Planning, Connecting, and Financing Cities—Now
Priorities for City Leaders

OVERVIEW
Acknowledgments

This overview has been extracted from the complete report, which is available at urbanknowledge.org/UR. The report was written by a team led by Somik V. Lall comprising Om Prakash Agarwal, David Dowall, Michael Klein, Nancy Lozano Gracia, and Hyoung Gun Wang. Significant contributions were made by Isabel Chatterton, Michael Jacobsen, Austin Kilroy, Andreas Kopp, Dennis Linders, Lili Liu, Chris Rodrigo, Hiroaki Suzuki, and Nozomi Tokiwa. Tara Vishwanath acted as adviser to the Urbanization Review program. Henry Jewell and Eugenia Suarez Moran provided valuable research assistance. The team thanks Indermit Gill for his time, advice, and guidance on sharpening the policy framework used in this report.

This report draws on Urbanization Review prototypes that seek to build a body of knowledge on urbanization challenges and public policy implications in a variety of country settings. These prototypes have been piloted in Brazil, China, Colombia, India, Indonesia, the Republic of Korea, Sri Lanka, Tunisia, Turkey, Uganda, and Vietnam. We are grateful to Dean Cara, Peter Ellis, Steve Karam, Somik V. Lall, Taimur Samad, Rachel Sebudde, Tara Vishwanath, and Hyoung Gun Wang for leading these country pilots.

This report was sponsored by the Sustainable Development Network of the World Bank. Financial support for the Urbanization Reviews was also provided by the Cities Alliance and the State Secretariat for Economic Affairs of the Swiss Federation. The report has been produced under the supervision of Abha Joshi Ghani, practice head for Urban Development, and the overall direction of Zoubida Allaloua, Director of the Urban and Disaster Risk Management Department, and Marianne Fay, Chief Economist of the Sustainable Development Network.

© Copyright 2012 by the World Bank
Urbanization in today’s developed countries was gradual, taking a hundred years or more. That fairly leisurely pace allowed for trial and error in developing rules and capabilities. Today’s cities are growing at an unprecedented speed, facing sudden deluges from the countryside. More than 70 percent of generated energy is now consumed in cities, and as much as 80 percent of global greenhouse gas emissions is attributed to urban residents—and vulnerability to natural hazards is increasingly concentrated in cities. So, getting this rapidly paced urbanization right is a key to resilient and sustainable growth.

Cities have been planned from the beginning, enabling new settlements, economic specialization, and cultural expression. The growth of cities is driven largely by the economic prosperity they help create. By enabling density—the concentration of people and economic activities in a small geographic space—cities have helped transform economies for many centuries. High densities enable social and economic interactions at a much higher frequency than in nonurban settings. These interactions create a vibrant market for ideas that translates into innovations by entrepreneurs and investors. Indeed, 50 percent of world GDP is produced on just 1.5 percent of the world’s land, almost all of it in cities. And various estimates point out that more than 80 percent of global GDP is generated in cities, with this share increasing rapidly.

But today cities are growing at an unprecedented and challenging speed. City leaders are concerned about creating jobs and making their cities competitive. They also worry about the quality of life for citizens, and how cities can lower their carbon trajectories. The city populations of emerging economies are expected to double between 2000 and 2030, from 2 billion to 4 billion people. Megacities, such as Tokyo, Mexico City, and São Paulo, are already home to 30 million people or more. The built up area of cities worldwide will triple in size, from 200,000 to 600,000 square kilometers. Such rapid population growth accompanied by an even faster spatial expansion of cities may lead to low density development dominated by individual-vehicle transportation—a largely irreversible pattern. With more than 70 percent of generated energy now consumed in cities, and as much as 80 percent of global greenhouse gas emissions attributed to urban residents—and with vulnerability to natural hazards increasingly concentrated in cities—getting this rapidly paced urbanization right is the key to resilient and sustainable growth.

This report is written for city leaders, but city leaders does not just mean mayors. It means anyone whose position—local, municipal,
Planning, connecting, financing—these are terms that policy makers use on a daily basis provincial, or national—gives him or her a policy or decision-making role and thereby a stake in urban development. City leaders are mayors, but they are also directors of community-based organizations; they are subnational and national policy makers and ministers (of finance, investment, and planning); and they are private sector investors, developers, and service providers.

The report provides a framework to help city leaders make informed decisions for sustainable development in their cities. What must be done to improve living conditions, especially in slums and hazard-prone areas? To create jobs? To bridge the divided cities (inclusion)? To expand the coverage and quality of basic infrastructure services? To manage the city’s physical form? In trying to address these challenges, city leaders often pursue targeted investments—providing housing subsidies, increasing infrastructure spending, creating new growth poles. Yet history shows us that a more comprehensive set of rules is needed.

To think comprehensively about how policy and investment choices can influence the pace, magnitude, and impact of urbanization and city development, the World Bank has developed a program of diagnostics called the Urbanization Reviews. These diagnostics are being carried out in collaboration with city leaders in several pilot countries (box 1).

At the heart of the diagnostic approach used in the Urbanization Reviews are the three main dimensions of urban development

Box 1

Thinking through policy and investment choices using the World Bank’s Urbanization Reviews

Lessons from developed and urbanized countries can help rapidly urbanizing ones. Synthesizing such lessons was the aim of the 2009 World Development Report, Reshaping Economic Geography (2009 WDR). The report looked at urbanization trends and policies worldwide, and it proposed a three-part policy framework for urbanization. First, institutions should provide the foundations for liberalizing the movement of people and goods and easing the exchange and redevelopment of land—enabling vast economic gains. Second, investments should respond to the needs of residents and businesses, especially for basic and connective infrastructure. Third, targeted interventions should respond to the needs of the poor and people in marginal locations or address individual behaviors that endanger health, safety, or the environment.

