

Infrastructure *2010*

INVESTMENT IMPERATIVE



Urban Land
Institute



ERNST & YOUNG
Quality In Everything We Do

Infrastructure *2010*

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Recommended Bibliographical Listing:

The Urban Land Institute and Ernst & Young. *Infrastructure 2010: Investment Imperative*. Washington, D.C.: The Urban Land Institute, 2010.

ULI Catalog Number: I21

ISBN: 978-0-87420-145-1

Cover: The Chicago River reflects Chicago buildings. Under Mayor Richard M. Daley, Jr., the city launched a major effort to clean up the once-polluted Chicago River.



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Infrastructure 2010: Investment Imperative

Infrastructure 2010: Investment

Imperative has a simple thesis: We must start treating infrastructure like an investment. Too often we treat it as anything but, funneling spending through siloed formulas and sidestepping critical questions about the country's longer-term infrastructure strategy and vision. The nation's vast infrastructure needs offer an opportunity to create much-needed jobs while making the lasting, integrated infrastructure investments that will lay the foundation for future prosperity.

The 2010 infrastructure report—the fourth in an annual series produced by the Urban Land Institute and Ernst & Young—examines global infrastructure trends and, for the first time, addresses water issues in depth. Water is the hidden infrastructure conundrum, with aging pipes and inadequate systems running headlong into rapid population growth in America's most water-constrained regions. *Infrastructure 2010* probes water challenges in the United States and abroad, including the overlapping challenges of aging pipes, failure to conserve, contamination threats, and the difficult issue of effective water management. Building on extensive research, interviews, and data collection, *Infrastructure 2010* reviews the specific water issues and concerns confronting 14 metropolitan areas throughout the country.

Across the nation, there are signs of a renewed commitment to infrastructure. Innovative state and local govern-

ments are taking the initiative on building and funding new and often costly infrastructure projects, including transit and rail. And more and more Congressional and administration leaders recognize the importance of infrastructure to national competitiveness, even if they can't agree on priorities or how to fund it. At the federal level, creative partnerships between agencies—including the sustainability partnership between USDOT, HUD, and the EPA—are linking and coordinating environmental, transportation, and land use programs. Federal agencies are experimenting with new grant programs that award dollars in more merit-based, competitive ways, and revising old grant criteria to be more holistic and wide ranging. These are promising moves, but more needs to be done.

As in previous editions, *Infrastructure 2010* provides a glimpse of global infrastructure initiatives in 16 major international markets, highlighting China's continued strong investments in rail and water infrastructure. This year's report also reviews water conservation efforts in Australia.

An investment in infrastructure is a promise to future generations. Done well and strategically, it can help guarantee increasing prosperity and rising standards of living. Countries around the world—in particular, China, but also those in Europe and elsewhere in Asia—recognize the infrastructure investment imperative. America must now do the same.



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Executive Summary

Falling behind global competitors, the United States struggles to gain traction in planning and building the critical infrastructure investments that are necessary to ensure future economic growth and support a rapidly expanding population.

Recent federal stimulus spending addresses some pressing repair needs for transport- and water-related systems and provides seed funding for high-speed rail in important travel corridors, as well as new energy infrastructure. But recession-busted government budgets, entitlement and defense expenditures, and ballooning health care costs push infrastructure down most political priority lists—leaders continue to procrastinate when it comes to new investments as stressed taxpayers balk at more spending.

A Path Forward

Infrastructure 2010: Investment Imperative warns that further delay risks impeding sustained economic recovery and means losing additional ground to countries in Asia and the European Union. These nations continue to implement long-range programs to integrate rail, road, transit, airport, and seaport networks to serve major economic hubs, employing state-of-the-art technologies and systems. Despite coping with recessionary fallout, they can front-load stimulus spending on national and regional infrastructure initiatives already underway—expanding high-speed rail networks and expediting energy and water projects.

In the absence of immediate funding solutions, the Obama administration takes some important initial steps to break down planning barriers between federal agencies responsible for infrastructure-related programs—departments of Transportation, Housing and Urban Development, Energy, and the Environmental Protection Agency. This more concerted policy-making approach could lead to developing national and regional strategies for helping America’s primary metropolitan areas cope with urbanizing suburbs, traffic congestion, and aging or inadequate water, sewer, and power systems. But more needs to be done.

Infrastructure 2010 recommends that government officials and policy experts take effective action, including the following:

- **LEVEL WITH THE AMERICAN PEOPLE** about how the country is falling behind other economies as a result of underinvesting in infrastructure, and explain the true costs of making required upgrades and building new systems.
- **DETERMINE A NATIONAL VISION** for infrastructure improvements that supports the viability of the nation’s key metropolitan areas and national gateways—the places that increasingly concentrate economic activity and propel growth.

- **MOVE TOWARD MERIT** rather than formulas in allocating federal funding to state and local governments for infrastructure, and encourage integrated infrastructure, environment, and land use planning.
- **ESTABLISH A NATIONAL INFRASTRUCTURE BANK**, modeled on Europe's success, which can help promote more investment-grade decision making and attract more private capital into infrastructure investments.
- **RAISE REVENUES THROUGH USER FEES**, not only to pay for improvements and upgrades, but also to help gain economic efficiencies and environmental benefits through encouraging changed behaviors—less driving, greater water conservation, and reduced per-capita energy consumption.

Addressing the Water Challenge

While transportation-related issues and energy needs typically dominate infrastructure agendas, ensuring water availability and maintaining water quality also require immediate attention to manage supply and demand. No one can take water for granted. Every U.S. region—including fast-growing metropolitan areas in arid western states and established cities in more fertile zones—faces costly challenges to husband and deliver this precious and essential resource. The federal government as well as state governments must consider how to allocate supplies among competing users—residential, industry, and agribusiness—as the impacts of climate change and increasing population accelerate the urgency of dealing with the water challenge.

Revamped approaches and implementing solutions are necessary, including the following:

- **REPAIRING AND MODERNIZING OUTMODED SYSTEMS** to reduce leaks in water delivery networks and stem declines in water quality from failing sewage treatment plants.
- **DEVELOPING COLLABORATIVE REGIONAL STRATEGIES** to protect supplies across multiple states and varied local jurisdictions.
- **EMPLOYING PROVEN LAND USE TECHNIQUES** to reduce stormwater runoff and capture groundwater to replenish depleted aquifers.
- **USING INNOVATIVE RECYCLING TECHNOLOGIES** in development projects and for retrofitting existing buildings.
- **FARMING LESS-WATER-INTENSIVE CROPS** and planting less-water-dependent landscaping.
- **IMPLEMENTING CONSERVATION-oriented irrigation systems.**

Internationally, few countries escape water-related challenges. Australia implements innovative adaptation and conservation schemes to deal with parching drought. Many European countries fail to provide reliable water quality, India struggles with inadequate systems, and China copes with contamination and pollution in its water supplies, the result of its break-neck industrialization pace.

Changing How We Pay

How to pay for infrastructure remains a daunting challenge for most countries, particularly the United States, where decades of underfunding now force a massive catch-up effort by deficit-