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By Natalie Betts

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sustainable economic

DEVELOPMENT AS A CLUSTER STRATEGY

By Natalie Betts

More than a year ago, this publication declared sustainability to be the "new normal" for business organizations and economic developers alike.[1] The shift toward triple-bottom-line decision-making in the business community and the increasing focus on sustainability concerns among the public and non-profit sectors have clearly changed the context in which economic developers work today.

However, when much of the discussion around sustainability focuses on questions of land use, transportation options, pollution prevention, or resource conservation, it can be challenging to see where the economic development professional fits in. Economic developers are often envisioned as taking a supporting or responsive role: they can help the environmental community discuss the jobs impact of a new solar program, laud the efforts of local B-corporations[2] and other socially conscious businesses, or tout the region's sustainably managed natural resources as they market to site selectors.

Scrap metal recycling supports more than 450,000 jobs in the U.S. according to the Institute of Scrap Metal Recycling Industries.

While all these efforts are critical roles for sustainable economic development, this article will discuss a more active sustainable economic development strategy which plays to the profession's core strengths – deploying cluster development strategies for industries that support a sustainable community. This concept is hardly new. Federally-funded cluster initiatives in New York, San Diego, and Maine have centered around renewable energy[3] and we focus on it here to demonstrate that sustainable economic development is fully within the wheelhouse of the traditional economic development professional. Although useful for communicating with a sustainable industry prospect or local business, an in-depth knowledge of sustainability principles is not a prerequisite for enacting a productive sustainable economic development strategy that takes a cluster development approach. Instead, this approach can be executed using the traditional economic development professional's existing playbook.

AUSTIN, TEXAS, CASE STUDY

Austin, Texas, has focused on the economic development opportunities in the recycling and reuse industry. In 2011, the City of Austin adopted a master plan outlining how the city would reach its zero -waste goal of keeping 90 percent of discarded materials out of the landfill by 2040.[4,5] The master plan adoption was the culmination of years of work on the question of reducing waste, beginning with the City of Austin's signature to the United Nations Urban Environmental Accords in 2005. Austin's zero-waste approach regards discarded materials as resources to be recovered and put to their highest and best

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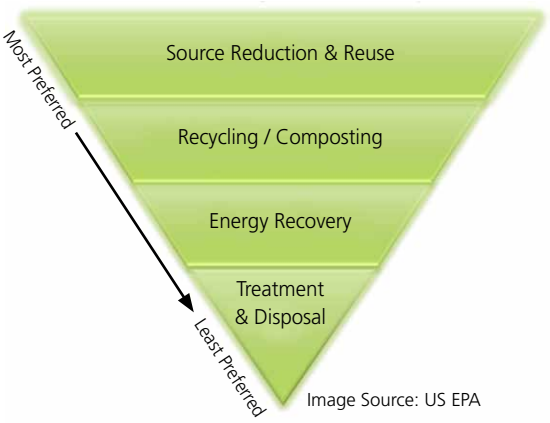
FIGURE 1 Waste Management Hierarchy



use, according to the Environmental Protection Agency's waste hierarchy (see Fig. 1).

One of four keystones of the plan was economic development through increased collection and processing of recovered materials (see Fig. 2). At the time of the plan's publication, there was already significant existing evidence of the economic development potential of zero-waste efforts. In 1997, the Institute for Local Self-Reliance had found that for every 10,000 tons of solid waste, one job will be created if it goes to the landfill, compared with 25 jobs if sent to a recycling-based manufacturer or up to 295 jobs if sent to a reuse operation.[6] Earlier in 2011, a Tellus Institute report found that recycling 75 percent of the nation's waste could create nearly 1.5 million jobs by 2030.[7]

Recognizing both that an increased supply of recycled materials was an asset for supporting a recycling manufacturing industry and that strong local end markets for recycled commodities would strengthen the overall recycling system, Austin dedicated a full-time staff person and resources to create a Recycling Economic Development Program. The program is led by the Recycling Economic Development Liaison, a position that reports jointly to both the Economic Development Department and to the Austin Resource Recovery (the City department responsible for trash and recycling collection and for making progress toward Austin's zero-waste goal). Major components of the program were identified during the creation of the Austin Resource Recovery master plan in 2010 and 2011, and were further developed after the hiring of the Liaison in 2013. Although early in its implementation, the Recycling Economic Development Program provides a useful template for other communities looking to develop a cluster strategy for sustainable economic development.

