

## A Green Paradigm

By Kaizer Rangwala, CEcD, AICP

### SUSTAINABLE ECONOMIC DEVELOPMENT PRACTICES

It is a great time to be an economic developer. Over two-thirds of the buildings that we will need to house our population in 2050 have not been built. **Much of what we have built in the last five decades will have to be replaced** – the buildings are either poor quality or the pattern of development is not sustainable. The next 50 years will see a huge surge in new development as we house and employ the next 100 million people. The challenge is that we cannot continue in our old ways. We need to curb our energy consumption and emissions, and we must grow smartly. Inherent in this challenge is the opportunity to innovate. **This article explores how a green economy can produce new jobs, sustain a high quality of life, and grow our small business base.**

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— Designated for Innovative Leaders in the Economic Development Community —

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is specifically designed to serve the Economic Development professional weather the challenges of globalization that have been threatening our communities in recent years.

#### AIMS OF THE EDRP

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*The Power of  
Knowledge and Leadership*

# a green paradigm

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**t**he perceived trade-off between the environment and the economy is an outdated belief that is no longer sustainable. The economy and the natural world are inextricably linked. The environment provides the raw materials, the natural capital without which the economy cannot prosper.

While our economy operates in a linear fashion, transforming energy and matter into products and services, nature operates in a cyclic manner. McDonough and Braungart in their book *Cradle to Cradle* call for a complete redesign of the product or processes. They suggest that buildings, like trees, produce more energy than they consume; factories produce effluents that are drinking water; and products be designed such that at the end of their life-cycle they decompose and become food for plants and animals rather than ending up in a landfill, or alternatively they become high-quality raw materials for new products. Technology has evolved to a point where corporations can shrink their carbon footprints, while still improving their bottom lines.

Leaders across the globe are gearing up to negotiate a new treaty when the Kyoto Protocol expires in 2012. Amid rising public outcry, it is inevitable that the US government will have to make adjustments to business as usual, which could include taxing or setting strict caps on greenhouse gas emissions. The public awareness of rising energy costs, preference for green products and services, and stricter climate controls is the perfect storm that could severely affect the bottom line of businesses, if they do not act now.

The green and sustainable focus is increasingly becoming evident in a number of core economic development initiatives. This article describes eco-



Photo credit: Sustainable South Bronx.

Sustainable South Bronx's (SSBx) Smart Roof Project. Dr. Majora Carter, a life-long resident of South Bronx, founded SSBx to advance the environmental and economic rebirth of the South Bronx. A green roof reduces heating and cooling costs, provides amenity space for building users, reduces stormwater run off, and filters pollutants and CO<sub>2</sub> out of the air.

nomic development trends, and green initiatives and opportunities available in core economic development areas to innovate, prosper, and at the same time do good for our planet.

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## SMART GROWTH

Compared to suburban greenfield sites, developing infill brownfield property is complicated and costly. We must level the playing field by implementing policies that make infill properties desirable to investors. Many cities and states are following Maryland's example. In 1997, the state adopted a Smart Growth Areas Act that coordinates economic development with planning. The Act specifies that Maryland will only spend infrastructure

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## SUSTAINABLE ECONOMIC DEVELOPMENT PRACTICES

*It is a great time to be an economic developer. Over two-thirds of the buildings that we will need to house our population in 2050 have not been built. Much of what we have built in the last five decades will have to be replaced – the buildings are either poor quality or the pattern of development is not sustainable. The next 50 years will see a huge surge in new development as we house and employ the next 100 million people. The challenge is that we cannot continue in our old ways. We need to curb our energy consumption and emissions, and we must grow smartly. Inherent in this challenge is the opportunity to innovate. This article explores how a green economy can produce new jobs, sustain a high quality of life, and grow our small business base.*

and economic development dollars in priority areas that are already served by infrastructure or are planning to build infrastructure – this policy has allowed Maryland to dramatically reinvest in repair, maintenance, and upgrade of existing infrastructure in its urban core.

