<b>Likely Lead Agencies</b>	<b>Timing</b>
<p>If not already in place, empower a coordinating Ministry to ensure effective cross-sector planning and ‘nested’ urban plans for all metropolitan agencies.</p> <p>Give priority at national level to rationalise planning systems to ensure they are coordinated and do not conflict.</p> <p>Move to implement integrated responses to national development imperatives, e.g. climate change.</p>	<p>Planning agencies and/or ministries in charge of infrastructure planning and provision.</p> <p>At the relevant government level above metropolitan level – usually state or province – the appropriate institutional structures, mandates and funding for cross-sectoral metropolitan planning should be provided.</p>	Phase 1
<p>Implement coordinating cross-sectoral strategies at national Ministerial level for more effective national urban planning and do this in the context of a holistic approach to urban development.</p> <p>Give priority at national level to review planning schemes and systems, and ensure that they incorporate all relevant policy objectives. Appropriate incentives should be built in to foster the implementation of these policies.</p>	<p>National and state/ provincial planning agencies and/or ministries in charge of infrastructure planning and provision.</p> <p>At the relevant government level above metropolitan level – usually state or province – the appropriate institutional structures, mandates and funding for such planning should be provided.</p>	Phase 1
<p>Local municipalities should implement cross-jurisdictional approaches to ensure effective and meaningful urban planning. This should be reflected in institutional arrangements assigning responsibility for coordination, project implementation and budgeting.</p> <p>Such institutions may include mechanisms for adjudication of disputes related to sectoral responsibilities.</p>	<p>Planning agencies at this level and/or ministries in charge of infrastructure planning and provision.</p> <p>Priority at the relevant government level above metropolitan level – usually state or province – to provide appropriate institutional structures, mandates and funding for metropolitan planning systems.</p>	Phase 2

### Tier 3: Effective project and program development systems

<b>Recommended Action</b>	<b>Likely Lead Agencies</b>	<b>Timing</b>
<p>Include a comprehensive assessment of projects in the context of the value that projects bring to the economic functioning of urban and city development.</p> <p>Projects without an adequate analysis should not be considered for financing.</p>	<p>Ministries of local government, planning and finance at this level.</p> <p>In concert with:</p> <ul style="list-style-type: none"> <li>• national ministries of planning and finance (to ensure consistency across states/ provinces) and</li> <li>• the ministries in charge of infrastructure planning and provision and PPP units.</li> </ul> <p>Priority should be given at the relevant government level above metropolitan level – usually state or province – to develop guidelines for, and mandating, such analysis beginning with major projects.</p>	Phase 1
<p>Ensure greater flexibility in the planning process to the use of technology in projects and view technology applications in an agnostic manner.</p> <p>Ensure opportunities are provided in the planning processes – at the feasibility stage – for innovative technology and financing solutions; this will involve deeper consultation with potential bidders, contractors and financiers.</p> <p>Give priority at the relevant government level above metropolitan level – usually state or province – to develop guidelines for, and mandating, such performance criteria in bidding –for all projects but certainly for major projects.</p>	<p>Ministries of infrastructure and finance at this level.</p> <p>In concert with:</p> <ul style="list-style-type: none"> <li>• national ministries of infrastructure (to ensure consistency across states/ provinces) and</li> <li>• state/ provincial ministries in charge of planning and PPP units.</li> </ul>	Phase 1
<p>Encourage bidders, at the feasibility and due diligence stage, to provide innovative technology and financing solutions with provisions to incorporate appropriate solutions incorporated in the planning determinations.</p> <p>Competitive processes should incorporate incentives to get best value from technology and financing solutions.</p> <p>Give priority at the relevant government level above metropolitan level – usually state or province – to develop guidelines for, and mandating such performance criteria in bidding – preferably for all projects but certainly for major projects.</p>	<p>Ministries of infrastructure, local government and finance at this level.</p> <p>In concert with:</p> <ul style="list-style-type: none"> <li>• national ministries of infrastructure (to ensure consistency across states/ provinces) and</li> <li>• both national and state/ provincial ministries in charge of planning and PPP units.</li> </ul> <p>Metropolitan implementation agencies with the capabilities in place to undertake such bidding would likewise be involved.</p>	Phase 2

### Tier 3: Financing urban infrastructure

<b>Recommended Action</b>	<b>Likely Lead Agencies</b>	<b>Timing</b>
<p>Develop and implement plans to further exploit revenue raising opportunities at state, (national challenge funds) provincial, and city level. Incorporate private sector financing opportunities in concert with public revenues. Give priority at the national government level to:</p> <ul style="list-style-type: none"> <li>• review infrastructure funding capacities against mandates and reform where needed.</li> <li>• providing appropriate institutional structures, mandates, incentives and funding for such revenue and expenditure sharing.</li> </ul> <p>Such institutions may include mechanisms for adjudication of disputes related to funding.</p>	<p>Ministries of finance at this level. In concert with:</p> <ul style="list-style-type: none"> <li>• national ministries of finance</li> <li>• state/ provincial ministries of finance</li> <li>• national and state/ provincial ministries in charge of infrastructure planning and provision.</li> </ul>	Phase 1
<p>Authorise city governments to access the capital markets and construct <b>financial structures</b> – e.g. municipal bond markets to mobilise finance - and governmental <b>funding instruments</b> to leverage public funds with private investment through grants, loans, guarantees and lease of public assets. Implement loan pooling policies to support fund raisings by weaker (financially) local governments, including through equity and debt instruments. Develop criteria and guidelines for structures of such financing compatible with the requirements of potential local and international investors. Give priority at national government level to amend legislation unduly restricting local government access to capital markets including the ability to borrow, issue bonds and set up SPVs.</p>	Ministries of finance, local government and relevant regulators at the national level and the ministries in charge of local government ant the state/ provincial level.	Phase 1
<p>To contribute certainty to infrastructure funding and development, make specific budgetary allocations to cover the costs of land acquisition, resettlement, determination and disbursements. Give priority at national government level to amend legislation and/or regulations on infrastructure project preparation to include such provisions. Examine the structures of bidding infrastructure for their compatibility with such needs and adjust accordingly.</p>	The agencies needing to coordinate action will likely be ministries of finance and local government at national level and ministries of local government and infrastructure planning and provision at state/ provincial levels. Metropolitan implementation agencies with the capabilities in place to undertake such bidding would likewise be involved.	Phase 1
<p>Consider easing or removing national controls on capital flows and constraints on deepening capital market structures and instruments to facilitate mobilisation of long-term savings in pension, life and wealth and sovereign funds into long-term urban infrastructure. Give priority at national government level to amend legislation unduly restricting local and international finance – including MDBs, pension funds and life insurance companies – from investing in infrastructure. Examine the structures of bidding and financing infrastructure for compatibility with the requirements of such investors and adjust accordingly.</p>	Ministries of finance and relevant regulators at the national level and the ministries in charge of infrastructure planning and provision.	Phase 2

## CONCLUSION

The report provides a Best Practice Policy Framework and proposed Action Plans to assist regional economies in enhancing their approaches to the provision of urban infrastructure. This report analyses why urban infrastructure is a major development challenge of our times. It challenges our capacities to plan, develop, implement and finance the urban structures necessary to achieve liveable cities.

The challenges confronting developing economies are substantial, often deriving from inadequate national planning for urban infrastructure, an absence of cross-sectoral planning and underdeveloped linkages between national, sub-national and municipal governments. Project development can often be improved by more rigorous analysis of costs and benefits of specific projects, the development of higher quality bidding and assessment processes and by working with the private sector and international agencies and academia in determining the appropriate technology and financial methods that could improve quality and value for money for urban services. The report points to ways in which innovative financial measures could be considered to help fund urban projects, including ways to expand local revenue opportunities at municipal level as well as the creation of direct relationships between municipal governments and international agencies.

The report assesses how individual economies and cities in the region undertake planning, projects and financing of urban infrastructure against proposed best practices with a view to developing guidance on Action Plans for economies to enhance performance and thereby improve the quality of services they deliver to their urban citizens. Like all work of this nature, while the criteria and assessments have been carried out in an objective and rigorous analytical manner, there is a fair degree of subjectivity in interpreting the data that has been drawn from various public sources and from the knowledge of the experts involved in the UIN. All economies, developed and developing, could do more to enhance their capacities to upgrade their approaches to urban infrastructure, whether it be in planning, project and financing activities. Thus, the Action Plans set out in this report should be considered as tools that economies may wish to use to enhance urban infrastructure delivery

The Action Plans for Tiers 1 and 2 identify areas where improvements in capacities would add significantly to performance in urban infrastructure over time. Not all actions are capable of immediate implementation and will require a staged approach in policy and practices. Economies in Tiers 3 generally have well-structured measures in place to meet the challenge under the categories of planning, project and financing. Even so, some areas have been identified in areas in which activities can be enhanced to better serve their communities. Those economies in Tier 3 have gained experience and expertise in their urban policies and in accord with the goals of the Ningbo Initiative they could be involved in building the capacities of those economies in Tiers 1 and 2.

Finally, The UIN is committed to continue to work with relevant APEC fora and with private sector business and associations in the region, regional and international development banks and agencies, academia and community groups to support the enhancement of urban infrastructure activities in the region. APEC economies are encouraged to regard the UIN as a valuable structure in APEC to identify and promote ideas and to mobilise capacity building initiatives in the period ahead in support of the Ningbo Initiative goals to improve urban infrastructure and to boost APEC cooperation on sustainable urban development.

## APPENDIX 1: ANALYSIS OF INFRASTRUCTURE AND URBANISATION IN APEC

### Background

Over the past three decades, cities in the Asia Pacific region, and in APEC member economies, have experienced unprecedented rapid economic growth and development. The 21 APEC economies account for approximately 42 per cent of the world's population, 57 per cent of the world's total GDP and 44 per cent of global trade. In 2014, APEC GDP was estimated at \$41 trillion, based on purchasing power parity.

APEC member economies include half the world's mega cities, 22 (55 per cent) of the world's cities with populations of 5-10 million, 185 (41 per cent) of cities with populations of 1-5 million, and 284 (48 per cent) of the cities with populations of 0.5-1 million.<sup>5</sup> These percentages are expected to increase only slightly over the next three decades, as population growth and urbanisation rates rise. Such rapid development in cities in the region has come at an environmental cost, with growing exposure to risks.

Over the next 35 years to 2050, an unprecedented increase will occur in the urban population of the APEC economies. Currently, 1.8 billion people or around 60 per cent of the region's population live in urban areas. This is expected to reach 77 per cent by 2050. By 2050, the urban population of APEC member economies is expected to increase to 2.4 billion, or by 33 per cent. Some economies are more than 80 per cent urbanised and many others are urbanising rapidly. 14 of the world's 37 megacities are located in APEC Member Economies, and all but five are in APEC Developing Member Economies (DMEs).<sup>6</sup>

In this context, broad strategies for Sustainable Urban Development were endorsed by the APEC SOM in Beijing in 2014, under which the priority objectives for sustainable urban development will be defined by each APEC city to reflect its circumstances. But, no matter the priorities, whether the construction of waste treatment plants for industrial estates, the systems required to construct and operate energy efficient buildings, or an early warning system for flooding, effective systems for development of the infrastructure underpinning sustainable development will be needed. The work of the UIN and the purpose of this paper is to assess the elements of a framework and supporting guidelines that will help regional economies to provide for the development, planning and financing of efficient and effective urban infrastructure.