Applying the 2009 WDR policy framework, the World Bank’s Urbanization Reviews offer city leaders diagnostic tools to identify policy distortions and analyze investment priorities. Each review starts by assessing a country’s or region’s spatial transformation: how the urban economy is evolving, how demand for the city is changing with economic development, the pace of new arrivals, and how these new arrivals into the city are finding places to live and commuting to their jobs. It then compares the city’s observed patterns with benchmarks in other places or with past conditions. Such comparisons help reveal how policy distortions constrain urbanization and how investment shortfalls restrict the benefits from it. Once the review has identified the possible constraints and shortfalls, it proposes policy options. It aims to show how a city can harness economic and social benefits not just today, but in the future, as economies grow, technologies change, and institutions are strengthened.

To test the relevance of the tools and policy framework in different development circumstances, the World Bank has piloted the Urbanization Reviews over 10 countries at varying stages of urbanization (see figure): Uganda and Sri Lanka (where urbanization is nascent), China, India, Indonesia, and Vietnam (where it is intermediate), and Brazil, Colombia, the Republic of Korea, and Turkey (where it is mature). The reviews use one diagnostic approach for all countries—but the policy options that are explored vary by country in their emphasis, reflecting each country’s particular stage of urbanization and institutional circumstances.

Urbanization Reviews have been done across different urbanization and GDP levels

The country-specific and city-specific diagnostics of the Urbanization Reviews can identify problems and help formulate policy responses. Although the Urbanization Review is not intended to generate a policy or investment blueprint, it should help in identifying and resolving key policy distortions. In addition, because diagnostics compare present realities with what could be or should be, they imply benchmarking—comparing performance against the situation in other places, against chosen standards, or against known best practices. The Urbanization Reviews also draw on the Bank’s Urban and Local Government Strategy, “Systems of Cities: Harnessing Urbanization for Growth and Poverty Reduction.”

1 World Bank 2010.
Priorities for City Leaders, also the focus of the three main chapters in this report:

- **Planning**—charting a course for cities by setting the terms of urbanization, especially policies for using urban land and expanding basic infrastructure and public services.
- **Connecting**—making a city's markets accessible (labor, goods, and services) to other cities and to other neighborhoods in the city, as well as to outside export markets.
- **Financing**—finding sources for large capital outlays needed to provide infrastructure and services as cities grow and urbanization picks up speed.

And for the framework of planning, connecting, and financing to work, a good governance structure is a prerequisite. City leaders, at all government levels, will have to work together. If this fails, everything else will stumble.

Planning, connecting, financing—these are terms that policy makers use on a daily basis, but they often place financing first without fully considering the other two dimensions. Of the three dimensions, planning for land use and basic services is primary. Yet because planning must allow for people and products to be mobile, it must be coordinated with connecting at all stages of a city's growth. What follows then is financing: a dimension that, although as necessary as the other two, should be city leaders' last concern rather than their first.

This point cannot be emphasized too strongly. A primary focus on financing—though understandable as an attempt to meet urgent needs—is likely to result in unplanned cities if it is not coordinated with planning and connecting. And that will lock a city into undesirable physical forms that can set back its development for decades, even centuries. A city's physical structures, once established, may remain in place for more than 150 years.

Putting financing first, without full consideration of the other dimensions, is a mistake because it often neglects the overriding need to coordinate infrastructure improvements (connecting) with policies (planning). And the lack of such coordination will be regretted by later urban generations. For example, in Hanoi, Vietnam, a projected new mass transit system will extend in several directions from today's central business district—but it will not reach an emerging second central business district, southwest of the city, where dense housing developments called New Urban Zones are already being built.

Another example: the government of South Africa tried to save money by selecting isolated regions, with lower land values, as the sites for about two million newly built subsidized homes. But there was no plan to connect these new homes to the job market. Many workers now commute in collective taxis, which are slow and expensive. The roads are not good enough to handle traffic efficiently, and several transfers are needed to reach dispersed job sites. Buses, too, carry workers on commutes that can last nearly as long as the work day itself. Here is how a typical day passes for one South African worker:

```
Jones is a limousine driver in Johannesburg . . . he lives three hours away from his place of work. He leaves home at 5:00 every morning, takes a bus and reaches his work place at 8:00. On the return, it's the
```
Planning, connecting, and financing need to be integrated

same story. He leaves at 5:00 and reaches home at 8:00. On most days the only meal he is able to find time for—or even afford, due to the high travel cost—is his dinner. He sees his little daughter only on Sunday, as she is not awake by the time he leaves and is asleep by the time he gets back.

Similarly, Colombia’s urban development challenges arise from problems of policy and planning. One of Latin America’s most decentralized countries, Colombia has more than 1,000 municipal governments with parallel responsibilities—basic infrastructure service delivery, land use and economic development, and social service provision. Urban areas comprise multiple municipalities: Bogotá, for example, contains seven. These municipalities lack mechanisms to coordinate policy and planning across their boundaries. As a result, Colombia’s metropolitan areas are crippled by inertia—unable to coordinate their land use policies, or plan for strategic investments, at the metropolitan or regional scale that is demanded by a growing urban economy.

Also similar, Uganda’s 1995 constitution created private land ownership and abolished land leases vested with local urban bodies. Local governments were fiscally starved, unable to acquire land or protect rights-of-way for infrastructure improvement. And land transactions generally were hampered by poor tenure security (only 18 percent of land is registered and titled); by the lack of a credible system for valuing land; by low incentives for landowners to rent their land; and by high entry costs for land development ventures. To remedy the situation, especially in the metropolis of Kampala, Uganda urgently needs a credible system for documenting and valuing land. To be sure, local urban bodies also need financing support—to buy land and pay for infrastructure. But no amount of financing alone will solve Uganda’s problems.