The region is the fundamental economic unit of the world. For cities to prosper, the region must adopt smart growth policies and actions that favor infill growth over sprawl. Competitive sales wars between cities hurt the region. Businesses moving out of a city to a sprawling greenfield site results in declining revenues and services for the city and loss of land for agriculture and open space in the areas receiving the growth.<sup>1</sup> This is a net loss to the region's economy, environment, and quality of life. Reinvesting in the aging and struggling areas builds the revenue base of the city and benefits the urban core and the suburbs.

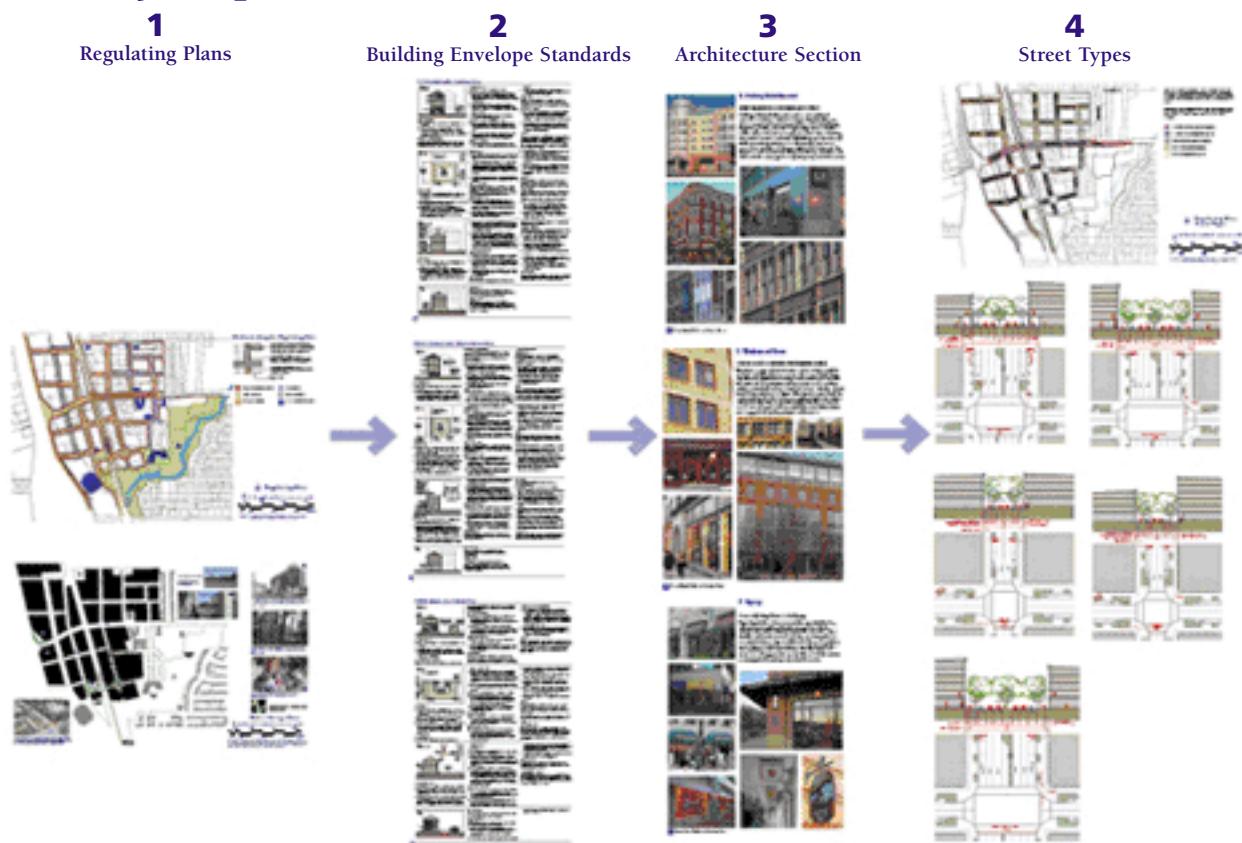
Smart growth and green development decisions make efficient use of taxpayers' investments in infrastructure improvements and services such as police and fire. Ventura, California, is currently implementing a smart growth-based General Plan that focuses on protecting natural resources while promoting high-quality, low-impact urban infill development. Smart and compact

growth insures us against any limits that high energy costs may impose on our ability to drive everywhere.