Infrastructure plays a key role in increasing productivity if planned and implemented effectively. A recent International Monetary Fund (IMF) study found that increased public infrastructure investment raises output in both the short and long term.<sup>7</sup> As urban areas constitute the large majority of the economy in most Asia Pacific regional economies, the critical infrastructure task is in the cities of the region. Improving infrastructure of cities should enhance their efficiency. Success in doing that will

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<sup>5</sup> Roberts, B., Lindfield, M. and Steinberg, F. 2014. *Shaping the Future through an Asia-Pacific Partnership for Urbanisation and Sustainable City Development*. APEC Secretariat Singapore, [http://publications.apec.org/publication-detail.php?pub\\_id=1567](http://publications.apec.org/publication-detail.php?pub_id=1567)

<sup>6</sup> Ibid.

<sup>7</sup> Warner, A. 2014. *Public Investment as an Engine of Growth*. International Monetary Fund, Washington: WP/14/148. *The report finds that increased public infrastructure investment raises output in both the short and long term, particularly during periods of economic slack and when investment efficiency is high. This suggests that in countries with infrastructure needs, the time is right for an infrastructure push: borrowing costs are low and demand is weak in advanced economies, and there are infrastructure bottlenecks in many emerging market and developing economies. Debt-financed projects could have large output effects without increasing the debt-to-GDP ratio, if clearly identified infrastructure needs are met through efficient investment.*

largely determine that economy's success in improving productivity and economic growth. It will be a major factor in enhancing the liveability of urban dwellers and the social and cultural environment they live in.

The scale of the challenge is huge. The McKinsey Global Institute (MGI) estimates \$57 trillion in infrastructure investment will be needed between now and 2030 to keep up with projected global GDP growth.<sup>8</sup> Of this, approximately \$17 trillion will be needed for the Asia Pacific region. This figure includes the infrastructure investment needed for transport (road, rail, ports, and airports), power, water, and telecommunications. These estimates are nearly 60 per cent more than the \$36 trillion spent globally on infrastructure over the past 18 years and more than the estimated value of today's worldwide infrastructure. Even then, this amount would not be sufficient to address significant backlogs and deficiencies in infrastructure maintenance and renewal or meet the broader development goals of emerging economies which ADB estimates as over \$200 billion for Asia.<sup>9</sup> The McKinsey analysis suggests that addressing such shortfalls will promote economic growth. In Indonesia, for example, a 1 per cent increase in GDP spent on infrastructure would translate into an additional 700,000 jobs.

The requirements for infrastructure in aggregate are large.<sup>10</sup> While some countries have been investing heavily in infrastructure, some are lagging considerably behind the levels need to achieve their growth potential. Indonesia will require over \$570 billion in infrastructure by 2020. This would mean spending over 4.5 per cent of GDP more than it is currently spending.<sup>11</sup> The Philippines will require up to \$110 billion in infrastructure by 2020<sup>12</sup>, which would mean spending 5 per cent more of GDP on infrastructure than it is currently spending.<sup>13</sup>

In these cases, and many others, domestic capital markets are insufficient to source all the needed investment, whether the sourcing is done by the government or by the private sector. The role for international financiers and for the APEC as catalyst and support of such international finance, is clear but to achieve the required response, better infrastructure governance systems are needed, encompassing planning, project development and financing.

- Planning needs to focus on providing the infrastructure needed by a city's economy and the infrastructure to maintain an environment for its citizens, which will be attractive for investors and highly skilled workers.
- Project development must foster innovative solutions to urban problems and the design of effective implementation vehicles which encourage community and private participation.
- Financing systems must use appropriate and sustainable funding modalities, encourage community and private sector investment, and ensure the effective use of funds mobilised.

These three elements – planning, project development and financing – need to work together towards improving the city's economic, social and environmental sustainability. This integration and the capacity to achieve synergies among investments is particularly important in the case of the needed large investments in order to mitigate Green House Gas (GHG) emissions and build resilience to climate-related disasters.

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<sup>8</sup> McKinsey Global Institute – MGI. 2013, 'Infrastructure Productivity: How to Save \$1 trillion per year.' Washington.

<sup>9</sup> ADB. 2013. 'Infrastructure for a Seamless Asia' Manila.

<sup>10</sup> MGI. 2012. "The future of long-term finance: Backup material", Report for Group of Thirty, November.

<sup>11</sup> MGI. 2011. Asia's \$1 trillion infrastructure opportunity. See:

[http://www.mckinsey.com/insights/financial\\_services/asias\\_1\\_trillion\\_infrastructure\\_opportunity](http://www.mckinsey.com/insights/financial_services/asias_1_trillion_infrastructure_opportunity).

<sup>12</sup> Goldman Sachs. 2013. ASEAN's half trillion-dollar infrastructure opportunity. Asia Economics Analyst. No.13/18.

<sup>13</sup> See Footnote 7.

Most of the internationally-agreed Sustainable Development Goals (SDGs), and specifically Goal 11 which focuses on cities, have implications for urban infrastructure investment.<sup>14</sup> In this regard, any proposed action in this area will foster the achievement of the Goals in APEC DMEs directly, and by generating best practice, in other DMEs. Such action would provide a useful basis to promote SDG-related programs and projects in APEC urban centres where a number of the SDG concerns urgently need to be addressed. The localisation of SDGs needs to be applied in the infrastructure investment programs of economies and cities.

## **Context**

### **The Urbanisation Context and Key Urban Dynamics in APEC Economies**

According to the United Nations, since 2008, the majority of the world's population live in urban areas. Overall, urban growth is more than double the rate of national average population growth. Urban centres worldwide are increasing in size and number.<sup>15</sup> Urbanisation means much more than just population movements. The economies of urban areas define the characteristics of and capacities for national growth, including whether or not that growth is inclusive and environmentally sustainable. The key dynamics of the urbanisation process are described below.

### **Cities as Core Drivers of the National Economy and of Regional Integration**

Economic growth is redefining the shape of urban regions and the relationship among cities, and between cities and national governments. Industrial and commercial agglomeration is promoting city competitiveness. As urban productivity and populations continue to grow, urban centres become more and more important to national economies. In general, they contribute more than 70 per cent of the gross national product in most APEC countries, and are focal points for trade, industry, banking, finance, and administration services. Economic competitiveness is increasingly competition among cities.<sup>16</sup> Research by RMIT University includes an index of the logistics which contribute to specialist economic development of some cities.

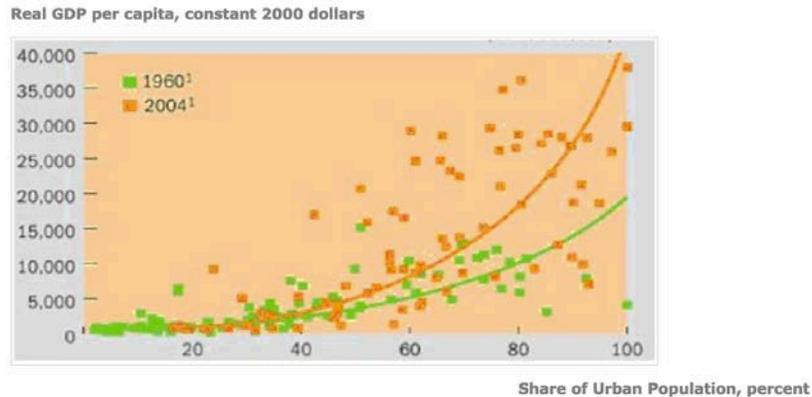
The resolution of rural poverty largely rests with the cities. Linkages to city markets bolster demand and access to labor markets enabling absorption of surplus labor from agricultural areas as rural productivity increases. The correlation between living standards (defined by per capita income) and urbanisation is clear as shown in the graph below.

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<sup>14</sup> See <https://sustainabledevelopment.un.org/post2015/transformingourworld/publication>

<sup>15</sup> United Nations. 2009. World Urbanizations Prospects: the 2009 Revision. [http://esa.un.org/undp/wup/CD-ROM\\_2009/WUP2009-F11a-30\\_Largest-Cities.xls](http://esa.un.org/undp/wup/CD-ROM_2009/WUP2009-F11a-30_Largest-Cities.xls)

<sup>16</sup> David Jin et al. 2010. *Winning in Emerging-Market Cities*. Boston: The Boston Consulting Group, Inc.



Source: Bloom, David and Tarun Khanna. 2007

The case of China graphically illustrates the centrality of the urban economy. Over the 10 years to 2008, some 50 per cent of growth came from fixed investment in China's cities. Some 80 per cent of total fixed investment in 2007 was in urban areas.<sup>17</sup> Urban consumption was 25 per cent of total GDP in 2005 and over the last 10 years, cities have created the overwhelming proportion of new jobs. Between 2000 and 2010, some 117 million people moved to city employment.<sup>18</sup> Shanghai's economy is bigger than Vietnam or Switzerland today.<sup>19</sup>

Conversely, inefficient and uncompetitive cities are a drag on economic growth and an impediment to inclusive development, trapping the poor in slums. India's infrastructure shortfalls are illustrative. Current service and financing performance falls far short of levels needed to alleviate the situation.<sup>20</sup>

APEC cities in trade corridors are connected into world economic networks as much as they are to their own economy acting as magnets for people seeking a better quality of life and economic opportunities. These linkages can be the basis of regional integration. Several significant agencies are supporting the development of such corridors. One of the Asian Development Bank's (ADB) three long-term development agendas,<sup>21</sup> regional cooperation and integration, is manifest by support to corridors, particularly in the Greater Mekong sub region. Well managed cities can be the locus of regional cooperation and are at the heart of policies of inclusive growth in the corridor, in particular through fostering rural-urban linkages. In addition, through coordinated policies of responsible industrial development and the development of environmental infrastructure, effective action can be taken to improve the natural environment.

### **New Competitive Structures Define New Spatial Patterns**

Reflecting this economic dynamism, new spatial patterns based on geographic, political, economic and social connectivity are evolving at scales not seen before. Cities are merging, sometimes joining as one city, but now often specialising within an urban region<sup>22</sup> or mega-region, transforming transport

<sup>17</sup> MGI. 2009. Preparing for China's Urban Billion. See: [http://www.mckinsey.com/insights/urbanization/preparing\\_for\\_urban\\_billion\\_in\\_china](http://www.mckinsey.com/insights/urbanization/preparing_for_urban_billion_in_china)

<sup>18</sup> World Bank. 2014. Urban China. Supporting Report 1. Washington.