The Republic of Korea can be considered a model of success, where urban planning and land management institutions have evolved to meet challenges at each stage of urbanization. Land development programs were established first, followed by a land use regulation system. Then came comprehensive urban planning, with guidelines for mandatory 20-year visions, zoning decisions, and planning facilities. Downtown development projects systematically adhered to phased scenarios under the comprehensive plans. Later, in the 1990s and 2000s, Korea integrated separate laws regulating urban and nonurban areas, and in 2000 it instituted metropolitan city–regional planning (between the city and the county or province). Meanwhile, the government initiated large-scale apartment construction projects that solved Korea’s most serious urban housing problems. Multiple transport modes were developed. Road projects, over time, have included urban highways and pavement projects as well as a network of expressways. And the nation’s rail network includes urban subway lines alongside traditional railroads and high-speed rail—the bullet trains that have shrunk Korea into a half-day travel zone.

Planning, connecting, and financing need to be integrated—as they are in this report, with chapters 1–3 drawing lessons from previous and ongoing Urbanization Reviews. In addition, chapter 4 presents the plan, connect, and finance framework in action, distilling lessons from seven pilot countries (Brazil, Colombia, China, India, Indonesia, Korea, and Vietnam). Interleaved with the chapters are four spotlights that apply the framework to ongoing policy debates. They discuss slums and natural hazards (spotlight 1), infrastructure service provision (spotlight 2), new growth poles and urban regeneration (spotlight 3), and innovations in urban finance (spotlight 4).

City leaders can use the three-dimensional urban development framework and the case studies in this report to tailor the analysis and identify the impediments to urbanization in their cities and countries—assessing “where the shoe really pinches.” Then they can identify the policy options that are most politically, technically, and fiscally feasible. What are the specific tasks under planning, connecting, and financing that policymakers should focus on? Consider three more terms that are also commonly used: value, coordinate, and leverage—terms that can help sharpen the effectiveness of planning, connecting, and financing.
Planning cities
Planning is fundamental to agglomeration economies in three ways. First, land use requires effective systems for land valuation. Second, land use must be allocated in a way that it allows for infrastructure improvements. Third, the most basic infrastructure services—water, energy, sanitation, and solid waste management—need to be provided for all residents, urban and peri-urban alike.

Value the city’s land by establishing systematic and transparent assessment
Urbanization generates an increase in the demand for land, and a problem arises when land is scarce in places it is needed the most. The success of tools for accommodating urban expansion and redevelopment is typically based on robust systems for assessing land values. And a clear definition of property rights is a first requirement in this direction. Further, developed countries rely on various forms of data and institutions to assess land values, including market data on transactions and attributes of the property, as well as ancillary data on potential income from land and the cost of inputs into land development. These data are managed to provide up-to-date and reliable information for professional appraisers as well as the general public. Institutions that improve the information foundations of the valuation process, including a trained cadre of appraisers in property valuation, contribute to ensuring transparency in the valuation process and to making information of land values widely accessible.

To establish appraised land values and prevent land-related conflict, city leaders should promote valuation processes that are systematic, professional, and transparent. Consider Korea, which during the 1970s encouraged the development of a cadre of property appraisers—bringing transparency to the valuation process while making information on land values widely accessible. In previous land acquisitions, market values and asset replacement costs had been assessed by local government officials. In 1972, the government introduced the Basic Land Prices system, which mandated the assessment of land and buildings by certified private appraisers. Estimated property values from two appraisers were averaged for a final value; if the two appraisals differed by more than 10 percent, a third private appraiser was selected and a new average calculated.7

Although the valuation of land is essential to the efficient allocation of land use, many developing countries lack institutions for valuing land effectively. In countries where land values are concealed to avoid high transaction taxes, or are distorted by laws that allow developers to acquire land at favorable rates, the result is inefficiency: land may not be allocated to the best use, high prices may lead to affordability problems, and infrastructure expansion may face delays because land is not easily accessible. Take India, where such information systems are in their infancy and the government often acquires land for industrial and infrastructure development. Farmers and other landowners are compensated with payments benchmarked on the stamp duties—a land transaction tax. But since the marginal rate for stamp duties historically has been as high as 12 percent, land and property values have long been underreported. Now, as India’s policy makers amend the rules for changes in land use, the lack of independent and reliable land valuations is likely to generate public discontent and related conflicts. But building these institutions may take time, and second-best solutions may help countries in the interim as longer term objectives are pursued. In India, for example, while stronger institutions governing land use conversion, property rights definition and adjudication, and land valuation emerge and land markets mature over time, city leaders may want to look at alternative options for the short and medium term. In India, leaders could explore expanding the use of land readjustment8 methods for land assembly and infrastructure development in urban areas.

Coordinate land management with infrastructure, natural resources, and hazard risk
A city’s demand for physical structures, infrastructure, housing, and amenities will change with time as its population grows. To meet new demand, city leaders and planners must have strategies that are flexible. Otherwise their
decisions and policies can lock cities into physical forms that may prove suboptimal. For example, density limits—though important—should not impede economic growth or prevent the development of affordable urban housing. Bangalore is an example of density regulations reducing economic efficiency. Research shows that if the city’s density restrictions were lifted, its radius would be 8 kilometers rather than the present 12, so the city would grow in a more compact form. Commuting times would shrink, saving households about 4 percent of their income through lower transport costs.9

Similarly, land use policies need to be aligned with infrastructure plans (such as plans for public transit). Singapore is a good example: densities vary by location, planned use, and infrastructure availability (with higher densities near metro stations). New York varies densities block by block and by planned use—commercial areas in midtown and downtown Manhattan have much higher densities than do uptown residential areas. To fund infrastructure improvements, cities can sell developers the right to build at higher densities than would otherwise be allowed in a given location. Aligning land use and infrastructure can also help manage the formation and growth of slums (see spotlight 1). In Tunisia, the national upgrading program has dramatically reduced slum housing from 23 percent in 1975 to 2 percent in 1995 of the overall housing stock. The program was successful as national utilities made massive investments in water and sewer trunk infrastructure over the same period, making it possible to upgrade existing informal settlements.