FIGURE 2: AUSTIN'S ZERO-WASTE MASTER PLAN KEYSTONES

1. Materials management focus where discarded wastes are collected as resources
2. Enhanced recycling service for all properties
3. Expansion of organics diversion through food waste collection and composting
4. Economic development through increased collection and processing of recovered materials

Using examples from this program, this article will make it clear that sustainable economic development can be implemented using tools and techniques familiar to economic development organizations (EDOs). Furthermore, although initially motivated by environmental goals, examples from the Recycling Economic Development Program demonstrate that sustainable economic development programs can aid economic developers in meeting their own central goals: jobs, investment, and a resilient economy.

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CLUSTER IDENTIFICATION

The first step to utilizing a cluster approach for sustainable economic development is to identify the green industries[8] that will flourish in a given community. If a community regularly undergoes a process to identify target markets, a particular emphasis should be placed in the next scheduled analysis on identifying sustainable industries that match the community's assets. Depending on the city's talent base, location, infrastructure, climate, or other market factors, the community could focus on renewable energy, efficiency technologies, organic agriculture, eco-tourism, advanced transportation, or another green industry sector or sub-sector. An EDO could also choose to direct attention to a sustainable movement within an existing cluster, such as developing a cluster strategy around green building materials if the region already has a strong base of traditional building materials firms.

Alternatively, if a community is taking major policy action in an area of sustainability that has the potential to seed a new cluster, the economic development community could leverage that policy action to incorporate that cluster into its work. Austin's focus on a recycling cluster is an example of the latter option. The Austin City Council's zero-waste policy efforts will soon require all properties to offer recycling, require all food enterprises offer diversion of organic material, place recycling requirements on construction and demolition projects, and enact rules for recycling at special events. In addition, the city works under a "Pay-As-You-Throw" model where households pay more for throwing away more trash instead of using the recycling bin or composting at home.

These actions, alongside other policy and programmatic support for recycling, laid the groundwork for expanding the local recycling industry. In this approach, an EDO can look to state and local policy efforts for requirements that could spur growth within a sector, such as renewable energy tax credits or procurement policies that favor sustainable or locally-made products.


From left to right: 1) Phil Gosh of Organics by Gosh pitches his idea to expand his local composting operation, 2) Attendees, investors, and companies mingle during the Recycling Innovations Expo, 3) Blythe Christopher de Orive of reuse non-profit Re-Sourcery exhibits at the Recycling Innovations Expo.

UNDERSTANDING GAPS IN THE SUPPLY CHAIN

Next, an analysis of the existing supply chain for that cluster will illuminate gaps where economic developers can focus their attention. Closing supply chain gaps is a particularly important next step for sustainable cluster development. Doing so meets a series of sustainability aims: it keeps more dollars circulating in the local economy, lowers the carbon footprint of that industry by reducing the transportation required to bring the product to market, and reduces costs, thereby improving the prospects for the other sustainable businesses in that supply chain network.

In the case of Austin's recycling sector, a key supply chain gap that the Recycling Economic Development Program has identified is a recycled glass processing facility. The Austin market produces an above-average volume of recycled glass, and is home to several beverage manufacturers who are end-users of glass bottles.[9] However, the Central Texas region has to ship its recycled glass outside the region for processing and remanufacturing into new bottles. Localizing the processing and remanufacturing steps could have huge environmental and cost benefits, especially given the weight of glass. Another example from Austin can be found in the food sector. In an analysis of that sector, TXP, Inc. discovered a supply chain gap, no slaughterhouse in the Austin area served smaller-scale producers.[10]

Once identified, supply chain gaps can be closed in a variety of ways. In some cases, economic developers can simply play the role of information provider. By doing the research legwork and raising awareness about the need for a particular service or product in the area, the business community may come in to fill the gap independently. In other cases, a more proactive strategy will be required, and those strategies are addressed below.

SMALL BUSINESS AND ENTREPRENEURIAL DEVELOPMENT

Sustainable economic development can take place when existing small business and entrepreneurship resources are tailored to the needs of a specific green industry. For example, a region focusing on eco-tourism might partner with the local Small Business Administration to include information about how to reach visitors, especially values-based consumers, in their business marketing classes. Communities like Austin where the technology entrepreneur ecosystem is robust and well-developed can leverage this substantial resource for the benefit of sustainable clusters. In May 2014, the City of Austin partnered with the Texas Entrepreneur Network to provide a Recycling Innovations Investment Forum, which allowed 10 companies and non-profits to pitch their recycling or reuse business expansion and start-up ideas to more than 20 investors. At least three companies that pitched are likely to receive funding to grow their business in Austin as a result of the investor connections made at the event.

