100 Resilient Cities
RESILIENCE PERSPECTIVE

Economic Development
During its six years of operations, the 100 Resilient Cities program supported the participating city governments to prepare city-wide resilience strategies for each city. During these strategy development efforts, city governments and their stakeholders considered and prioritized a full range of urban risks and vulnerabilities, which spanned each city’s diverse communities, places, economic sectors, and operations.

As the strategy processes established each city’s resilience priorities and action areas, 100RC staff, together with 100RC’s 115 Platform Partners and scores of Subject Matter Advisors, provided further domain specific support to the cities’ relevant technical and managerial counterparts and stakeholders. These focused efforts led to the preparation of domain specific resilience frameworks and approaches. These approaches are now being summarized in this 100RC Resilience Perspective series.

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Urban economies are widely vulnerable to external shocks such as natural catastrophes, financial crises, disease outbreaks, military conflict, and terrorist attacks. For instance, Hong Kong’s economy suffered a 3.2%, 10-year decline in gross domestic product (GDP) due to the 2003 SARS epidemic. Similarly, in the two years following the 2007 start of the U.S. subprime mortgage crisis, the GDP of metro Miami declined 7.3% and the GDP of metro Chicago declined 4.7%. The 2015 terrorist attacks in Paris led to an estimated €750 million decline in tourism income and local consumption. And the 2015 earthquake in Nepal ended the country’s sustained progress in poverty reduction, pushing an additional 0.7-1.0 million Nepalis into poverty.

In addition to human harm, these kinds of shocks – and in some instances, even just the knowledge of high exposure to them – can impose long-term reductions in investment, consumption, and output in cities.

An even larger drag on urban economies likely results from the chronic stresses that cities face, such as poverty, poor health outcomes, or aging and inadequate infrastructure. For example, traffic congestion in New York City arising from lagging infrastructure investment is estimated to annually cost the city’s economy $20 billion – equivalent in magnitude to New York City’s total insured losses from the 100-year Superstorm Sandy catastrophe in 2012. Similarly, the acute and long-term economic impacts of urban poverty or civil unrest are widely viewed as detrimental to investment, economic productivity, and growth, though more difficult to measure.

Economic exposures to external shocks and chronic urban stresses are often substantially underexplored in urban and regional economic development planning and investment programs – suggesting the need for dedicated resilience practices in the local economic development (LED) field. Without the use of deliberate resilience-based approaches by those planning and leading economic development efforts, the overall resilience of cities and their residents will be compromised. This is particularly the case in the context of the disruptive consequences of rapid urbanization, climate change, and globalization.
100 Resilient Cities (100RC) defines urban resilience as the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience. Urban economic resilience is the ability of a city and its metropolitan economy to grow, adapt, and survive in ways that address the city’s chronic stresses and shock exposures and risks. In other words, economic resilience involves not only stabilizing local economies and advancing economic growth, but also ensuring that the benefits of growth serve to build the resilience of the city’s households, communities, businesses, and institutions. A resilient urban economy supports the city to thrive. This in turn increases the city’s overall economic potential.

The U.S. Economic Development Administration (EDA) highlights the importance of comprehensive efforts to reduce urban stress conditions in order to build a local economy’s ability to withstand and recover from exogenous shocks. “By focusing on the resilience of the community as a whole, the community’s adaptive capacity to recover from all kinds of change is enhanced, whether that risk has been identified or not.”

Reflecting a similar approach, the UK-based Centre for Local Economic Strategies (CLES) describes local economic resilience as “the extent to which an area can both bounce back from adversity and respond to opportunity (italics added).” According to CLES, “economic success is about policies which support local economies, business growth and private gain, but simultaneously, strengthens local economic infrastructure, builds enduring social and civic institutions for the future and helps in the aim of providing a decent standard of living for all.”

Another way to understand economic resilience is through the economic concept of productivity. Productivity is the measure of the amount of economic output that can be achieved through investment in capital and through the employment of labor for production and service provision. Productivity rises and falls according to 1) the amount and quality of production inputs - labor and capital - that firms and industries deploy, and 2) the contextual or underlying social and institutional conditions in which firms and industries operate. The contextual conditions for economic production are what economists call an economy’s Total Factor Productivity (TFP). TFP is the sum contribution of all factors, which are external to firms and their production processes (i.e., labor and capital deployment), that systemically determine the efficiency of capital and labor in economic production. In statistical terms, TFP accounts for as much as – and in some cities more than – 50% of statistically measurable economic productivity at local, regional, and national scales.