In thinking about coordinating land use policies with infrastructure plans, it is also important to consider vulnerability to natural hazard risks. While 70 percent of high-income countries integrate land use and natural risk management, only about 15 percent of low-income countries are doing so.10 This is of concern as cities are more vulnerable to natural hazards, including floods that are becoming more destructive in many parts of the world. Equally important is coordination between land use and natural resource management—including water resources and water supply.11 Swakopmund, Namibia, a city of 42,000 surrounded by environmentally sensitive areas, has been able to limit development to within the zoned “townlands” and has protected watersheds through integrated environmental, sector, and land use planning.

Leverage competitive markets alongside regulation to expand basic infrastructure

Water, sanitation, transportation, and electricity are basic services. How can city leaders promote their expansion and increase access? For certain services—such as trucking—it is possible to establish wholly competitive markets, with free entry to providers and prices that reflect demand while covering costs. For other services, such as bus transportation and garbage removal, the effects of competition can be mimicked through recurrent auctions: franchises go to the provider who offers the lowest price for a given set of performance criteria.

Such franchise auctions have succeeded in reducing both costs and prices, so they deserve serious consideration. In many cities, such as Bogotá, London, and Santiago, bus routes are auctioned to operators who are then assigned to predefined itineraries. In London, since auctions were instituted, operating costs per bus-kilometer have declined considerably (gross of administrative costs by an estimated 20–35 percent, net of administrative costs by at least 14 percent).12 Santiago awards five-year contracts using criteria that include the fare offered by the bidder, along with performance standards. Before the auctions, during a period of deregulation, bus fares had risen; with the auctions, the fares came back down.

For still other services, characterized by natural monopolies (networks) and public good characteristics, such as provision of water and sanitation, governments and city leaders have to set realistic objectives for the development of the water supply and sanitation sector, checked against available resources and agreed in a multistakeholder policy dialogue. Efforts to improve the effectiveness of service delivery and lower capital costs are needed in most cities. These efforts may be supported by a range of planning tools including strategic financial planning, legislative and regulatory reform, benchmarking, and performance tools.
In addition, prices may have to be regulated. But to make regulatory regimes work, cities need a mechanism to prevent after-the-fact opportunism—by regulators or by service providers. In Latin America, for example, providers have renegotiated 55 percent of infrastructure concessions in transport and 75 percent in water and sanitation.

Finally, price discrimination and subsidies can be used to expand access to services such as public transportation—for both social equity and environmental sustainability. Still, city leaders should look first at market structures that give providers the needed incentives and flexibility to cover costs while serving as many people as possible.

**Connecting cities**

Connections—between cities and within cities—benefit producers and consumers. They give producers access to input (including labor) and output markets. They give consumers options and, in many cases, better prices. And connections expose cities to new economic opportunities. But city leaders who envision better transport connections for cities and neighborhoods face difficult choices. With limited resources, they cannot invest in everything. It is hard to know which new or improved connections will yield the highest returns over time.

Setting priorities for connective investment means picking winners and losers in the short run—but in the long run, thinking about priorities can make a vast difference for cities, even countries. To identify the most effective additions and improvements to the networks connecting cities and neighborhoods, city leaders can take the following three steps.

**Value the city’s external and internal connections**

For external connections, compare a city’s transport costs—and the density, quality, and capacity of roads, railways, waterways, and the like—with data from similar cities. In this way, determine where improvement is most needed. Alternatively, identify possible transport cost reductions and connectivity gains that reflect the city’s desired mix of economic activities and extent of specialization. In Colombia, lowering transport costs along the country’s key trade corridors can enhance competitiveness—for cities and for the nation. For example, transporting freight by road from Bogotá to the Atlantic costs about $94 per ton while maritime transport from the Colombian coast to the United States is less, at about $75 per ton. High domestic transport costs undermine the competitiveness of goods produced in Colombia’s largest cities, especially compared with other large cities around the world. Reducing domestic transport costs by 12 percent can lead to an increase in exports of about 9 percent.¹³

For internal connections, find out what the problems are: are gridlocks and lack of adequate public transport deterring residents from working outside their immediate neighborhoods (making labor markets inefficient)? Conversely, are long commuting times or high fares forcing residents to live in crowded slums so that they can walk to work? A city that faces one or both of these challenges needs a plan for a better transport system, including a desired mix of transportation modes. The plan must balance two main objectives: increasing the supply of affordable transport options, and ensuring that congestion and pollution remain within acceptable limits.

**Coordinate among transport options and with land use**

From the beginning, city leaders must systematically coordinate transport plans with land use policies and related infrastructure plans. Different cities demand different modal mixes, different neighborhoods demand different modes: mass transport is generally suited to compact areas, private vehicles to more sprawling ones.

City leaders should also seek ways to reduce the gap between transport prices and costs—both between cities and within them—by inducing competition in transport markets. Not all modes and routes will support multiple providers. But where they will, and where demand is high enough, policies and regulations should foster competition and not create artificial monopolies. At the same time, city leaders should find ways to price the full cost of individual motor vehicle use. These costs...
include externalities from congestion where road users do not take account of the time costs they incur on other road users. Local air pollution imposes additional costs. The expansion of urban areas separates jobs and residential location, increasing trip lengths and use of motorized transport. The associated health costs are high—in Beijing, the health costs from local air pollution are estimated at $3.5 billion annually.

Finally, city leaders must balance the aim of covering transport costs through market pricing with other social and environmental objectives. In Brazil, the government requires formal sector employers to provide transit tickets to their employees through a system called vale transporte (VT); the firms then deduct the VT expenditures from taxable income. The VT system—albeit affecting only the formal sector—effectively spreads the cost of transport subsidies between employers and the government.

If city leaders were to convey all the external effects of transport to users, monetary costs of transport would increase. This would gradually make households and firms rebalance their decisions on where to live and where to establish business. The result would be a denser settlement pattern, higher land rents, and shorter transport distances—contributing to the efficiency of cities.