<sup>19</sup> Brookings Institution. 2015. Global Metro Monitor. See: <http://www.brookings.edu/research/reports2/2015/01/22-global-metro-monitor>; and World Bank. 2015. Data. See: [http://databank.worldbank.org/data/download/GDP\\_PPP.pdf](http://databank.worldbank.org/data/download/GDP_PPP.pdf)

<sup>20</sup> Ibid.

<sup>21</sup> ADB. 2008. Strategy 2020. Manila.

<sup>22</sup> Defined for the purposes of this Plan as a geographically coherent area containing one or more cities and other urban areas linked by strong economic ties and by comparatively – in relation to areas not in the region – good transport infrastructure.

corridors into economic corridors and forming city clusters. While mega-cities are growing, the majority of urban growth over the next 30 years is projected to be in second-order cities,<sup>23</sup> often within these urban regions or economic corridors. These changing relationships among cities require new infrastructure, and new types of infrastructure, for their efficient operation and sustainability. This infrastructure is not being built. The urban infrastructure deficit in Asia is estimated to be at least \$60 billion per year.<sup>24</sup>

However, as these mega-cities and urban regions improve inter-connectivity and increase interdependence among cities, they can result in unbalanced regional and urban development, since these more complex regions favor strengthening economic centres rather than allow for more diffused spatial development.<sup>25</sup> Managing these regions is complex. Even mid-sized Asian cities have outgrown their historic jurisdictions and have expanded into surrounding local governments. The institutional arrangements for inclusive urban service delivery across the adjacent local governments (metro areas) have not kept pace. Managing large scale city-regions is even more complex.<sup>26</sup>

### **Decentralisation**

Further compounding the problem of service provision are the decentralisation policies and the move to local governance common across many APEC economies. Central governments have decentralised the political system and have given considerable responsibility for service provision to local governments. This has often been done without corresponding decentralisation of revenue sources to support the provision of these services.

As a consequence, local governments, particularly in Asia, are heavily dependent on either transfers from central government (as in the Philippines and Indonesia) or ad hoc revenue sources (such as land sales and land transfer taxes in China), or both. This revenue is often provided on a population or some other non-performance related basis. The costs of the resulting inefficiencies and market distortions are underappreciated by policymakers. Importantly, the potential of properly structured transfers and of the capital markets to discipline urban service project design and implementation and to leverage government resources for efficient, commercially viable infrastructure project is missed. In addition, complicating the lack of mechanisms for cross-jurisdictional coordination discussed above, the administrative and financial inter-relationships between the provincial/ state government(s) and the local government(s) of a city region are often unclear, asymmetrical (in terms of mandate and revenue mismatch) or potentially conflicting. Resolving or working around these issues adds significantly to the complexity and cost of project development.<sup>27</sup>

It is often the case that local governments do not maximise their own potential to generate revenue from mandated taxes and fees. The reasons range from political caution or lack of will, to inadequate systems of collection, to poor enforcement and recording. Often, there are few countervailing pressures on mayors and other decision makers. However, experience has shown that taxes spent effectively and transparently are usually accepted by the community.

On the expenditure side, much can be done to institute efficiencies. Depending on the country, approaches such as outsourcing through competitive tendering, applying zero-based budgeting to local government activities, leasing rather than buying and numerous other techniques are possible. In

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<sup>23</sup> United Nations, 2006. *State of World Population 2007*. [http://www.unfpa.org/swp/2007/english/chapter\\_1/index.html](http://www.unfpa.org/swp/2007/english/chapter_1/index.html)

<sup>24</sup> ADB. 2006. *Special Evaluation Study on Urban Sector Strategy and Operations*. Manila.

<sup>25</sup> UN-HABITAT. 2010. *State of the World's Cities 2010/2011: Bridging the Urban Divide*. Kenya

<sup>26</sup> ADB. 2010. *Managing Asian Cities*. Manila.

<sup>27</sup> Ibid.

particular, the transparency and targeting of subsidies should be carefully reviewed. More effective techniques, such as output-based approaches are available.<sup>28</sup>

However, even if local governments are proactive in raising revenue, long term financing for their infrastructure projects is often difficult to access. In general, APEC economies' capital markets are not easily accessible to local government. On the demand side, local governments are often highly constrained in the modes of financing and partnerships into which they can enter, both by their capacities and by higher levels of government. On the supply side, financial institutions, while liquid, finance short term and are not easily able to fund the long term investments urban infrastructure requires. Assisting local governments to access domestic capital markets is a promising approach, with scattered successes, but remains to be effective at scale.

Thus, and in line with the action agenda suggested for cities in the context of the 2015 Addis Ababa Conference on Financing for Development,<sup>29</sup> to improve urban infrastructure development and financing, APEC economies first must improve their:

- (a) Systems of inter-governmental fiscal relations;
- (b) Instruments for local governments' access to capital markets, as appropriate to the level of development of the capital market and the macro-economic context; and
- (c) Strategies and systems for mobilising long term financing for infrastructure.<sup>30</sup>

### **Increasing Importance of the Private Sector**

APEC member economies have been scaling up private sector involvement in urban infrastructure provision, particularly through Public Private Partnerships (PPPs) and private sector engagement in infrastructure financing.<sup>31</sup> Financial intermediaries and project developers are also increasingly seeking funding for housing and housing finance related projects. However, the regulatory framework for private sector involvement in urban infrastructure projects is often lacking. APEC, ABAC and regional organisations have provided significant support to its member economies to strengthen the regulatory framework for private sector involvement.<sup>32</sup>

In terms of the development of member economies to finance infrastructure, there is a wide range of structures and capacities, but in general the picture is improving in many areas. Regionally, the number and capacity of development finance institutions has expanded, adding sub-sovereign finance, local currency finance, an enlarged range of credit enhancement mechanisms, and new types of lending instruments. The private sector has also multiplied the number of funds and financial products available for financing infrastructure. Nevertheless, the development of the capital markets in respect of being able to provide the debt or equity for large projects remains limited, even in some of the higher income economies. Major companies are interested in supplying equipment and other inputs for such projects across a range of sectors, including some not traditionally considered for PPP such as education, and are willing to take part of the debt and equity financing of a project.

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<sup>28</sup> UN Habitat. 2016 (Forthcoming). Local Finance for Development. Nairobi.

<sup>29</sup> UN Department of Economic and Social Affairs. 2015. *Addis Ababa Action Agenda of the Third International Conference on Financing for Development*. See [http://www.un.org/esa/ffd/wp-content/uploads/2015/08/AAAA\\_Outcome.pdf](http://www.un.org/esa/ffd/wp-content/uploads/2015/08/AAAA_Outcome.pdf)

<sup>30</sup> Ibid.

<sup>31</sup> See for example: [http://www.apec.org/Press/NewsReleases/2015/0730\\_PPP.aspx](http://www.apec.org/Press/NewsReleases/2015/0730_PPP.aspx)

<sup>32</sup> For example, ABAC's support to Asia Pacific Infrastructure Partnership activities and ADB's support to regional governments as in its 2008 technical assistance projects: *Technical Assistance for Knowledge Sharing on Infrastructure Public-Private Partnerships in Asia*.

The situation in respect of readiness for private sector involvement varies widely across the region, within countries and across sectors. A range of strategies is needed<sup>33</sup> to promote private sector engagement, but the fundamental basis for this engagement in urban service delivery is for the service in question to be institutionalised in such a way that its capital and operational costs, and its revenues, can be monitored, and that the responsibility for administration of the service is clear and embodied in a coherent organisation structure.

Such institutional reform lays the basis for assessment of tariffs and of the need for, and the effectiveness of subsidies. It underpins subsequent tariff reform, commercialisation, and corporatisation. Until such a basis is laid, private businesses will limit their involvement to providing management services under contracts, and that in situations where they feel comfortable with basic contract risks and public sector stability, transparency, and fair dealing. As this institutional base improves, the private sector will be able to assume a more permanent role, assuming commercial risk.

Intermediate steps are possible. Where entities are not yet capable of accessing private finance in their own right they may be 'pooled' as with the Small Power Utilities Group in the Philippines.

Taking into account this context, the process of preparing PPP projects to be commercially viable for the private investment must look well beyond physical design and investment needs, as is done in traditional public projects. It must identify all possible risks during the project's entire life, from development, through construction and operation periods to what will happen at the end of the PPP contract (re-bidding, de-commissioning, possible extension, etc.) and allocate them appropriately to the parties to the contract. A key to preparing sustainable PPP projects is to match the cash flows during the project's life cycle (including user fees, tariffs, grants, as well as maintenance and operating costs and projected capital expenditures) to provide returns to the private investor commensurate to the project risks. At the same time, the project must meet the public sector performance and service quality targets and the PPP solution must provide more value for money than a purely public budget solution.

A chronic difficulty has been that city governments lack the capacity for structuring such projects. Another issue is the relatively small scale of many urban sector projects. Many may not warrant the high legal and other professional fees and other costs associated with structuring large PPP transactions.

## **The Challenges for APEC Urbanisation**

### **New Spatial Patterns and Land Management**

Responding to the new spatial structures, driven by the structural changes in APEC economies, set out above, is a major challenge for cities. As discussed, the cross-jurisdictional economic integration of local governments and even clusters of cities in a region requires much more comprehensive systems of planning and more effective implementation organisations than is generally in place today. Planning systems are both spatially and structurally challenged. Planning agencies often do not have the mandate to encompass the spatial extent of the city economic region. Further they are often divorced from both implementation institutions and financing needed investments. Implementation organisations are similarly too limited in geographic responsibility and too sectorally limited to comprehensively address core urban issues, for example, development and financial coordination of land and transport

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<sup>33</sup> ADB. 2010. Advancing PPPs in ADB's Operations. Manila

investments. Importantly, and with the exception of China and Vietnam, neither planning nor implementation organisations at city level have a mandate to promote economic development.<sup>34</sup>

Practically, there are two important issues for implementation of the above principles. They are the need to define:

- The 'hierarchy of different plans: Regional plans, metropolitan plans, city level plans, sub-plans need to be mutually consistent and to be drawn through participative processes.
- Clear cut areas of responsibilities at different level of governments and managers of different sectors so that there is no overlap or gap in implementation of an agreed urban plan.

At the micro scale as well, cities are failing their citizens in respect of the inclusiveness of the development of shelter and local infrastructure. While cities have performed relatively well in terms of poverty reduction and improving human quality of life, they play host to millions of the region's poor. Once-rural poverty is now concentrating in cities and towns that are not well able or prepared to manage its growth. Poor urban migrants settle on marginal land in vulnerable slums. The resulting poverty of people and place impacts the health of its people and the competitiveness of its economy. UN-HABITAT in its paper on Pro Poor Land and Housing suggests that if "preventative policies" that offer the poor a better option to squatting are not implemented, the number of people living in slums will grow to an estimated one billion by 2020. The proliferation of slums is testament mainly to poor land management, ineffective livelihood improvement, and weaknesses in the housing finance markets. On the land management side, shortfalls in incentives to utilise urban land efficiently, poor enforcement of existing zoning codes and regulations, and a lack of proactive rezoning and systems for development of new, well-serviced, inclusive, peripheral development, means there is no legal place for the poor in the existing urban area.