Another small business support strategy in Austin is the promotion of locally-owned businesses to encourage residents to choose homegrown enterprises over national chains when shopping. The website *LocallyAustin.org* provides a directory of these businesses so that consumers can find locally-owned options. To support the Recycling Economic Development Program goals, a "Shop Zero Waste" category was added to promote those businesses that sell recycled or reused goods, or repair or rent items to keep waste out of landfills.

SOCIAL ENTREPRENEURSHIP STRATEGIES

You'll note that in the example above of the funding forum, non-profits pitched investment ideas alongside for-profit firms. While economic developers may typically look to non-profits for services that support their work such as workforce development or cultural arts development, the non-profit sector has significant potential as the target audience for sustainable economic

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A centerpiece of Austin's Recycling Economic Development Program is the attraction of re-manufacturing businesses, firms that utilize value-added processing and manufacturing of would-be waste to create new products.

development strategies. Economic developers can work with non-profit organizations to introduce social entrepreneurship concepts and business-oriented solutions that create jobs and revenue to support the non-profits' missions.

St. Vincent de Paul Society of Lane County in Eugene, Oregon, is a prime example of social entrepreneurship that furthers sustainable economic development in action. The non-profit organization makes gift products from recycled window glass, fire starters from recycled candle wax, pet beds from recycled mattresses, wiping rags from old T-shirts, and more. This model produces what the organization calls a "quadruple bottom line:" generating revenue, reusing and recycling, providing jobs and job training, and providing quality goods and services.[11]

The more traditional social business element of St. Vincent de Paul, the retail thrift store, is by now such a commonplace non-profit model that it is easily overlooked. However, it is a tried-and-true example of sustainable economic development – generating revenue by conserving resources while creating local jobs that can be expanded upon. The Austin Public Library used the same basic concept when it created Recycled Reads, a used bookstore that has diverted 47 tons from the landfill since May 2011 while raising funds for the library (itself a predecessor to today's sharing economy businesses). Because sustainable economic development is both mission-driven and profit-driven, non-profit partnerships to create social business enterprises and leverage a community's passion for sustainable causes offer an excellent opportunity to further both goals simultaneously.

In addition to non-profits that are explicitly mission-driven, for-profit entrepreneurs and small business owners are also frequently motivated by a desire to create a positive social impact. Sustainable economic development can also work in reverse of the approach described above: rather than bringing a business model to a mission-driven organization, the community's sustainability goals can be brought to local businesses. For example, an economic development organization could host a localized version of the XPRIZE competitions. The event would encourage business-oriented solutions to sustainability challenges. With seed funding for implementing the best ideas as the prize, this strategy can attract entrepreneurs from other sectors to the cluster and encourage the creation of new enterprises.

Recovered plastic resins can be re-manufactured into fiber for carpet and textiles, landscape and garden products, or polymer lumber.

Entrance sign at the future home of the Austin [re]Manufacturing Hub

REAL ESTATE DEVELOPMENT

A centerpiece of Austin's Recycling Economic Development Program is the attraction of re-manufacturing businesses, firms that utilize value-added processing and manufacturing of would-be waste to create new products. To that end, the program is redeveloping over 100 acres of City-owned land once destined to become landfill cells into an eco-industrial park called the Austin [re] Manufacturing Hub. Working with local partners such as chambers of commerce, the City is proactively marketing the Hub and the community at large to the recycling and reuse industry.

The Hub will create up to 1,250 living wage jobs, most of which will be available to individuals without advanced degrees or who face other employment barriers. These jobs will fill an important void in Austin's economy, which despite its many lauded successes, suffers from severe income inequality, ranking No. 10 out of all large U.S. metropolitan areas in a recent study.[12]

The Austin [re]Manufacturing Hub will be tailored to meet the specific needs of the recycling manufacturing businesses and will be marketed directly to that industry. Although the exact business make-up of this eco-industrial park has not been determined, there is significant potential for resource synergies between businesses locating in the property. One business could purchase from its neighboring business, and recycling haulers could bring multiple material types to the same property for delivery to multiple businesses in the Hub. For green

Austin Materials Marketplace information sessions and program working meetings help to build the trust and long-term relationships that make business-to-business reuse connections flourish.

industries, which are often predicated on principles of efficiency and conservation, these synergies can be especially compelling.

BUSINESS RETENTION AND EXPANSION

Like most communities beginning focused work on a new cluster, Austin already has a base of recycling and recycling-related businesses calling the city home. The expansion of recycling access mandated by policy will aid these businesses, whose input was sought during the policymaking process.