Leverage investments that will yield the highest returns for cities—collectively and individually

Nationally, leaders must identify the most efficient investments in connections among all the cities in a country. Where is demand highest for the expansion of intercity infrastructure and transport services? Which corridors are identified through spatial analysis and simulations as most central to the network, in that improving them will yield the highest returns—for efficiency and for equity? Similarly, leaders must find ways to make transport within cities affordable while limiting congestion and pollution. Investments to increase capacity should be combined and aligned with other policies. Targeted subsidies, though not effective for all purposes or in all contexts, can sometimes be used to make transport more efficient as well as more equitable and safer for the environment. And other fiscal and regulatory tools can be used to manage demand for particular transport modes.

Financing cities

How do city leaders bridge the gap between readily available resources and investment needs? What sources should they tap? To start with, the government can establish its creditworthiness by first securing cash flows from user fees and taxes—and by leveraging the value of land in several ways, including taxes. Only after that can the government begin to borrow money and attract private investment, making finance easier. Whether financing is public or private generally does not make the difference between successful and struggling cities. But there are at least two situations in which private financing may be the preferred course: when the government sees public-private partnerships as a way to improve efficiency in service provision, and when the government suffers from severe credit constraints that prevent it from obtaining credit for improvements to publicly run systems.

Value and develop the city’s creditworthiness

Without domestic credit markets, and often lacking the transparency needed in municipal bond markets, many city governments in developing countries cannot access long-term credit. Experience shows that subnational debt can work if clear regulations are in place to:

- Guide the issuance of debt.
- Manage risks from borrowing.
- Clearly set forth the conditions for subnational governments to issue debt (including the purpose, type, and amount of debt that can be issued).

To make the issuance of debt to cities more transparent, Colombia has published traffic-light ratings of local government payment capacity, with red, green, and yellow signals reflecting a combination of liquidity and solvency indicators. To rate municipalities’ subnational debt, a red light identifies those whose ratio of interest to operational savings exceeds 40 percent and whose ratio of debt stock to
current revenues exceeds 80 percent. Red-light municipalities cannot borrow. Green-light municipalities can borrow only after obtaining the approval of the central government.

Creditworthiness is limited not only to local governments—it extends to their utility companies. In Kenya, the Water Services Regulatory Board calculated and published utility shadow credit ratings for 43 water service providers in 2011 and found only 13 providers to have investment grade ratings.

Smaller cities can seek short- and medium-term loans from higher levels of government and pool their credit. Thus, governments of smaller cities can use bond banks, loan pools, and guarantees to reduce lenders’ risks. There are two common types of municipal bonds: general obligation bonds—debt instruments secured by general purpose municipal revenue such as property taxes—and revenue bonds—debt instruments secured by the revenue generated from specific municipal assets (such as ports, toll roads, water and wastewater utilities), with or without recourse to general revenues. Revenue bonds are particularly useful in cases where bond markets are not well developed. Colombia, India, Malaysia, Romania, the Russian Federation, the Slovak Republic, Slovenia, South Africa, and the República Bolivariana de Venezuela provide examples of countries where cities have raised funds from municipal bonds.

In the absence of a well-developed bond market, financial intermediaries in diverse forms play important roles in mobilizing resources for urban infrastructure financing. In Colombia, a successful financial intermediary is FINDETER (Financiadora de Desarrollo Territorial S.A.), a government company created to finance regional urban infrastructure projects. More than 90 percent owned by the national government, with the remainder owned by the regions (Departments), FINDETER provides resources for financial intermediaries who assign them to regional authorities. It has received funds from multilateral banks and has consistently received high credit ratings. Still, none of these methods can replace a creditworthy local government.

**Coordinate public and private finance using clear and consistent rules**

When city governments have constrained access to credit, private investors may step in to fill the gap. There are many types of partnership structures, with each one transferring different levels of risk to the private sector. They include service contracts, management contracts, leases, and privatization. Under any of these structures, property rights must first be clearly defined, so that creditors need not depend on the government’s promises. Then a public-private partnership, with private sector selection mechanisms based on the market and on cost-benefit analyses, can improve project selection and ensure project sustainability while adding sources of infrastructure financing. Nevertheless, public-private partnerships (PPPs) are no magic bullet: they require commitments to sustainable cost-covering tariffs or equivalent tax revenues. They cannot stand in for good financial management or good project evaluation. Clear rules must dictate the procedures, the requirements, the approvals, the institutional responsibilities of the entities involved, and the allocation of risk.

Consider Ghana, where such rules were not in place. In 2002, the government of Ghana initiated a process to encourage PPPs in the urban water sector. However, lack of transparency and accusations of corruption in the selection process led to the end of the PPP. And in Bolivia, the government privatized the water supply system in the city of Cochabamba, awarding a 40-year concession to the private consortium, Aguas del Tunari. The contract was awarded without adequate appraisal of the financial situation of the company. Once the concession was awarded, rate structures were modified resulting in an increase of up to $20 in water bills, representing as much as 20 percent of incomes for local families. Subsequent violent protests led to Aguas del Tunari withdrawing from the project.

In contrast, Chile put in place a clear and transparent procurement process, focusing on public awareness and a learning-by-doing approach that allowed for adjustments along the way. This process led to the award of 21 road projects on a competitive basis between
1993 and 2001. The bidding started with smaller projects in order to test the market while also minimizing the risk for the private sector. More than 40 Chilean and international companies from 10 countries participated in the bidding through 27 consortia.

To successfully implement PPPs, city leaders will have to consider strengthening public sector capacity, laying out the appropriate legal and sector framework, promoting rigorous planning and risk assessment through feasibility studies, ensuring transparent and competitive procurement, building strong monitoring systems, and allowing flexibility for adapting to unpredictable events.