Some of the common factors that have been statistically demonstrated to be determinants of TFP include:

- the level of urbanization and the size of the city or of the region’s cities,
- the health of the population,
- educational attainment,
- openness to new technology and innovation,
- efficiency of resource use, including the quality of infrastructure, and
- internal (and not only external) shock events including conflicts and civil unrest.

Considering the central contribution of TFP to economic development, building economic resilience requires that local and metropolitan economic development strategy extends beyond its historical focus on attraction, retention, and public support of corporate investment and hiring. The practice of building economic resilience is very similar to the practice of building a city’s TFP.
Resilience in the context of local economic development practice

Integrating resilience into local economic development practice will generally require greater:

- Anticipation, mitigation, and management of emergency scenarios, including future/dynamic hazards (e.g., extreme weather, pandemic) and proactive responses to long-term trends (e.g., demographic and technology change).

- Consideration of interdependencies between systems, workforce groups and their communities, and industries, factoring how each impacts the performance of others under normal circumstances, under stress scenarios, and during extreme, acute events. Systems and sectors need to be developed and managed to mitigate exposure to cascading impacts of probable shocks and stresses from other industry sectors, and to increase collective efficiency and performance across sectors. Systemic risk exposures to the local economy need to be evaluated, reduced, and managed.

- In addition to risk reduction and mitigation, LED measures can be designed to address chronic stress conditions, in particular those affecting regional TFP. This involves specific efforts to increase the “co-benefits” or “dividends” from economic development polices, incentives, and investments in addition to increasing the targeted direct benefits of these efforts. For example, economic development investments, incentives, and projects can be designed to increase the efficiency of resource use; to improve educational outcomes; to reduce pollution and improve health outcomes; to foster a local culture of creative collaboration among industries, institutions, and professions; and to otherwise contribute to community- and household-level (i.e., employee) health, security, and well-being.

The traditional practices of local economic development have given primary attention to attracting, supporting, and retaining operations of specific firms, and to attracting and developing a resident workforce to match these corporate or institutional capital investments. In recent decades LED professionals have advanced new practices to improve key aspects of TFP, as a further, more systemic way to attract new capital and desired employee-resident professionals have advanced new practices to improve key aspects of TFP, as a further, more systemic way to attract new capital and desired employee-residents, and to build long-term competitive advantages. These efforts include: increasing the availability and quality of infrastructure and services provided for new industrial zones and employment areas (e.g., fiber optic networks); advocacy for public infrastructure improvements such as transit line extensions; reforms in policy to provide a predictable regulatory and investment environment; support for the development of industrial communities or clusters to advocate their own interests; and broad-based initiatives to improve local population health and educational outcomes.

In recent decades LED professionals have developed specifically urbanistic approaches to workforce attraction and retention, particularly in regions transitioning from manufacturing to knowledge-based services and to technology industries. Efforts to increase the qualified local labor pool of high-demand occupational groups has fostered an urban “livability” agenda within LED practice, emphasizing the attraction and public subsidy of services such as startup incubators, of cultural institutions, such as arts districts and sports teams; and of recreational amenities, such as parks, trails, and leisure facilities.

These urban livability strategies and investments highlight a challenge of TFP-focused LED strategy: providing and maintaining public amenities of this nature requires the taxation of growth, but local employers favor low-tax environments. For this and other reasons, provision of livability amenities has generally been prioritized for specific demographic and occupational groups, often further exacerbating inequitable distribution of the proceeds of growth, gentrification, and related chronic stresses. When cities pursue the provision of these amenities through private sector partnerships, equitable access can be further reduced. Therefore, a focus on one aspect of TFP improvement, related to specific service industry clusters and their occupational groups, may not contribute to citywide resilience, in particular if they are implemented at cost to or if they displace other significant population and occupational groups and their ability to thrive within the city. The development of economic resilience, in practice, must be steered by a practiced commitment to economic inclusion, reflecting the variety of livelihoods and pathways to household wealth creation in a city.

This reality is starkly illustrated in the predominance of informal sector economic growth and by household reliance on microenterprise activities in many parts of the world. In 23 of the 44 countries that have IOORC Network cities, 57% of all non-agricultural employment is informal (meaning, not part of the legal, regulated system of registered enterprise, employment, and taxation). Added to this, micro- and small businesses – both formal and informal – account for a substantial part of economic production in cities worldwide. As described by the Organisation for Economic Cooperation and Development (OECD), informal livelihoods and micro-enterprises are a “shock absorber in times of economic crisis.”