The objective should be to foster more proactive approaches that use urban infrastructure projects to guide urban growth processes into more efficient and inclusive directions. In particular, inclusive activities in water supply and sanitation, shelter and settlement upgrading, and in solid waste and drainage systems would have very positive impacts on poverty and social development, environmental improvement and economic growth. Deepening Asia Pacific's housing finance markets can help to alleviate acute shortages of housing which have, in part, contributed to the proliferation of slums. Research indicates that developing nations with deeper housing finance systems have a lower proportion of their population living in slums.<sup>35</sup>

In summary, land use planning needs to be more comprehensive and inclusive, more conscious of the need to respond to social imperatives, better related to finance for implementation, and better enforced. Within a given urban area there will be many differing perspectives on what constitutes the most desirable form of urban development. To respond to this and develop a consensus based vision for the city, a careful analysis of its opportunities in terms of the city's endowments and challenges that it is facing is required. This will form the basis of the development of a broadly agreed set of long term objectives through an effective participatory process. Project development needs to support the formulation of projects which comprehensively further the objectives of the plans. National governments need to develop policy guidelines, enabling frameworks and financing mechanisms to foster such activity.

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<sup>34</sup> These issues are discussed in more detail in Chapter 5, Section 3 of the UN ESCAP. 2015. *The State of Asian and Pacific Cities 2015*. Bangkok.

<sup>35</sup> Dubel, Hans-Joachim. 2008. *Does Housing Finance Promote Economic and Social Development in Emerging Markets?* (Short version study for International Finance Corporation). Berlin. IFC.

## Pollution and the Global Environment<sup>36</sup>

Cities occupy only 2 per cent of the world's land, but consume 75 per cent of its resources. They produce a similar percentage of the world's waste with devastating results on the environment and the health of citizens. Asian cities are likely to contribute more than half the rise in Green House Gases (GHGs) over the next 20 years. Cities, particularly Asian cities, are also highly vulnerable to the consequences of climate change, including flooding, landslides, heat waves, and shortages of water.

The ambient air concentration of particulate matter in most Asian cities now exceeds World Health Organisation (WHO) health and safety norms, often by dramatic margins. In some cities, industry is steadily relocating to the periphery or beyond city limits, with the net effect being improved air quality in city centres, but pollution moves to the suburbs. Asian attempts to control air pollution have involved both demand- and supply-side approaches, including fuel switching, developing mass public transport, and introducing regulations, fees, and targeted subsidies. The results have not been encouraging so far, with failures especially apparent in efforts to reduce demand. Overall institutional weaknesses, capacity constraints, inadequate financing for infrastructure, and poor financial incentives for appropriate investment have all contributed to the lack of success. Meanwhile, the problems are becoming worse, particularly in cities with high energy demands, like those in the rapidly growing industrial centres of the PRC and India, many of which have resorted to increased use of coal.

Many, perhaps most, of APEC's cities do not have effective wastewater treatment systems. The coverage of waterborne sewer systems is low and heavy reliance on septic tanks and latrines for waste disposal without appropriate treatment systems results in sea, surface and groundwater contamination. Only about 40 per cent of household sewage is being treated prior to disposal and it often undergoes only primary treatment. Most sewage is discharged untreated into urban drainage, river systems, or the ocean. In the PRC, for example, only 50 per cent of wastewater is treated while in Indonesia the figure is 2 per cent, in Pakistan, 40 per cent, and in India, 25 per cent. In Peru, some 63 per cent of households have access to sanitation and in Colombia 85 per cent but treatment levels are much lower. However, some cities enjoy a high percentage of wastewater treatment, 83 per cent in Bangalore, India, and 70 per cent in Chiang Mai, Thailand, but the efficiency of the treatment plants is often very low. The challenge of improving treatment facilities using appropriate technologies, to reduce pollution of water courses and avoid further environmental degradation, and to ensure technical and financial sustainability will require massive and innovative investments.

About 75 per cent of solid waste generated in urban areas in Asia is collected, according to estimates, and less than 60 per cent finds its way to a disposal site. Most Asian towns and cities use open dumps and only about 10 per cent ends up in properly engineered and managed landfill sites. The situation is better in Latin America. For most cities, disposal remains a serious problem. Finding suitable sites, appropriate technology, and finance for a citywide facility is difficult, and often there are also issues over the public acceptance of such disposal facilities once they are found.

In summary, land use planning and local governance need to be more focused on sustainability, resilience and environmental imperatives, better linked to finance for implementation, and plans need to be better enforced. Project development needs to support the formulation of projects which comprehensively further the objectives of the plans embodying such priorities, such as Green City plans.

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<sup>36</sup> The discussion in this section summarises the arguments made in *Managing Asian Cities* - see footnote 21. These issues are discussed in more detail in Chapter 4 of the UN ESCAP. 2015. *The State of Asian and Pacific Cities 2015*. Bangkok.

National governments need to develop policy guidelines, enabling frameworks and financing mechanisms to foster such activity.

### **Weak Governance and Capacity to Finance**

Lack of transparency and efficiency in local government has long retarded development in cities, undermining planning systems and reducing the resources available for investment.<sup>37</sup> Recently there are signs of change, with e-governance and other initiatives making inroads in many countries. However, it is widely recognised that corrupt practices and weak institutional capacity remain a problem affecting the performance of the sector in DMEs.<sup>38</sup> APEC has advocated improving these practices by taking steps including:

- adopting internationally recognised procurement procedures;
- scrutinising project procurement activities;
- financial, procurement, and performance audits;
- supporting streamlining and reform of government procurement procedures; and
- introducing whistle-blower mechanisms.

More proactively, however, APEC needs to address the lack of a clearly and publicly articulated vision of city development translated through efficient and equitable planning and development control systems, and to assist cities to develop, structure and finance investments in a cost-effective and competitive way.

Intrinsically related to the governance issue is the capacity of local governments to obtain finance. The constraints to financing have been addressed above, but even in economies with more advanced financing systems and with some private sector involvement in infrastructure provision, other issues emerge. Lenders to and potential investors in potential urban sector PPP projects are often concerned about the credit quality and performance capacity of the municipalities and other urban bodies that act as a counterpart to PPP contracts.

This concern has, however, been addressed in many parts of the world, where private sector is already playing a role in the delivery of urban services. In the DMEs of APEC, the experience has been limited, but some urban regions have tried various types of private sector partnerships in the delivery of services that include local transport, waste collection and management, water supply, parking, city busses, bus terminals and transport interchanges. Investors are often also concerned with regard to the performance risk related to the local government, for example, in respect to a recycling project, on the sorting of waste which it may not have done before and which may require additional investment outside the project. There are also concerns on the municipalities' ability to contract reliably (e.g. beyond the term of the current mayor).<sup>39</sup> Again these have been addressed in a number of countries through a variety of mechanisms which will be discussed later.

### **Institutional Basis for Performance Shortfalls**

The reasons why performance in the above areas falls short of needs include the following:

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<sup>37</sup> These issues are discussed in more detail in Chapter 5, Section 2 of the UN ESCAP. 2015. *The State of Asian and Pacific Cities 2015*. Bangkok.

<sup>38</sup> According to Transparency International, civil works and construction ranks as the worst sector worldwide for payment of bribes to public officials and state capture. Transparency International. 2008. *2008 Bribe Payers Index*. Berlin.

<sup>39</sup> Ibid.

## **Lack of Integrated Urban Planning<sup>40</sup>**

Planning systems in many APEC cities are dysfunctional. Planning cycles are unrealistically long in relation to the dynamic nature of APEC urbanisation and electoral cycles. Physical plans do not necessarily cover the whole urbanised area and different levels of plans may contradict each other. Sectoral plans (e.g. water supply) may not reinforce the land use planning. Plans are ignored with impunity by developers and the informal sector. While in part this is a function of inadequate and inequitable land management systems, the need to link planning systems to the broader issues of land management (e.g. land tax) has largely been ignored. In addition, the physical nature of master planning systems focusing on land use pays insufficient attention to economic, social and environmental issues. In addition, the coordination across local government boundaries and between different levels of government (e.g. city and state) is often poor.

A further problem with the traditional approaches to integrated planning is that they are resource and time intensive. The cost of such approaches and the lead times involved make them both unaffordable for many Asian local governments and unsuitable tool for managing rapidly urbanising areas where significant change may take place on a daily basis. On the other hand, the current situation is not sustainable.

It is considered that current capacity for integrated planning falls short in both wealthy countries and in developing countries, in Asia and elsewhere. While paragons of good practice, systems used in Singapore and Japan are not appropriate for much of Asia. A better approach, addressing both the flexibility/ responsiveness and resources issues, would seem to be a combination of a high level strategic planning and local level infrastructure investment planning coordinated across levels of government.

The Strategic Plan should be for the metropolitan region. It should define directions of growth designed to achieve the city's vision of where it should be in 20 years, as determined by a city assessment that identifies specific areas for development including renewal areas and satellite cities. The London Plan<sup>41</sup> was considered a good example of such a plan. While this plan took very considerable resources, a 'leaner' version, using experienced local consultants would be less expensive and within the resource envelope of DMEs.

Following the practice in London and other well managed cities within a broad strategic vision, good practice appears to be that specific development areas be identified and investments focused on those areas marked for priority development due to specific problems, opportunities and/or demonstration potential. These could be either renewal areas within the existing city or satellite areas designed to preempt haphazard development. It is important that these areas be planned and implemented under coherent management structures. There are many models of such area specific urban development authorities and effective ones are found in the US and Australia. Such structures are usually (seed) funded by national or state level programs.

Complementing the Strategic Plan, would be a city investment plan based on the format of the City Development Plans (CDPs) undertaken for the Jawaharlal Nehru National Urban Renewal Mission

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<sup>40</sup> This section summarises the analysis of planning systems set out in the planning sections of V. Lall, Somik. 2013. Planning, connecting, and financing cities - now: priorities for city leaders. Washington DC: World Bank Group.  
<http://documents.worldbank.org/curated/en/2013/01/17197253/planning-connecting-financing-cities-now-priorities-city-leaders>.