"In the face of such global threats and opportunities, local communities must fundamentally reshape their approach to economic development away from targeting aggregate growth as an end in itself. Instead, our focus will need to be on fostering a healthy economy that is integrated with our concern for the environment and social equity, the three pillars of sustainability," says Ventura City Manager Rick Cole. "Easier said than done, of course. It is not enough to simply slap a 'green' label on recycled conventional strategies. We need to not only rethink, but redo our approach. In Ventura, for example, we pay less attention to sales tax revenue and more to the retention and creation of high-value, high-wage jobs that generate the wealth that is the underlying source of retail sales. In a time of transition, our need is not for a perfect academic model. Instead, it is time to experiment with fundamentally changed approaches. The communities that successfully do so will be the real models for the 21st century."

One obstacle to smart growth is the current zoning codes. Conventional zoning codes separate the daily needs of shopping, housing, and work into disjointed

## 4 easy steps



Form-Based Code pages from the Farmers Branch Station Area Code, TX: Typically, Form-Based Codes include easy to understand drawings, diagrams and photographs. The key to a Form- Based Code is a regulating plan, which specifies the function and location of streets and their relationship with buildings and open spaces. Building heights, the siting of buildings on a lot, and uses are defined in building envelope standards. Architectural standards regulate the important public elements of the facade. Street sections specify mobility and pedestrian comfort details.

zones accessible only by automobiles. A large number of cities are replacing their conventional zoning codes with form-based codes. Form-based coding is an integrated place-based approach that focuses on the careful design of the public realm: the street, open spaces, and the public face of private buildings. Land uses are not ignored but regulated by broad parameters that better respond to market economics and allow for a mix of uses serving daily needs within easy walking distances. Predictable outcomes and a streamlined process that reduces discretionary review are other business-friendly attributes of this coding method.

Peter Katz, an urban theorist and Form-Based Code Institute<sup>2</sup> president says, "Form-Based Codes are strongly linked to public participation programs and lead to more appropriately scaled projects that are more consistently linked with the needs of emerging economies."

## REAL ESTATE DEVELOPMENT AND REDEVELOPMENT

Buildings consume about 40 percent of the world's energy and materials. Buildings, more than the cars, are responsible for environmental damage. Sustainable buildings offer low operating costs, higher productivity, and better sales. While several case studies support this assertion, many businesses are still unaware that an efficient building which uses fewer resources will cost less, not more.

Careful orientation and siting based on climatic conditions maximize the energy efficiency of buildings. Eco-friendly buildings use renewable sources of energy, have energy efficient appliances, and reduce waste while increasing the use of recyclable building materials. Employing sensitive site design techniques can minimize disruption of existing trees and other local habitat. Use of drought tolerant native landscaping reduces reliance on periodic watering, while enhancing an authentic sense of place.

Over the past 50 years, buildings have been regarded as disposable. In Carrollton, Texas, a vacated Ethan Allen building in a commercial strip center, only a block away from City Hall, sat vacant for years while a new commercial building was built next to it. A new grocery store is built in the newer part of town, only a few blocks north, while the same grocery chain closes an existing store in an older part of town. In the new, green economy, buildings must be built to last, so they can be restored and recycled to reduce their environmental impact.

## HOUSING

To control costs and maximize profits, conventional builders resort to standardization and a "build and flip" mindset. In the carbon-starved future, houses built today will require expensive retrofitting to renewable sources of energy and sustainable materials, in the long run. Energy-efficient features reduce operating costs, thereby increasing the value of the house. Some builders are recognizing that green building helps sell houses to a increasingly conscientious buyer.

## GLOSSARY:

**Eco-tourism:** Responsible travel to environmentally sensitive places that minimizes impact, increases awareness, and improves the economic prosperity of local people.