In recent decades a further form of LED practice has emerged in which the local government plays a direct entrepreneurial role to build and shape new markets, advance new industries and products, and change local purchasing patterns. In entrepreneurial LED practice, the public sector takes a position as a co-investing partner. Local governments or their redevelopment authorities assemble and develop properties and districts, often with broader public policy purposes in mind. They actively develop local supply chains or offer finance and other business services solutions to advance policy-driven industry development. They co-finance startup incubators and subsidize the development and market introduction of innovative product areas, such as green building, renewable energy, local cuisine, and cultural and recreational services. In entrepreneurial LED practice, local governments’ urban (re)development investments and market-shaping product innovations and consumer education can be designed to reduce shock exposure or to mitigate pollution and chronic health or poverty stresses.
Cities within the 100RC Network, with support from 100RC Platform Partners, are beginning to integrate resilience into their economic development practices through innovations in the way they evaluate economic development opportunities and design their economic development strategies.

4.1. Assessing Economic Resilience

Resilience issues can be more fully integrated into the analytical frameworks commonly used in LED strategy development by increasing attention given in strategy and program development to industry risks, local asset risks, and to TFP challenges.

Local Assets Risk Analysis
LED strategies have not normally integrated comprehensive shock and stress risk assessments into plans for specific development or economic hub locations, or other assets into their LED incentive programs. Factoring asset exposures under different scenarios (e.g., demographic change, technology change, or factoring climate change) could improve location decisions and reduce future economic losses. LED investment incentives and public regulations generally could be designed to reinforce private sector risk management, including business continuity planning.

Quantitative Assessments of Comparative Advantage
Resilience thinking can be integrated into the standard tools of LED planning, such as location quotient (LQ) or shift-share analysis, thereby adding a resilience dimension into the development of attraction and organic cluster development strategies. To do so, relative risk scores could be developed for different industries based upon the cyclical nature of each industry’s output and growth; competitive risk; policy risk; supply chain risk; the status and resilience of key occupational groups; and technology (disruption) risk. Resulting context-specific industry risk scores reflecting industry volatility and vulnerability could then be integrated as weighting factors into the assessment of relative comparative advantages for further sector growth. If a LED priority is to foster homegrown firms or to strengthen the small business segment, additional weightings could factor the relative distribution of each industry’s output across small, medium, and large firms. If a LED priority is to increase local economic multiplier benefits for specific communities or occupational groups, then regional expenditure coefficients (for those with regional input-output model capabilities) could be further considered alongside shift-share assessments.

Qualitative Assessments of Competitive Advantage
Resilience can be integrated into qualitative assessments such as SWOT (i.e., strengths, weaknesses, opportunities, and threats) analyses by addressing resilience issues that have been prioritized in the city’s resilience strategy or in other risk assessments. Analyses of exposure to external shocks can be factored into the “threats” aspect of the SWOT analysis. Analyses of chronic stresses can be factored into the “weaknesses” aspect of the SWOT analysis.

Regional TFP Analysis
LED professionals and local business associations often have an anecdotal understanding of their city’s unique TFP or systemic productivity advantages or disadvantages. These are often articulated in terms such as “innovation culture,” “good governance,” or “social capital.” Statistical analysis of the distinct contribution of components of TFP to growth and overall productivity can provide statistical clarity about systemic strengths, weaknesses, and opportunities in SWOT analysis.

4.2. Including a Resilience Workstream in LED Strategy and Project Development

Once resilience issues have been considered in the analysis of local and regional comparative and competitive advantages, then a specific workstream can be established to address these issues in the context of LED strategy and specific economic development projects. Figure A outlines a general framework for thinking about the scope of such a workstream.
In conclusion, there are two of the major aspects of economic resilience that can be fully considered in the preparation of LED strategies and LED projects. These are:

- Efforts to reduce, mitigate, manage and/or transfer risks associated with exogenous shocks to the economy (e.g., natural hazards, market cycles and volatility, currency risk exposure, political risk, etc.). Particular attention should be given to those risks associated with priority industries or business communities, considering interdependencies and cascading effects. An economic resilience workstream generates a variety of initiatives including infrastructure improvements and hardening, new insurance mechanisms and instruments, and local capacity building for business continuity planning (e.g., among micro- and small businesses).

- Efforts to develop and/or reinforce aspects of Total Factor Productivity that will increase long-term opportunity, productivity, and comparative advantage. These efforts generally link local economic development initiatives with the city’s Resilience Strategy, and with the strategic work priorities of other departments and institutions. Examples of such efforts are improvements to transportation access and efficiency, to health outcomes, to interinstitutional collaboration, to policy transparency and stability, or to better integration of formal and informal sector economic activities.