**Leverage existing assets to develop new ones, linking both to land use planning**

Land sales and leaseholds can provide initial capital for new infrastructure investments. Sales in Cairo, Istanbul, and Mumbai provide examples of the revenue potential of land auctions. Yet in the long run, governments must tap own source revenues such as property taxes, or similar levies, and access long-term credit to fund the maintenance and expansion of public facilities. Of special interest are three revenue sources—betterment levies, special assessment taxes, and exactions—that link fees to increases in land value based on infrastructure improvements. All these ways to leverage state assets require the presence of many factors to succeed, and all have risks. Strong institutions are essential to make these instruments work. Institutions to clearly define property rights, to objectively value land using standard methods, and to support and oversee land management, land sales, and tax collection.

**Planning, connecting, and financing cities—now**

Urbanization in today’s developed countries occurred gradually, over a hundred years or more. That fairly leisurely pace allowed for trial and error in the development of rules and capabilities. In contrast, today’s developing countries face sudden deluges from the countryside. Some can expect to go from 10–20 percent urban population to 60–85 percent in just 30 years.

Such rapid urbanization confronts developing country governments with unprecedented institutional and fiscal challenges. Managing individual decisions and planning for urbanization, today’s cities struggle to ensure the availability of shelter, transport, and other basic infrastructure and services. All are needed by growing populations—and they are needed by businesses to start and expand.

For the economy, for equity, and for sustainability, it is therefore of the greatest urgency that city leaders plan, connect, and finance their cities—now. How decision makers prepare for rapid urbanization is crucial, not only to the future of their cities, but also to global economic progress and sustainability. The World Bank, among others, can help (box 2).

---

**Box 2: Planning, connecting, and financing cities: How the World Bank can help city leaders**

The World Bank has instruments to help city leaders plan, connect, and finance for the future.

**Planning.** To support evidence-based urban planning policy at the national and city levels, the World Bank can build on:
- City Asset Management Strategies (with robust data collection and dissemination).
- Municipal Contracts (with tools to capture multisector data, as part of a wholesaling approach).
- Subnational Investment Climate Assessments and Doing Business Surveys (with greater coverage).

The Bank can also use the Urbanization Knowledge Platform and its Singapore and Marseille Urban Hubs to support city leaders with just-in-time advice.

**Connecting.** To support improved connections through Development Policy Loans at the subnational level—with its focus on housing and slums, land and urban poverty, and urban mobility—the Bank can expand programmatic and policy-based lending. It is also exploring options for results-based programmatic lending linked to core elements of planning and connecting cities.

**Financing.** To partly cover debt servicing for governments borrowing from commercial markets (loans and bonds) and so improve debt terms, the Bank can provide policy-based guarantees—resulting in longer maturities, lower interest rates, higher debt limits, and the power to tap new markets and institutional investors.
The United Nations projects that 2 billion people will live in slums by 2030. How to manage slum formation and reduce the hazards faced by slum dwellers? Most policy discussions tend to focus on moving people to safe environments or providing better housing elsewhere. Proposed objectives include urban upgrades, such as community and household infrastructure projects; resettlement to new housing developments; housing subsidies; and land titling.

But many of these policies do not work. The reason is that people do not always willingly trade away a better location for a better home with modern utilities. People choose neighborhoods for their affordable services and amenities—but also for their proximity to jobs.

In many developing country cities, it can be difficult to live near one’s job, because land markets have failed: formal housing supply is low, in part because of restrictive regulations. But it may also be difficult and costly to commute to work, because transport infrastructure fails to connect urban neighborhoods. Commuting by public transit in many African cities would be too great? This seems at least possible. What is certain is that many slum dwellers are people for whom even the cheapest public transit would be too expensive. And it is an illustrative fact that in Mumbai more than three in five commuters pay extraordinarily high costs for subsidized housing and multiple transfers are needed to reach dispersed jobs. Buses carry other workers on commutes that last nearly as long as the work day itself.

Two main lessons emerge from these cities’ experiences:

- Efforts to alleviate slum growth and unsafe conditions with improved housing should not have the unintended effect of reducing workers’ access to labor markets.
- Setting rules for land and infrastructure coordination can connect generations of workers to jobs—and earn city leaders the right to say that their policies have transformed urban living conditions.

**Notes**

1. Slum dwellers, though not all living in hazard prone areas, are more likely than others to do so. Studies show that the share of the world’s urban population subject to natural hazards will more than double by 2050. Today, 370 million people live in cities in earthquake prone areas, 310 million in cities with high probability of tropical cyclones. By 2050, these numbers are also likely to more than double (Lall and Deichmann 2009).

**References**


SPOTLIGHT 2

The value of market rules for basic services: For expanded coverage and increased efficiency, it’s not all about the money

When policy makers consider how to expand infrastructure and improve the provision of basic services, they have a choice. Rather than give first priority to financing, as is often done, they can look at the structure of markets for basic services—and determine what rules will work best.

In particular, policy makers may consider rules for competitive pricing and cost recovery. Indeed, in many cases the expectation of cost recovery through fees will determine the availability of financing.

Consider Colombia. In 1964, only half the residents of Bogotá and other large cities had access to water, electricity, and sanitation. In smaller cities, coverage was even lower. Today, there is nearly universal access in cities of all sizes—a convergence that took more than 40 years (figure B1).

How did Colombia expand service coverage? A big part of the answer is that policy reforms allowed fees to nearly cover costs. For example, average residential water fees more than doubled over 1990–2001. With almost 90 percent of households having a metered connection, household consumption was nearly halved. And that, in turn, reduced the need to develop major new infrastructure.

Even with fee increases, water remains fairly affordable in Colombia. The fee structure allows the government to cross-subsidize: richer households and industrial users pay for the poorest consumers. As a result, the average poor household spends less than 5 percent of its income on utility services.

In the electricity sector, Colombia’s government changed the rules to increase efficiency—loosening restrictions on market entry and unbundling electricity provision into four categories (generation, transmission, distribution, commercialization). The policy change succeeded, transforming the electricity market in Colombia and greatly increasing its output. Indeed, the country became a net exporter of electricity, exporting 1.76 terawatt hours to Ecuador in 2005.