**Form-based Code:** Form-based code is a method of regulating development to achieve a specific urban form. Form-based codes create a predictable public realm by controlling physical form primarily, with a lesser focus on land use.

**Green Development:** Green development emphasizes environment over economic and cultural considerations.

**Industrial Ecology:** Industrial ecology is an interdisciplinary framework for designing and operating closed loop business systems in which resource and capital investments move through the system to become waste and the waste then becomes inputs for new processes.

**Smart Growth:** Compact pattern of development that provides people with housing, employment, and recreation choices by focusing infill growth in built out areas while conserving the natural resources.

**Sustainable Development:** Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable developments preserve and reduce consumption of resources, and recycle used resources.

Mortgage lenders such as Citibank, Bank of America, and JP Morgan Chase offer up to \$1,000 off closing costs for mortgages on new homes that meet the government's Energy Star Program<sup>3</sup> requirements.

California energy regulators have adopted a target that all new homes built after 2020 produce as much energy as they consume. This will be done by pursuing a combination of strategies such as: not purchasing energy from the electric or gas grid; use of energy-efficient design; and generating on-site energy thru solar cells or wind turbines. The state will offer financial incentives to promote this initiative.

## BUSINESS ATTRACTION

Businesses are looking beyond traditional financial incentives to make more meaningful and socially conscious location decisions. Their decisions are motivated by the knowledge workers who are looking for more than a paycheck and want to be part of a company and place that share their values. This segment of the workforce constantly rejects the sterile suburban office complexes for a jolt of city life and urbanity.

The 2007 Cone Consumer Environmental National Survey reported that 93 percent of Americans believe companies have a responsibility to help preserve the environment, and 85 percent indicated they would consider switching to another company's products or services because of a company's environmentally irresponsible practices. These numbers are too significant for any size business to ignore and present a unique growth and marketing opportunity.



*Green Exchange in Chicago: The country's largest sustainable business community is a landmark renovation of a 272,000-square-foot warehouse aspiring to LEED Platinum certification. Green Exchange aims to bring the eco-business industry from niche to mainstream by offering consumers a collection of more than 100 businesses purveying green products and services all under one green roof.*

Green Marketing is the promotion or advertising of products and services with minimal negative impact on the environment.<sup>4</sup> Green marketing allows businesses to use commitment to the environment as a competitive edge in attracting today's well-informed and environmentally responsive customer. Just as companies market their products as fat-free or all-natural, businesses of the future will try to outgreen each other by marketing the size of their carbon footprints. Cadbury and Timberland are interested in labeling their products with carbon emission data. Carbon labeling on Cadbury packaging will list how much carbon is released in the production and delivery of a milk chocolate bar, from the dairy farm to the distribution facility. Wal-Mart Inc is asking its suppliers to cut back on packaging and fossil fuel consumption, and disclose their energy and carbon-emission data.

Edward Jepson, Jr and Anna Haines in *Under Sustainability* published in the Summer 2003 issue of this Journal advocate new sustainable marketing tools. The existing economic development paradigm encourages export base industries that sell outside the community. The alternate sustainable paradigm could encourage businesses that achieve profitability through local sales in addition to export sales.<sup>5</sup>

## **TOURISM**

The primary purpose of tourism is to develop and promote an area's assets to attract new income into the economy and increase land values. Communities and resorts that value the environment can identify and promote themselves to the growing number of "eco-tourists"

who yearn to experience nature. "Recent research has shown that nature-focused tourism is the most important source of self-generated revenue for protected area systems in countries like Ecuador, Peru and Bolivia," notes Andy Drumm, senior ecotourism specialist at the Nature Conservancy. In America, "the rediscovery of the Ivory-billed woodpecker in Arkansas has led to an economic boost for local communities in the area as hopeful birdwatchers have flocked in," says Drumm.

## **ENTREPRENEURIAL AND SMALL BUSINESS DEVELOPMENT**

For small businesses dealing in eco-friendly products, there has never been a better time. Being green provides a competitive edge over bigger non-green corporations – the tax breaks and lower utility bills are a bonus.