<sup>41</sup> See: <https://www.london.gov.uk/what-we-do/planning/london-plan/current-london-plan>

(JNNURM) in India. These plans focus on providing the infrastructure to achieve the city's vision as informed by the assessments of the investments needed to make the city more competitive, inclusive and environmentally sustainable. These investments are prioritised in a budget context.<sup>42</sup> Such clear, funded plans have a better chance of being implemented and enforced in the circumstances of many of APEC's DMEs. Again the investment plans can be prepared mainly by local consultants as is the case in the JNNURM. The Mission funds these consultants.<sup>43</sup>

The question of continuity is also important. How can the planning institutions withstand constant calls for ad hoc changes to planning to suit the short term goals of some decision makers? Models such as an independent planning institute as used successfully in Curitiba, Brazil were considered, but may not be practical in many Asian countries. Instead, two supports to continuity were offered as most practical. The first is widespread consultation in the framing of the plans. Those stakeholders who have a vested interest in the benefits the plan will bring are more likely to defend it. The second is to lock in the investments with matching grants from higher levels of governments which will not be forthcoming if significant, unwarranted changes are made. Neither of these measures are 'tamper-proof', but they do provide some counterbalance. From the above discussion, an overview of best practice policy in regard to integrated planning can be derived. Best practice policy must thus foster, and the structure of plans must incorporate, the following key elements:

- **A flexible form:** Detailed proscriptions of the type of development are not good practice. A performance-based approach, setting out the objectives sought from development, is required. Plans need to be regularly updated with minimum of legalistic process in order to reflect changing circumstances.
- **Coordination across jurisdictions and levels of government in planning:** The 'hierarchy of different plans: regional plans, metropolitan plans, city level plans, sub-plans etc. need to be mutually consistent and to be drawn up through participative processes. Plans need to be 'nested' so that they do not conflict with (at worst) and actively support (at best) the plans made by higher and lower levels of government and in adjacent jurisdictions.
- **Clear cut areas of responsibilities:** Lines of responsibility need to be clear and agreed across different level of governments and for managers of different sectors so that there is no overlap or gap in implementation of an agreed urban plan.
- **Cross-sectoral coordination:** Plans need to actively incorporate all relevant infrastructure sectors (both 'soft' social sectors such as health and education and 'hard' physical infrastructure sectors such as public transport) with mechanisms to ensure ongoing coordination of provision and operation.
- **Integrate specific national strategies which have spatial elements:** Planning need to ensure that local incorporate aspects of existing national policy and priorities with implications for infrastructure, for example climate change strategies and PPP strategies. Poor planning may limit the scope for efficient PPP structures and investments.

Planning institutions which can achieve the above and enforce plans using fair and transparent processes which are efficient and not subject to undue delay due to complex legal processes.

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<sup>42</sup> The Cities Development Initiative for Asia has an existing tool for this purpose which has been used in over 100 DMC cities: see <http://cdia.asia/download/ciipp-toolkit-brochure/>

<sup>43</sup> See discussion in Managing Asian Cities footnote 21.

## Ineffective Project and Program Development Systems<sup>44</sup>

Project design has tended to focus on technical solutions in specific sectors investment to solve immediate problems, most usually a shortfall in capacity. While such design exercises have improved over time, with social and environmental issues in particular being addressed, single intervention, 'non-complex' projects remain the norm, a tendency reinforced by institutional silos and lack of a programmatic approach to funding an integrated set of prioritised projects. It is such projects which can maximise both the potential social and environmental benefits of investment and the efficiency of its provision. In particular, the crowding in of private sector investment to leverage government resources is difficult under current project development systems. Program design has tended to utilise sectoral project modalities, even within a 'multi-sector' project covering many local governments, meaning that project sub-components in a given city have often been one-off individual unrelated sectoral investments. Further, there has been little differentiation in approach between mega-cities and secondary cities.

The key objective of program and project design should be the 'leverage' of APEC government funds. APEC is uniquely advantaged and brings together through the APEC Business Advisory Council, the Asia Pacific Infrastructure Partnership and the Asia Pacific Financial Forum and public private dialogues, culminating in advice to APEC Finance Ministers and Leaders, ideas and recommendations on ways to promote and manage infrastructure financing. Potentially this should facilitate the structuring for, and participation in, leveraging mechanisms, with the public side leveraging donor and national government resources and the private side being able to foster private sector involvement. In this regard, the resources of the Multilateral Development Banks (MDBs) provided through projects are important catalysts, and it is thus, in turn, important that these project development systems be structured to design projects that will assist governments in this leveraging task. The question then is: 'How such future urban programs should be structured?'

In the discussions on planning systems above, some elements of the JNNURM were used as a model. The Mission, in abstract terms, provides a path-breaking national model for structured policy reform backed by clear and significant incentives allocated on a transparent basis. It is true that the implementation of the program falls somewhat short of the elegance of the concept.<sup>45</sup> Nevertheless, significant reform and investments have occurred. While the JNNURM is overwhelmingly funded by the Indian government, there is no intrinsic reason why such a program, appropriately structured, could not be funded at least partly by external agencies such as MDBs and indeed such participation may have some significant advantages, including the introduction of better practice in a range of areas.<sup>46</sup>

*ADB and World Bank results-based assistance could foster key reforms, as identified in the new format for national urban assessments, including those needed to address the three core issues set out above:*

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<sup>44</sup> This section largely summarises the discussion undertaken for the G20 Review of Project Development Processes – see Bray, D., Coulthart, A. and Reddel, P. 2014. Assessment of the Effectiveness of Project Preparation Facilities in Asia. See: [http://www.g20australia.org/sites/default/files/g20\\_resources/library/assessment-effectiveness-ppfs-in-asia-15092014.pdf](http://www.g20australia.org/sites/default/files/g20_resources/library/assessment-effectiveness-ppfs-in-asia-15092014.pdf)

<sup>45</sup> For example, the program has been accused of crowding out other forms of finance, not being rigorous enough in enforcing actual performance on reforms once promised (partially due to having little upfront commitment of local governments, large upfront incentive grants which are not conditional and unwillingness to 'pull the plug' on underperformers), and insufficient focus on fiscal, social and environmental sustainability (related to an insufficient emphasis on capacity development) – these issues are recognised and will hopefully be addressed in the second phase of the program.

<sup>46</sup> Potential advantages include: more rigorous results monitoring, such monitoring may be linked to a results-based funding modality providing appropriate rewards for performance, more flexibility in the use of resources for guarantees etc., more streamlined reform agenda, provision of explicit incentives for revenue raising and PPP where appropriate.

- i. Providing incentives through well-structured transfers for improved revenue collection and reform of corporate governance in local governments and improvement in the quality of investment;<sup>47</sup>
- ii. Formation of metro associations and metro wide, corporatised or concessioned utilities; and
- iii. Provide appropriate incentives for expanding the use of the capital markets,<sup>48</sup> both on the supply (finance) side and on the demand side (local government).

Underpinning these efforts would also be a strong emphasis on governance system improvements and capacity development, funded under the national program and potentially with MDB assistance. Such operations are an extension of the concept embodied in the ADB's financing of the Transition Support Fund in Pakistan (Sind) which underpins institutional reform of urban service delivery and can be implemented through results-based lending modalities used by MDBs.

Such catalyst lending can be justified to national governments on the basis of economic efficiency, and ultimately, reduced rate of increase in the pace of transfers to local governments. Focusing on a small number of cities, selected in partnership with the national government, will provide an opportunity to maximise impact and demonstration effect by focusing investment and will improve 'buy in' to needed reform. Such lending can demonstrate experience in effectively leveraging private sector investment, as, for example, in the North Luzon Expressway project in the Philippines. Models of sovereign lending modalities which leverage private sector finance also exist. The World Bank is lending to Vietnam to fund availability payments for PPP transport projects.

In terms of how such activities would work in practice, given the 'silo' nature of the ADB, the Cities Development Initiative for Asia (CDIA) model is instructive. Engagement with local governments occurs BEFORE any defined public or private sector programs are established under a Country Partnership Strategy (CPS). At this stage projects can be assessed, given the circumstances of a client city, to determine what combination of public and private resources could be used. In the context of a long term engagement with ADB through a national results-based urban policy operation, such enhanced interaction with cities would yield a mix of public and private sector assistance tailored to the local context. This model is currently being trialed in Bishkek, Kyrgyzstan.

The review of project development facilities emphasised the need for such development to take place in the context of a clear economic plan which justifies the investment spend. Such a plan also provides the basis for setting clear performance criteria for the project which should be independent of a particular 'technological solution', for example if the issue is mobility, should we build more roads or restrict cars and build better public transport?

Given this context, the processes adopted to actually design, bid and construct projects are important. McKinsey estimated that a trillion dollars in savings are available globally<sup>49</sup> if more effective processes were adopted. Such processes relate to undertaking effective prefeasibility studies, transparent cost benefit analysis, rigorous due diligence, and efficient and competitive procurement. Good examples of practice in all these areas are known and the issue is to apply them universally.

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<sup>47</sup> Funds could be used for planning and project development, and for removing obstacles to investment such as land acquisition – as in Indonesia's PPP program.

<sup>48</sup> One or more funds could be established, among others, to: provide credit enhancement for local government or other (corporate) infrastructure debt; provide availability payments for PPP projects; viability gap financing; encouraging recycling of project finance capital through the encouragement – credit enhancement and enabling legislation – of covered bond markets and/or brownfield debt/ equity funds.

<sup>49</sup> See footnote 4.

The caveat to the above must be that not all projects are of the scale which can benefit from the additional cost of undertaking such rigorous processes. For small scale projects, the investment solution is often obvious. In such cases, due process within existing good systems is sufficient.

From the above discussion, an overview of best practice in regard to project development for more important projects, that determine key planning outcomes and the context of future investments, can be derived. Best practice policy must thus foster, and the structure of project development facilities and processes must incorporate, the following key elements:

- Project concept development should be done in the context of a comprehensive assessment of the contribution of the project to the economic functioning of the city.
- Such context should provide the basis of performance criteria for the project and the development of investment options should be done in a ‘technology agnostic’ manner.
- A prefeasibility study should be done to assess investment options and potential implementation and financing structures.
- The feasibility study and due diligence process should preserve the potential for options for innovative project solutions from contractors and financiers.
- Market sounding and bid preparation process should be responsive to market conditions, including consideration of changes in ownership and financing structures post-construction.
- Bid processes should be efficient and effective, ensuring competition but providing incentives for physical and financial innovation.
- Bid assessments should be transparent and be based on well-articulated criteria based on the performance measures set out above, including cost benefit analysis.

### **Underdeveloped Urban Financing Systems<sup>50</sup>**

Urban finance in Asia is a three level problem. On the first level, local government finances have been traditionally weak. On one level, local governments have often not collected the taxes they are due and have not set tariffs to maintain the levels of cost recovery needed to achieve sustainable operation of services. Incentives to perform in this area are lacking and sometimes perverse. At another level, local governments have been given unfunded mandates with the responsibility to provide services but not the corresponding revenue sources (either from local taxes or from transfers from higher levels of government) or funding sources (through such mechanisms as municipal development funds or municipal bonds). At a third level, local governments are either prevented from accessing, or are strongly restricted in their access to the capital markets for investment funding. On the other hand, sources of long term capital such as pension funds and life insurance companies are constrained from providing such finance.

Improved systems of urban finance need to address:

- a) the current lack of incentives for local governments to perform effectively in revenue generation and fiscal governance;
- b) the lack of capacity and structures to leverage their funds once generated; and
- c) macro-level constraints on long term funding for infrastructure in general and at the urban level in particular.