Vietnam also increased electricity coverage—rapidly (figure B2). In the early 1990s, electricity reached only a small minority of Vietnamese (about 14 percent). Today, it is available to almost everyone (97 percent). Coverage is almost universally equitable:

---

**Figure B1** Access to basic services by city size in Colombia, 1964–2005

- **Electricity**
- **Water**
- **Sanitation**

**Figure B2** Vietnam achieved near to universal electricity coverage in just over 15 years

there little disparity between rural and urban areas, and regional gaps are minor.

What policies led to Vietnam’s steep rise in coverage? In 1995, the government created a public enterprise, EVN, to manage the electricity system. Prices were kept well below cost, and service expansion was funded by fiscal transfers along with other EVN revenues. But EVN also remained viable by diversifying into other profitable businesses, including telecommunications.

Vietnam’s approach has brought benefits to many—but those benefits have come with costs. First, the service is spotty and inefficient, with frequent outages. Second, low revenues from electricity provision led EVN to focus on its more profitable ancillary businesses, rather than on further electricity improvements. Instead of focusing exclusively on universal access, Vietnam’s policy makers could have tried to ensure higher quality. It might have been better for all to provide businesses with reliable power than everyone with unreliable service. And Vietnam cannot easily sustain its fiscal support for EVN. The strain on the budget gives the government a stake in seeking alternatives, such as privately financed electricity generation—but those alternatives would require cost recovery through higher fees.

Vietnam’s present government is trying to increase electricity fees and attract private financers and generators. It is also considering whether to open the electricity market to competition among generators. Signs indicate that the market can indeed support higher fees.

In contrast to Colombia and Vietnam, Uganda still has large gaps in access to basic services throughout the country. In 2008, Uganda’s rate of access to improved water sources was 22 percent in urban areas and 5 percent in rural areas—far below the overall average for developing countries (84 percent) and for the Sub-Saharan region (58 percent).

Ugandan policymakers have started thinking about the rules that need to be in place to expand access to basic services. A water reform of 1998 focused on creating the right incentives for more efficient service provision: attributing responsibility to local service managers and increasing their accountability. Since 2000, the national government has been working with the National Water and Sewerage Corporation (NWSC)—the autonomous public provider of water and sanitation to the country’s large towns—to enforce performance contracts. Renewed every three years, the contracts include specific indicators that NWSC must meet at the end of the period. However, Uganda’s reform has not yet attempted to promote cost recovery through user fees. The NWSC charges a uniform fee across all towns and customer categories served. In 2010, of 23 areas served, only 6 covered production costs.

Policy makers hoping to improve basic services have usually focused on financing. Sometimes they have even expressed objectives as investment targets (such as spending 7 percent of GDP on infrastructure). But the examples of Colombia, Vietnam, and Uganda show the value of rules—three in particular:

- Establish clear and consistent rules for service provision to increase effectiveness, efficiency, and equity.
- Ensure sustainability through full cost recovery from tariffs and/or transfers.
- Where required, subsidize access.

Notes
2. Larsen and others 2004.
5. UN Millennium Project 2008.

References
Cities in the developing world increasingly must accommodate urban expansion. During rapid urbanization, existing cities struggle to cope with infrastructure backlogs and increased densities. Policy makers have two main options: they can expand existing cities—increasing urban areas and densities—or they can create new ones.

New cities have been planned, with mixed success, in countries including China, the Arab Republic of Egypt, and the Republic of Korea. A look at their history suggests two main lessons:

- New cities are more economically viable if they are located near existing metropolitan areas.
- Given a good location, a new city can yield higher returns if it benefits from coordinated policies for land use and for infrastructure—with fluid land markets and strong connections to existing cities.

These two principles—a good location, institutionally supported land use transformation coordinated with connective infrastructure—do much to explain the early success of China’s Jing Ji Te Qu or Special Economic Zones (SEZ). The Shenzhen SEZ was deliberately located just north of Hong Kong SAR, China, on a greenfield site in southern China. Although basically rural, the area had two urban settlements. One was Luohu, the main customs checkpoint with Hong Kong and a major point of cross-border traffic on the Kowloon-Canton Railway. The other was Shenzhen Old Town, a stop-over for cross-border travelers.

China’s government enabled land use transformation in the Shenzhen SEZ by assembling large lots of land and by adjusting land prices to attract industry. The introduction of land auctions in 1987 led to a boom in property development, while giving the local government more extrabudgetary capital to improve basic and connective infrastructure—ports and roads, water and sewerage, electricity and gas, telephone communications—and to carry out development plans. Shenzhen’s success revolves around its spatial proximity to Hong Kong, but this advantage was supported by strong state actions to nurture land and labor markets. China’s government invested in the initial basic and connective infrastructure for SEZs, even as it offered private investors the opportunity to collaborate in infrastructure development. The government also helped entrepreneurs take risks and experiment with new products, in part through subsidized financing. And the SEZ was granted considerable autonomy in deciding how to attract industry, including legislative authority: it could develop municipal laws and regulations along the basic lines of national laws and regulations. Finally, labor markets were created. Shenzhen was the first zone in China to adopt wage reforms, including a minimum wage and a social insurance package.

What happens to new cities planned without regard for the principles of convenient location, flexible regulations, and efficient connections? They fail. Egypt planned and developed 20 towns over the past 20 years to reduce population growth in Cairo and the Nile valley. Meant for 5 million people, the new towns have barely drawn 800,000. In the Greater Cairo Area, eight new towns were created to deconcentrate the city—but by 2006 still accounted for less than 14 percent of Greater Cairo’s population increase over a decade. The reason for these failures is that Egypt’s new towns are hobbled by their distant locations, overly rigid land use plans, and lack of connective infrastructure. Their planning norms, considered restrictive by international standards, have elevated property prices and limited affordable housing. And the need for infrastructure to connect the new towns with existing metropolitan markets has been neglected, deterring firms from relocating. Finally, taxes on new trucks are high in Egypt, and important roads are of low quality, so road transport costs are prohibitive.