Consumers of green products prefer and trust small and local businesses over large corporations. The popular Union Square Greenmarket and other farmers' markets carry food produced only within a limited distance from the city, reducing the carbon footprint while promoting an indigenous product. Shopping local products eliminates the energy expended in transporting the products and provides the consumer with an appreciation of where the resources come from and the environmental costs of production.

The preference for green carries over into the commercial real estate market as well. In Chicago, a four-story landmark manufacturing building was converted in accordance with Leadership in Energy and Environmental Design (LEED) standards established by the U.S. Green Building Council into a green business incubator that offers car share and bike programs to tenants. "More and more tenants are looking for green

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*Sky Garden: Green Exchange will feature an 8,000 square foot sky garden as a central gathering place for tenants and visitors alike. The garden is on the second floor of the building and can be accessed directly from the organic café and glass enclosed event space. The various elements used in the creation of the garden will be culled from the most sustainable materials available including recycled paving stones, LED lighting and reclaimed wood decking. Even the water used to irrigate the garden will be recycled as it will come from a 41,000-gallon cistern underneath the garage that is designed to capture rainwater.*



In a commitment to fulfilling the 10 visionary goals laid out in its General Plan, the City of Ventura approached its most recent budgeting cycle from the perspective of funding outcomes - not line items - to best fund and achieve goals for a community that is Natural, Prosperous, Well Planned & Designed, Accessible, Sustainable, Active, Healthy & Safe, Educated, Creative, Involved, and for a government that is Accountable.

spaces not only because it's consistent with their values but also because they recognize the economic benefits of being in a green building," says Phil Baugh, director of leasing for Green Exchange. "Evidence has shown that housing a business in a green building can lead to dramatic increases in employee productivity and in retail sales per square foot, and that drops right to the bottom line."

A green business incubator allows like-minded tenants and customers to share and benefit from being located under one roof. "Simply put, building green means you are building a better property for both the tenant and the landlord," says Baugh. "Our rental rates are competitive, but because Green Exchange offers a variety of green benefits, the demand for space is greater. This yields higher occupancy rates at a faster than normal pace and, in turn, creates a positive impact on the developer's return on investment."

Increasing sources of public funds are now available for small businesses involved in environmentally friendly industries and practices. The Department of Agriculture offers a Small Business Innovation Research Program (SBIR) that awards funds up to \$350,000<sup>6</sup> and the Environmental Protection Agency gives grants to green initiatives.<sup>7</sup>

## WORKFORCE DEVELOPMENT

*Green for All*, a national organization dedicated to building an inclusive green economy, advocates for a national commitment to training, employment, and entrepreneurial opportunities in the emerging green economy for people from disadvantaged communities. Van Jones, founder of *Green for All* says, "for too long, low-income communities and people of color have been hit first and worst by toxic pollution and ecological dis-

asters like Katrina. Meanwhile, they've benefited last and least from new economic growth. An investment in green-collar jobs would help reverse this cycle – by focusing some clean energy job training on those who most need work. Today, our society can create jobs that pay well and honor the environment – thereby fighting poverty and pollution at the same time."

Green-collar jobs involve manual work in fields that help the environment, like installing solar panels, weatherizing buildings, making bio-fuels, and maintaining wind farms. In Oakland, CA, the nation's first city-funded Green Jobs Corps is poised to train and employ at-risk youth and people with barriers to employment for a variety of green-collar jobs that heal the environment.

If residents do not have the skill sets to apply for jobs created by new or growing businesses located within their community, they are forced to travel elsewhere and

the businesses must import workers from outside – adding trips to the transportation systems. Welfare recipients and those unable to drive, who represent half the population and include the very poor, those under 18 years of age, and older people, cannot get to work and support services due to gaps in the transportation systems. Economic development practitioners must take an active interest in enhancing mobility options of their workforce by working with employers and transportation providers to ensure effective and timely access. Strong linkages must be established between economic development activities and education and training systems so residents can find employment closer to home, preferably within the same community.