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<sup>50</sup>The following section is derived from the discussions relating to the provision of long term finance for infrastructure undertaken by the G20 – see: World Bank. 2014. Demand for Long-Term Financing of Infrastructure Issues Note (No. 7). Washington. – and the analysis of constraints to sub-sovereign infrastructure finance conducted by the ADB – see: Sood, P, Mays, M. and Lindfield. 2013. Subnational Finance for Infrastructure. ADB. Manila.

Despite decentralisation, IMF data shows that local governments are LESS self-sufficient today than they were 20 years ago.<sup>51</sup> National governments have not transferred funds or access to finance to match service delivery responsibilities. But one must have some sympathy for their position. Local governments have not been seen as paragons of fiscal rectitude. Sub-national government debt and contingent liabilities have brought national governments low in Latin America and threaten Spain, and to a lesser extent, China, even now. Nevertheless, the current system is inefficient and ineffective. The current dearth of systems fostering local fiscal responsibility and local government capacity to borrow flies in the face of both economic theory and reality.

Reversing this situation at a systemic level by realigning the revenue raising responsibilities and powers of government levels and by reforming inter-governmental fiscal relations, while desirable, will not happen soon, if at all. In the meantime, what structures can address the above three needs?

Central to an effective approach is to take the level of transfers as an opportunity rather than a problem. Incentives can be built into transfers over and above minimum mandated untied transfers (and there is usually quite a substantial quantity of these) to:

- a) collect taxes and fees due using matching grants;<sup>52</sup>
- b) undertake the needed infrastructure investments using matching grants and access to finance; and
- c) leverage their funds using guarantees and facilitation funds for PPP activities.

The Philippines has piloted a 'Challenge Fund' for local governments, providing matching grants for national priority investments (such as solid waste) by local government.

National policies both framing and linked to transfers can provide incentives for better local government governance and finance performance. As a 'frame condition' nationally mandated minimum property valuations and taxation rates can prevent a 'race to the bottom' by local governments. They can also define, and encourage through transfers, additional mechanisms, or the use of underutilised instruments, to bolster local government revenue, such as infrastructure charges to developers and tax increment financing. National policies can also foster more transparency and fiscal performance by giving access to additional finance and/or guarantees only to satisfactorily rated local governments. These rating systems do not have to be the full ratings agency evaluation, intermediate systems have been developed in the Philippines for example, although this should be seen as the ultimate goal. Further, national policy can also extend the 'intercept rights' to national transfers so as to broaden the pool of financiers willing to fund local government. In many instances such initiatives will not require legislation and can be accomplished with changes to regulation.

In parallel, local government funding systems need to be developed to successfully attract financing from the private sector, both domestically and internationally.<sup>53</sup> Although local government bodies in many economies have access to infrastructure financing from state-owned banks and financial institutions, rarely do those financing transactions reflect the true economic costs and risks associated

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<sup>51</sup> Gadenne, L. and Singhal, M. 2013. Decentralisation in Developing Economies. IMF. Annual Review of Economics. No. 3.

<sup>52</sup> May be for cadastre development and other activities providing systems for more revenue generation and/or utilising additional instruments such as various forms of land value capture – which are often possible within the existing legislation but are not utilised.

<sup>53</sup> See the analysis of financing systems set out in the planning sections of V. Lall, Somik. 2013. Planning, connecting, and financing cities - now: priorities for city leaders. Washington DC: World Bank Group.  
<http://documents.worldbank.org/curated/en/2013/01/17197253/planning-connecting-financing-cities-now-priorities-city-leaders>

with urban infrastructure delivery. Not surprisingly then, local government institutions in developing APEC economies do not have a very successful track record in leveraging or crowding-in private sector financing to deliver urban infrastructure.

Good quality urban infrastructure is not cheap, especially when new infrastructure is relied upon as a solution to remedy problems caused by legacy infrastructure in a built environment. Local government institutions need to develop infrastructure financing policy and regulatory frameworks that will allow investors to earn reasonable returns in proportion to the risks and costs associated with urban infrastructure investment. Furthermore, it is equally important for local government institutions to have the capacity and skills base necessary to administer procurement processes that encourage good quality bids that offer value for money over the cheapest bids.

Urban infrastructure projects, which can often be small in scale, may also require local or sub-national governments to use innovative financing instruments and techniques to attract investors, in addition to relying on traditional financing instruments such as municipal bonds. It may involve local government policymakers working closely with private sector experts to pool small urban infrastructure assets into bigger portfolios that can attract the interest of institutional investors such as pension funds, sovereign wealth funds and private equity groups.

MDBs and bilateral donor agencies can and do play an important role in financing urban infrastructure delivery through a credit enhancement role or by providing viability gap funding. However, MDBs and donor agencies have historically focused more on engaging directly with national governments to determine the nature of their participation in infrastructure financing transactions. Although this can partly be due to rules and regulations imposed by national governments on MDB country office operations, the role of the national government in providing a sovereign guarantee on infrastructure transactions is an important reason why MDBs have engaged almost exclusively with national governments.

National governments have a constructive role to play in encouraging MDBs and international investors to engage more directly with local governments to finance urban infrastructure projects. Developing a national policy framework for sovereign guarantees that provides clear and consistent guidance on the type or nature of infrastructure transactions that will be supported by the national government can be an important initiative to enable MDBs and international investors to interact more closely with local governments and with greater certainty. It will also enable MDBs to train and develop the capacity of local government institutions to develop and prepare high quality infrastructure projects.

In addition to initiatives that target local government policy, regulatory regimes and institutional capacity, investment and financial sector policies at the national level also play an important role in promoting domestic and international investment in urban infrastructure. Many developing economies have liberalised investment policy regimes to attract long-term Foreign Direct Investment (FDI), but maintain stringent capital controls to discourage short- to medium-term capital outflows. This presents notable challenges for infrastructure investors because an investment to build and operate an infrastructure asset exhibits unique short- and long-term characteristics.

Not all infrastructure investors have the same investment horizon, and as a result, different types of investors are involved in the construction and operational phases of an infrastructure asset over its lifecycle. National governments have to have consistent and coordinated direct and financial portfolio investment policies that allow investors to construct and hold an infrastructure asset over the short- to medium-term, before transferring the long-term risks associated with operating and maintaining an infrastructure asset to specialist long term investors such as pension funds and sovereign wealth funds.

This will require governments to remove capital controls and other types of financial restrictions that discourage short- to medium-term investors from investing in greenfield infrastructure. Investment in infrastructure is and should be a significant FDI category for many developing economies. But attracting investment in this FDI category requires governments to be much more agnostic about the investment horizons of infrastructure investors and ensuring its national policy frameworks do not contain structural rigidities and contradictions.

Starting with strengthening municipal development funds (which most countries have),<sup>54</sup> fostering a more commercial approach to investment,<sup>55</sup> and moving on to improving the enabling environment for local government debt issues, in particular structuring capital market regulation and instruments to encourage holders of long term funds such as pension funds and life insurers to finance infrastructure.

It is important to note that in many countries, an important and often ignored source of urban finance is land-based financing. This includes many models: outright sale of inefficiently used government land; lease to private parties after appropriate change in their permitted land use; and instruments like Tradable Development Rights (TDR) where property holders in areas having larger carrying capacity are allowed (after paying a particular fee) to construct additional floors and also are allowed to trade such permissions among themselves. These forms of financing should be encouraged.

It should be further noted that government land assets in cities are not held only by the local Government but by State/provincial and national government agencies and entities. Hence the word 'local' from this draft may be deleted to include assets like land, inefficiently held by all levels of the Governments. These assets should also be considered as important assets for the city's development and should not be outside the planning and development framework for the city.

Based on the above reviews, best practice can be summarised as:

- Building effective enabling frameworks, especially in regard to:
  - intergovernmental fiscal transfers which correspond to infrastructure funding needs of each level of government;
  - encouraging state/ provincial and local governments to fully utilise their revenue base (i.e. collect all taxes due) and to leverage this base by tapping community and private sector resources;
  - encouraging the flow of long term finance to infrastructure, specifically from private investors including pension, insurance and sovereign wealth funds by removing constraints to their activities and by promoting as appropriate PPP models of infrastructure and agreed risk sharing arrangements;
  - by encouraging debt and equity funds focused on infrastructure investment, and
  - by removing constraints to international capital flows (private and MDB) for urban infrastructure investment.
- Building the required structures for urban financing, specifically:
  - the establishment of national challenge funds and funding instruments designed to leverage effective government investment at state/ provincial and city levels, and private investments through the use of grants, loans, equity participation and guarantees;
  - These must be appropriately 'nested' with structures below.

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<sup>54</sup> For example, extending financing options for smaller local governments through the use of 'pooled financing'.

<sup>55</sup> For example, the Ho Chi Minh City Investment Fund for Urban Development (HIFU) was set up to leverage private sector investment with government assets (initially land).

In addition, it is necessary to build institutional arrangements at metropolitan level for implementation – metropolitan and sector structures to share revenue and expenses across jurisdictions corresponding to infrastructure funding needs and mandates especially for:

- land acquisition and resettlement cost determination and disbursement; and
- the establishment of city funds and funding instruments designed to leverage private investment through the use of government grants, loans, equity participation and guarantees, and through contribution/ lease of local government assets.

### **Urban Governance**<sup>56</sup>

In the above discussion of the three core issues for implementation, there was a strong emphasis of the role of national government actions to reform incentives and enabling frameworks. Thus, APEC's need to continue engagement with the sovereign entities remains appropriate but in respect of urban issues, sub-sovereign governments need to be recognised as important partners.

Almost all APEC cities have outgrown their original municipal jurisdiction and the urban area now extends into at least one other local government (often many). In addition, the state/ provincial government level (and sometimes the national government) also provide(s) urban services. However, systems of metropolitan governance, enabling integration of these various levels of provision, are largely inadequate, falling short in any or all of: their geographic coverage for planning and representation, sectoral coverage, and financial capacity to fund investment. Where they exist, metro areas do not cover the whole urban area. Many only cover some sectors, for example only transport, but not water. Inter-governmental fiscal systems cannot provide for burden sharing for investment, not to mention such sharing between different levels of government (say local-state/ province levels). In addition, instances of shortfalls in accountability and transparency are commonplace.<sup>57</sup>

There are a variety of models of metropolitan governance in both wealthy countries and in developing countries, in Asia and elsewhere. While APEC should be open to, and support, anything that works to improve urban governance in its DMEs, it is normally the case that the two conventional models of consolidating metropolitan governance do not work well in many APEC DMEs.

First, the annexing of adjacent local governments by the core local government is fiercely resisted and rarely successful. Second, raising the level responsible for metropolitan governance to state/ provincial level, while theoretically appealing, is rarely effective. The significant decentralisation which has taken place in many DMEs over the last 20 years has eroded the authority of the provincial level and thus the 'Sydney model', in which constituent local governments are subject to planning controls at State level and metro infrastructure services are provided by state-level corporations, will not work – the local governments have too much statutory power.