In contrast to Egypt’s failed towns, Korea’s new cities were a success. Developed mostly over a single five-year period in the mid-1990s, they quickly attracted 2.7 million new residents. During their rise Seoul was spatially deconcentrated, and its population began a gradual decline. How did Korea ensure that its new cities would be viable? By basing its regional development plans on the principles of convenient location, flexible regulation, and efficient connection. During the 1980s, as the demand for urban land increased, the government assembled land in Seoul’s periphery for five new cities strategically positioned within 20–25 kilometers of the city’s central business district. The land, acquired through public purchase, was fully paid for at market prices. Densification was encouraged by fluid urban development guidelines on issues such as floor area ratio and land conversion. And the new cities were connected to Seoul’s core with metro links and with bridges across the Han River.

Rigid policies on land use and urban expansion, with underinvestment in urban infrastructure, will limit the growth of new cities and existing metropolitan areas alike. New cities are likely to do well near existing metropolitan areas, but underlying land market distortions must also be corrected and rights-of-way set aside for infrastructure in greenfield locations (just as infrastructure must be developed in areas already showing economic promise). The suburbs of large metropolitan areas are well suited to the creation of thriving new cities. Developing new cities far from large metropolitan areas is more risky—so before a government plans to develop such locations, it should first carefully assess why they have not already taken off. Is it because of regulatory constraints, high transport costs, or low market accessibility (limiting yields on private investment)? If public investments are made to offset some of these costs, will they succeed in countering the tendency of firms to cluster in sectors that value agglomeration economies? Finally, since agglomeration economics asserts that some metropolitan concentration of economic activity is best for
productivity, what is the tradeoff in industrial location between national efficiency and spatial equity?

Around the world, new cities have been seen as solutions to metropolitan problems. But city leaders could more prudently address the problems by encouraging fluid urban land and labor markets—regardless of whether the solutions include new cities or redeveloping old ones. The main question is not whether the government should or should not initiate the development of new cities. It is whether the government has taken the needed measures to correct underlying land market failures and created institutions to set aside rights-of-way for infrastructure expansion. With these policies in place, a city can develop organically. In their absence, urban development will falter.

Notes
1. Given the strong hand of the government in this SEZ development, it may be difficult to replicate China’s experience in every detail. But the underlying principles are still relevant.

References


In Colombia, commercial banks had no experience with lending to municipal governments until the early 1990s. However, the subsovereign debt market has rapidly developed since, and has been stimulated by the financial intermediation of Financiera de Desarrollo Territorial (FINDETER). FINDETER, established in 1999 as a legally independent and quasi-public financial institution, acts as a second-tier lender encouraging commercial lenders (first-tier lenders) to directly finance municipal governments. By lowering the cost of loans, FINDETER increased commercial banks’ willingness to lend to municipal governments.

FINDETER rediscounts loans that commercial banks make to subnational borrowers; this process makes it more financially attractive for commercial banks to lend to subnational borrowers. In practice, this means that a municipal government applies for a loan to a commercial bank. The commercial bank and FINDETER then appraise the proposal and if approved, the commercial bank lends to the municipal government. FINDETER in turn lends an agreed-upon amount at a discounted rate to the commercial bank. The commercial bank remains responsible for servicing its rediscounted loan by FINDETER regardless of its own collection of debt services from the municipal government, thus absorbing all the credit risk. The municipal government also has to set up a special account into which intergovernmental payments flow. The commercial bank has a senior right to intercept revenue if loan payments are due. The commercial bank in turn endorses these liens to FINDETER. Thus, if a participating bank becomes insolvent, FINDETER can still collect its dues (figure D1).

FINDETER has encouraged commercial banks to offer municipal governments long-term loans at attractive rates. In addition, it provides long-term financing up to 15 years, whereas typical maximum loan maturities are 3–5 years. From 1990 to 2003, FINDETER has financed about $2 billion in loans in more than 700 municipalities, and from 2006 to 2010, it disbursed about $4 billion. In addition, FINDETER has maintained low levels of bad debt to under 2 percent.

FINDETER has succeeded in establishing itself as a viable financial institution. And although FINDETER initially relied on donor support, primarily from the Inter-American Development Bank and the World Bank, revenue from existing loans has financed more than 78 percent of its activities since 2006. In addition, FINDETER has achieved an AAA local credit rating (from Duff & Phelps), which has helped accessing less expensive financing.

Contributed by Nozomi Tokiwa and Hiroaki Suzuki
Notes

2. These are concerns expressed by more than 750 city leaders in regional and national consultations on urbanization priorities carried out through the Urbanization Knowledge Platform—a global partnership for open-source knowledge exchange among policy makers, practitioners, and researchers. The platform included countries ranging from low to high income, from the smallest country size to the largest.
4. See Clark (2012) for a discussion on who constitutes city leaders and what leadership implies.
8. Land readjustment is in essence a participatory tool used for land assembly and infrastructure development. In India, it has been applied under the name of Town Planning Schemes in the State of Gujarat.
16. This includes national government clearing of subnational borrowing.

References


Helping city leaders find the answer to key challenges

Urbanization Reviews

**Plan**
- Value land use through transparent assessment
- Coordinate land use with infrastructure, natural resources, and hazard risk
- Leverage competitive markets alongside regulation to expand basic services

**Connect**
- Value the city’s external and internal connections
- Coordinate among transport options and with land use
- Leverage investments that will generate the largest returns—individually and collectively

**Finance**
- Value and develop the city’s creditworthiness
- Coordinate public-private finance using clear, consistent rules
- Leverage existing assets to develop new ones, and link both to land use planning

What must be done to...

- ...improve living conditions, especially in slums?
- ...manage the city’s physical form?
- ...create jobs?
- ...expand the coverage and quality of basic infrastructure services?
- ...bridge the divided city and foster inclusion?