Businesses that locate within a community after receiving incentives must be asked to get involved in developing the workforce that will be necessary for the business as it grows and matures within the community. Farmers Branch, a suburb of Dallas, developed a sales tax exemption program that allows a company to utilize the city's tax-exempt status to purchase equipment. The city holds a possessory interest in the property until the company chooses to replace the equipment.

"The development of this program was a key factor in attracting the relocation of Chase Manhattan from New York City to Farmers Branch," says Norma Nichols, economic development director. The program has increased the local tax base with a large capital project, provided necessary technology to the local school district and community college, and has created 1600 value added jobs. "Within the last three years, numerous computers have been put into use by the school district and local college that makes them available to students who may not have the equipment at home," notes Nichols. The city offers the equipment to minority businesses as well.

## GLOBAL MARKETS

India and China have opened up their economies and are clocking in double-digit GDP growths. Their demands on energy are increasing. This is their time to grow and they are not likely to cap their growth based on CO2 emissions. To compete in the new world economy, America can use its current wealth, position, and influence to invent clean and green alternatives that will fuel the next green economic revolution and help America reclaim its moral ground and economic dominance.

## CONCLUSION

We must retool to a new and better way. While this is a daunting task, it is also an unprecedented opportunity to innovate and create lasting value. Businesses that act now could reduce risk and find competitive advantage, improving profits while creating a social good.

Manufacturing industries have polluted the earth for a long time. Due to global outsourcing, manufacturing jobs have consistently declined in the last decade. The manufacturing sector can be revived by focusing on closed loop businesses (Industrial Ecology) that offer products and services that heal the earth.

John Ballbach, managing partner of the Cleantech Group says, "The promise of Cleantech is not only one of the greatest wealth generation opportunities of the 21st century, but the most powerful engine to drive ecological progress. Over the last 5 years, venture capital investments in the Cleantech category have increased 253%."

Preserving the environment needs to be at the core of any business strategy. Green initiatives allow businesses to tap into customer loyalty while reducing cost and liability. Dan Esty and Andrew Winston, authors of *Green to Gold*, remind us that companies that have a good product at a good price, and then offer environmental benefits, like Toyota's hybrid gas-electric Prius, increase their market share and cash flow. They advocate a market-based rather than a government led approach. The

private sector's innovation and technology based solutions together with public sector taxing and incentive policies can result in unprecedented job creation which will address some of our most pressing environmental challenges. Every business needs to find its own "Prius" and get it to the market soon.

The promise of a green economy is a convenient remedy to the inconvenient truth of \$4 a gallon gas and looming global warming impacts. The 21st century economy will be structured around the "green revolution". Are we ready? 

## ENDNOTES

- 1 The 2008 IEDC report on *Forty Years of Urban Economic Development: A Retrospective*, points out that economic development activity: has not been effective in land use policy, creating sprawl; has not focused on housing, which is surfacing as a challenge in many cities; and has not sufficiently engaged in urban issues and urban neighborhoods.
- 2 The Form-Based Codes Institute is a group of multi-disciplinary practitioners involved in setting standards for the practice of form-based coding; education and outreach; and creating a forum for discussion about and advancement of form-based codes. More information posted at [www.formbasedcodes.org](http://www.formbasedcodes.org)
- 3 Energy Star is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy focused on saving money and protecting the environment through energy efficient products and practices. More information posted at [www.energystar.gov](http://www.energystar.gov)
- 4 Polonsky, Michael, *An Introduction to Green Marketing*, Electronic Green Journal, Volume 1, Issue #2, November 1994.
- 5 Jepson, Edward, Jr., AICP, and Haines, Anna, *Under Sustainability*, Economic Development Journal, Summer 2003.
- 6 USDA SBIR awards funds for research and development projects that allow small businesses to explore their technological potential and provide an incentive to profit from the commercialization of innovative ideas. More information posted at [www.csrees.usda.gov/fo/sbir.cfm](http://www.csrees.usda.gov/fo/sbir.cfm).
- 7 The Environmental Protection Agency (EPA) participates in the SBIR Program established by the Small Business Innovation Development Act of 1982. More information posted at [www.epa.gov/ncer/sbir/](http://www.epa.gov/ncer/sbir/).

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