These fundamental issues can be addressed over time but likely not in time to effectively manage the current wave of rapid urbanisation.

A more effective model is likely to be voluntary formation of metropolitan councils and secretariats, incentivised by additional resources from higher levels of government only forthcoming if effective management systems are in place. These higher level arrangements would have to be complimented by

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<sup>56</sup> This section summarises the analysis of urban governance systems set out in ADB. 2008. *Managing Asian Cities*. Manila.

<sup>57</sup> These issues are discussed in more detail in Chapter 5, Section 2 of the UN ESCAP. 2015. *The State of Asian and Pacific Cities 2015*. Bangkok.

metro-wide service providers managed on a corporatised or concession basis under the regulation of the metro body. CDPs under JNNURM are metro-wide and have catalysed cooperation on infrastructure investments among adjacent local governments.

The metropolitan council would prepare and be guided by the Strategic Plan as discussed above, and the service utilities would implement the investment plan. Precedents for both forms (voluntary councils and metropolitan boards) exist in most countries and can largely be undertaken under existing legislation.

## APPENDIX 2: ANALYSES AND DATA

### Evaluation / Scoring Methodology

The institutional infrastructure systems of the economies were evaluated across multiple criteria, discussed below, in three categories: Policy and Planning, Project Development, and Finance. For each criterion, each economy was given a maximum score of 3, to indicate a well-formed structure, and a minimum of 1 to indicate a lack of infrastructure in each category.

#### Scoring criteria by category

<b>POLICY AND PLANNING</b>	
Level of detail of strategy as formulated by National, state and local government planning agencies	1 - none; 2 - guidelines/ partial; 3 - agencies/ budget nominated
Degree of coordination among national, state and local governments in formulation of strategy	1 - no; 2 - partial; 3 - high
Strategy integrates multiple infrastructure sectors in plan(s)	1 - no; 2 - some; 3 - all
Plans integrate responses to other development imperatives such as climate and PPPs	1 - no; 2 - some; 3 - all
Comprehensiveness of planning - economic development and spatial plans	1 - none; 2 - aggregating sectors; 3 - integrated economic development / spatial analysis
Is planning by sector-specific agencies with minimal coordination, or in an integrated way by adequately mandated institutions?	1 - no; 2 - ineffective coordination; 3 - coordinated
Is planning broken up by local government entities, or is a cross-jurisdictional approach taken (i.e. metro area?)	1 - no; 2 - some; 3 - all
Is planning done sector-by-sector by sector-specific agencies, or in a way in which sectors are planned for together, either by coordination among specific agencies or by integration of responsibilities in single institutions?	1 - no; 2 - coordination mechanism; 3 - mandated
Degree of specificity in project implementation arrangements and assignment of implementation responsibility and budget	1 - no implementation mechanism; 2 - agencies assigned; 3 - mandated coordination agency
Degree to which plans can be amended or updated according to changing circumstances	1 - low flexibility; 2 - some flexibility; 3 - high flexibility
Degree to which approved plans (e.g. zoning) can be enforced	1 - none; 2 - some; 3 – high degree

## PROJECT DEVELOPMENT

For small scale extensions:

Is there a <i>physical plan</i> into which the project fits?	1 - none; 2 - partial; 3 - integrated
Is there an <i>asset management plan</i> identifying the investment and a budget for it?	1 - none; 2 - partial; 3 - agencies/ budget nominated
Is the project been subjected to <i>cost benefit analysis</i> ?	1 - none; 2 - partial and/or not disclosed; 3 - rigorous and fully transparent

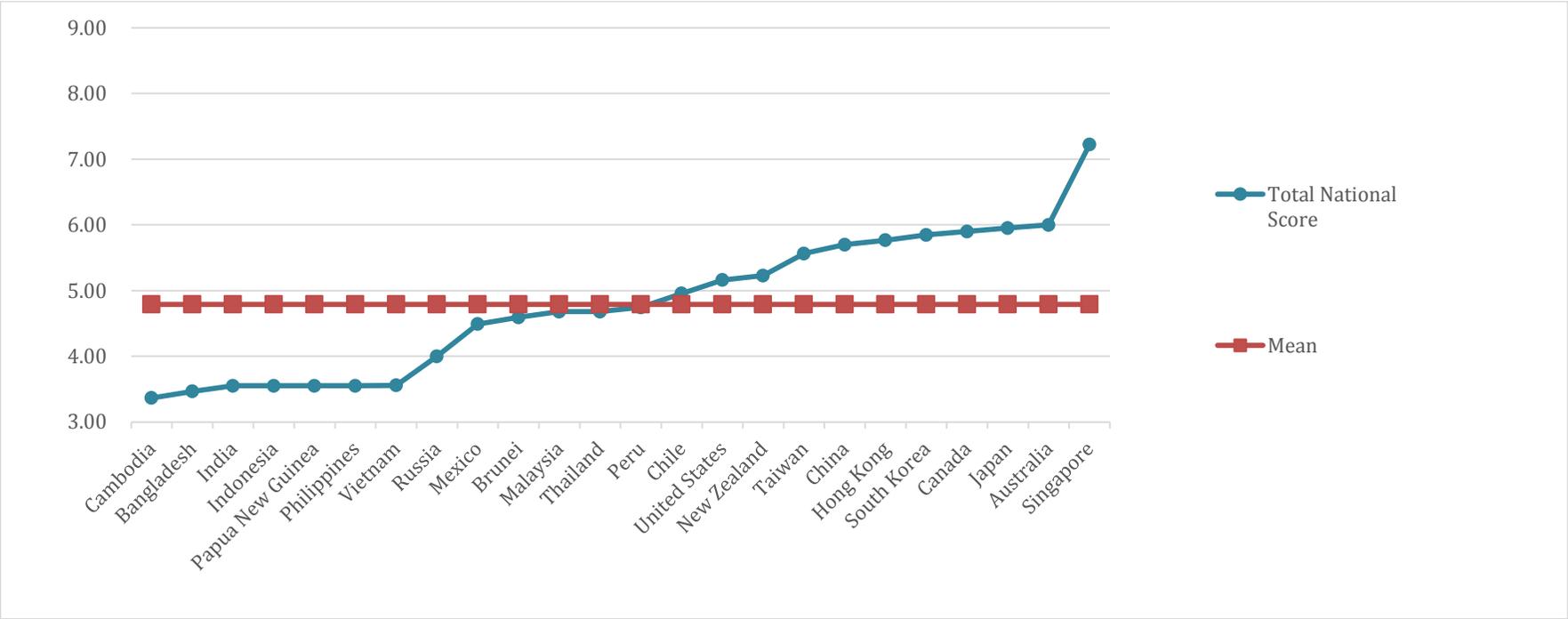
For 'determining' projects:

Was the <i>concept development</i> of the project concept done in the context of a comprehensive assessment of the contribution of the project to the economic functioning of the city?	1 - none; 2 - partial e.g. CBA; 3 - context of economic cluster analysis
Were <i>performance criteria</i> for the project developed so investment options could be assessed in a 'technology agnostic' manner?	1 - none; 2 - partial but sector specific; 3 - fully performance based
Was the <i>prefeasibility study</i> done to assess investment options and potential implementation and financing structures?	1 - none; 2 - done but not including financing options; 3 - done with assessment of agencies/ and financing options
Did the <i>feasibility study and due diligence</i> process preserve the potential for options for innovative project solutions from contractors and financiers?	1 - none; 2 - done but no space for innovation; 3 - done with space for innovation in design and financing
Was the <i>market sounding and bid preparation</i> process responsive to market conditions – including consideration of changes in ownership and financing structures post-construction?	1 - none; 2 - informal sounding; 3 - formal transparent sounding
Was the <i>bid process</i> efficient and effective – ensuring competition but providing incentives for physical and financial innovation?	1 - none; 2 - done but no space for innovation; 3 - done with space for innovation in design and financing
Was the <i>bid assessment</i> based on defined criteria based on the performance measures set out above, include cost benefit analysis, and transparent?	1 - none published; 2 - done but not published; 3 - done in transparent manner

<b>FINANCE</b>	
Infrastructure finance practice falls into two categories:	
Enabling frameworks – especially in regard to:	
<i>intergovernmental fiscal transfers</i> which correspond to infrastructure funding needs of each level of government;	1 - ad hoc; 2 - guidelines but not fully related to responsibility; 3 - related to agencies mandate and investment needs
encouraging state/ provincial and local governments to fully utilise their <i>revenue base</i> (i.e. collect all taxes due) and to leverage this base by tapping community and private sector resources;	1 - none; 2 - guidelines/ partial; 3 - effective incentives
encouraging the flow of <i>long term finance</i> to infrastructure – specifically from pension, insurance and sovereign wealth funds by removing constraints to their activity,	1 - none; 2 - guidelines/ partial; 3 - effective incentives
through the development of municipal, agency and project capital markets,	1 - none; 2 - guidelines/ partial; 3 - effective incentives
and loan pooling mechanisms for weaker local governments,	1 - none; 2 - guidelines/ partial; 3 - effective incentives
by encouraging debt and equity funds focused on infrastructure investment, and	1 - none; 2 - guidelines/ partial; 3 - effective incentives
by removing constraints to international capital flows (private and MDB) for urban infrastructure investment.	1 - none; 2 - guidelines/ partial; 3 - effective incentives
Financing structures – specifically:	
the establishment of <i>national challenge funds and funding instruments</i> designed to leverage effective government investment at state/ provincial and city levels, and private investments through the use of grants, loans, equity participation and guarantees;	1 - none; 2 - guidelines/ partial; 3 - effective incentives

**Overall Scoring Results:**

Scores were averaged across the categories and totaled, for a minimum of 3 and maximum of 9. Total scores were plotted against the mean of all scores (mean = 4.79), as shown in the figure below (note that none of the economies received a perfect score across all three categories):

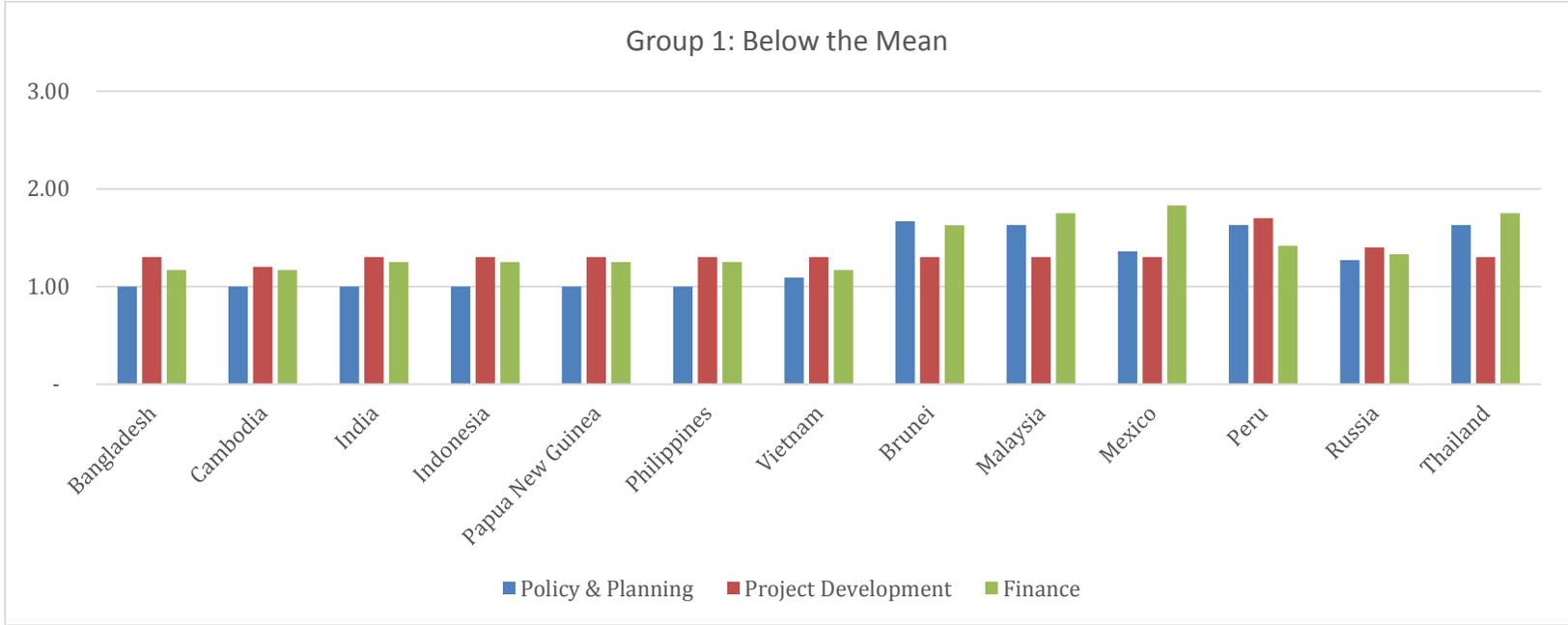


Total scores across the three categories

# Details of Scoring Results

## Group 1: Economies Scoring Below the Mean

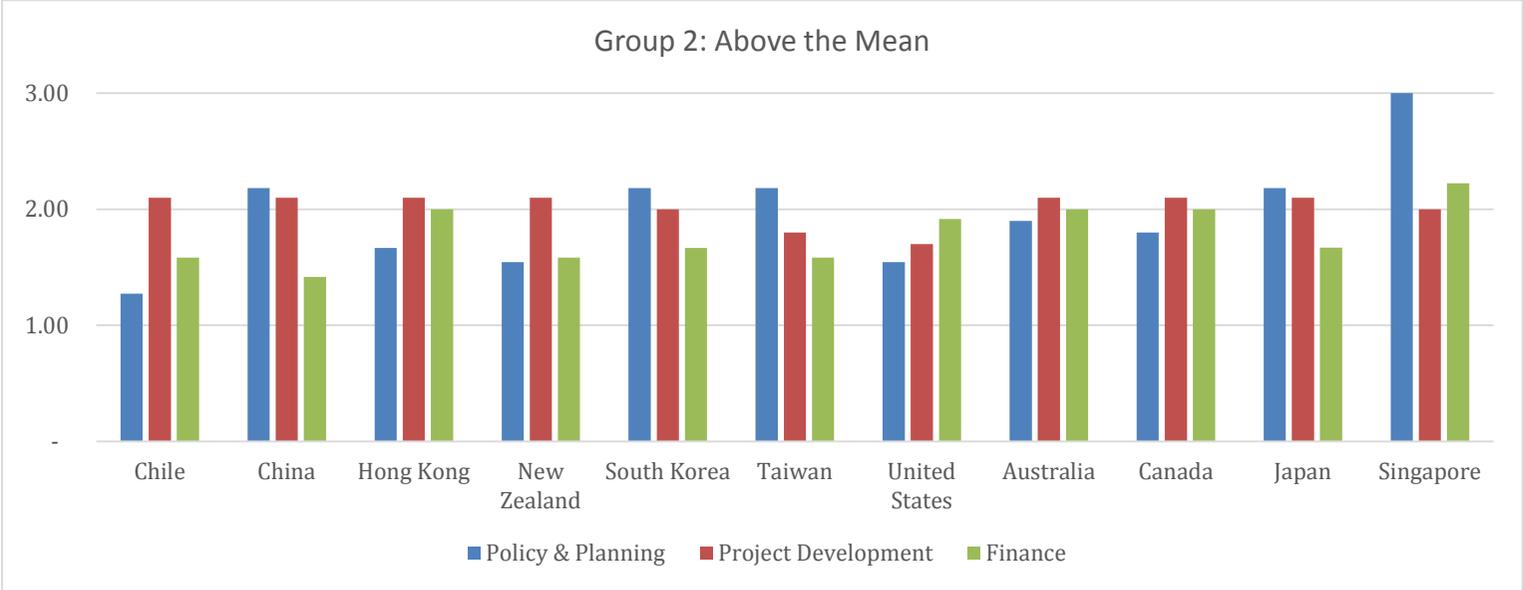
The total scores of Bangladesh, Cambodia, India, Indonesia, Papua New Guinea, Philippines, Vietnam, Brunei, Malaysia, Mexico, Peru, Russia and Thailand fell below the mean across all economies of 4.79.



Scores for Group 1 Economies, by Category

**Group 2: Economies Scoring Above the Mean**

The total scores of Chile, Hong Kong China, New Zealand, South Korea, Chinese Taipei, Canada, Japan, China, Australia, the United States and Singapore



Scores for Group 2 Economies, by category

## Correlations with Development Indicators

Correlations were run to see how the assigned scores compared with selected development indicators (i.e. the Human Development Index (HDI), GDP per capita, national credit rating, population size, total population density, density of the cities chosen for the study, and total land area).

HDI was chosen as an indicator as it is a composite statistic that takes income per capita, education and life expectancy into account. Unsurprisingly, there was a high correlation (80%) between the finance scores across all four Tiers and their HDI and GDP per capita (Table 1). This finding indicates that economies with high levels of income, development and education are likely to have well-developed financial institutional infrastructure systems.

There was also a high level of correlation between the Policy and Planning, Project Development, and Total Scores with HDI and GDP/capita. Unexpectedly, there was no correlation between the assigned economy scores and population density, land area or population size. The 91percentcorrelation between the total scores and credit ratings indicates that economies with high credit worthiness are associated with high levels of development.

The correlations at the individual group level, however, do not match the correlations across all the economies, as seen in Appendix 2. Since the Tiers are small in size, there is less precision and increased uncertainty. As a result, it is difficult to be confident that the correlations are significant since the margin of error is significantly higher.

Correlations of Scores with Development Indicators Across all Economies (colors indicate degree of correlation)							
	Human Development Index	2014 GDP per capita, PPP (constant 2011 \$)	National Credit Rating	Total Density	City Density	Land Area	Population Size
Policy and Planning	0.733	0.756	0.775	0.453	0.168	0.071	-0.026
Project Development	0.772	0.566	0.824	0.292	0.260	0.207	0.013
Finance	0.770	0.784	0.760	0.382	0.173	0.206	-0.195
Total	0.857	0.803	0.906	0.436	0.223	0.171	-0.072

## Data and scores for the economies

Tier	Country	Land Area (in km <sup>2</sup> )	Total Population	Population Density (per km <sup>2</sup> )	HDI	2014 GDP per capita, PPP (constant 2011 \$)	National Credit Rating (Moody's)	Policy and Planning	Project Development	Finance	Total Score
Below mean	Bangladesh	130,168	156,600,000	1,222	0.57	\$2,979	Ba3	1.00	1.30	1.17	3.47
Below mean	Cambodia	176,509	15,140,000	87	0.555	\$3,113	B2	1.00	1.20	1.17	3.37
Below mean	India	2,973,000	1,252,000,000	436	0.609	\$5,439	Baa3	1.00	1.30	1.25	3.55
Below mean	Indonesia	1,811,000	249,900,000	140	0.684	\$10,034	Baa3	1.00	1.30	1.25	3.55
Below mean	Papua New Guinea	452,860	7,321,000	16	0.505	\$2,724	B1	1.00	1.30	1.25	3.55
Below mean	Philippines	300,000	98,390,000	332	0.668	\$6,649	Baa2	1.00	1.30	1.25	3.55
Below mean	Vietnam	310,070	89,710,000	293	0.666	\$5,370	B1	1.09	1.30	1.17	3.56
Below mean	Brunei	5,770	418,000	79	0.856	\$67,912	A1	1.67	1.30	1.63	4.59
Below mean	Malaysia	330,803	29,720,000	91	0.779	\$24,460	A3	1.63	1.30	1.75	4.68
Below mean	Mexico	1,943,000	122,300,000	64	0.756	\$16,284	A3	1.36	1.30	1.83	4.49
Below mean	Peru	128,000	30,380,000	24	0.734	\$11,438	A3	1.63	1.70	1.42	4.75
Below mean	Russia	16,377,000	143,500,000	9	0.798	\$23,293	Ba1	1.27	1.40	1.33	4.00
Below mean	Thailand	510,890	67,010,000	133	0.726	\$15,012	Baa1	1.63	1.30	1.75	4.68
Above mean	Canada	9,093,000	35,160,000	4	0.913	\$42,778	Aaa	1.80	2.10	2.00	5.90
Above mean	Chile	756,102	17,620,000	24	0.832	\$21,980	Aa3	1.27	2.10	1.58	4.96
Above mean	China	9,326,000	1,357,000,000	145	0.727	\$12,599	Aa3	2.18	2.10	1.42	5.70
Above mean	Hong Kong China	1,105	7,188,000	6,897	0.91	\$52,552	Aa1	1.67	2.10	2.00	5.77
Above mean	Japan	364,485	127,300,000	349	0.891	\$35,635	A1	2.18	2.10	1.67	5.95
Above mean	New Zealand	267,710	4,471,000	17	0.913	\$33,847	Aaa	1.55	2.10	1.58	5.23
Above mean	South Korea	99,909	50,220,000	517	0.898	\$33,629	Aa2	2.18	2.00	1.67	5.85
Above mean	Chinese Taipei	35,883	23,480,000	650	0.882	\$39,600	Aa3	2.18	1.80	1.58	5.57
Above mean	Australia	7,692,000	23,130,000	3	0.935	\$43,219	Aaa	1.90	2.10	2.00	6.00
Above mean	Singapore	707	5,399,000	7,736	0.912	\$78,958	Aaa	3.00	2.00	2.22	7.22
Above mean	United States	9,148,000	318,900,000	35	0.915	\$52,118	Aaa	1.91	2.00	2.58	6.49