An initiative to encourage business-to-business reuse, the *Austin Materials Marketplace*, is an online facilitated database that allows unwanted materials to find their highest and best end use, sometimes through a direct reuse opportunity or by stopping at a recycler for processing. This initiative offers existing businesses a chance to identify new buyers and suppliers in their backyard. Existing recycling and reuse businesses are also target customers for the *Recycling Innovations Investment Forum*, the *Shop Zero Waste* directory, and the *Austin [re]Manufacturing Hub*. The Recycling Economic Development Program also offers one-on-one customized assistance to these businesses.

One important role economic developers can play is to encourage the sustainability community to keep business-oriented solutions at the forefront when trying to meet socially-conscious end goals. While grants, charitable donations, and government funding all fulfill important functions in supporting new ideas and social missions, the most sustainable solution to any problem is one with a successful business model and a product or service that provides value to its users.

CONCLUSION

As the scarcity of our natural resources and the fragility of our environment becomes increasingly evident and present in the minds of business and community leaders, economic development must respond by incorporating sustainability into the profession. Communities that respond quickly to this shift will be better prepared for a global economy that defaults to a triple bottom line approach. However, economic developers do not need to become geologists or transportation planners to embrace sustainability. Economic developers know how to identify and support their region's or community's cluster industries, a skill set that is crucial to the sustainability movement.

One important role economic developers can play is to encourage the sustainability community to keep business-oriented solutions at the forefront when trying to meet socially-conscious end goals. While grants, charitable donations, and government funding all fulfill important functions in supporting new ideas and social missions, the most sustainable solution to any problem is one with a successful business model and a product or service that provides value to its users. Such a solution is far more resilient to changing political tides, shifting budget priorities, or economic downturn drying up charitable donation sources. Another key role is in reaching out to the environmental community to raise awareness about existing economic development resources and adjusting or customizing those resources as needed to meet the needs of sustainable businesses and green industry.

By tailoring a strategic approach to a cluster within the sustainability umbrella, economic developers can generate jobs and investment and support the next wave of innovative firms that will pay economic, ecological, and equitable dividends for a community today and in the next generation.

Real estate development, small business support, business retention and expansion, and entrepreneurial development are eminently familiar to economic development organizations. Sustainable economic development does not require brand new techniques but can be achieved by focusing our well-honed tools on the clusters of business enterprises that will enable our transition to a cleaner, greener, more resilient economic age. Forward-thinking economic development organizations that embrace sustainability can put their communities ahead of this curve. They can become magnets for the best and most innovative sustainable industry leaders.

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ENDNOTES

[1] Schjedahl, Don. "The Coming Era of Sustainability: Directives for Competitive Communities." *The IEDC Economic Development Journal* Volume 12, Issue 4. Fall 2013.

[2] A B Corporation, or Benefit Corporation, is a type of for-profit entity certified by the nonprofit B Lab to meet rigorous standards of social and environmental performance, accountability, and transparency. See: www.bcorporation.net.

[3] U.S. Small Business Administration. "SBA Supports 56 Federally Funded Cluster Initiatives." See: https://www.sba.gov/about-sba/sba_initiatives/clusters_initiative.

[4] The Zero Waste International Alliance recognizes working toward or achieving 90 percent landfill diversion as the benchmark for recognition for Zero Waste Communities and Zero Waste Businesses. See: http://zwia.org/.

[5] The Austin Resource Recovery Master Plan can be viewed online at http://www.austintexas.gov/department/master-plan.

[6] Institute for Local Self-Reliance. "Recycling Means Business." Available at: http://ilsr.org/recycling-means-business/.

[7] Tellus Institute with Sound Resource Management. "More Jobs, Less Pollution: Growing the Recycling Economy in the U.S." February 2011. Available at: www.tellus.org/publications/files/More_Jobs_Less_Pollution.pdf.

[8] "Green industry" will be used throughout this article to refer to any industry whose core business function contributes to a more sustainable and regenerative economy where, to paraphrase the UN Brundtland Commission, the needs of the current generation are met without compromising the needs of future generations. The term is not intended to have exclusively environmental connotations but to embrace all three "Es" of sustainability: economy, ecology, and equity.

[9] Approximately 27 percent of Austin's residential single stream recycling by volume is glass, which is significantly higher than average according to local recycling facilities.

[10] TXP, Inc. "The Economic Impact of Austin's Food Sector." Spring 2013. Available from: http://www.austintexas.gov/sites/default/files/files/Redevelopment/Economic_Development/TXP_Austin_Food_Sector_Report_03282013_FINALv1.pdf.

[11] St. Vincent de Paul Society of Lane County, "Recycling and Manufacturing." Available at: http://www.svdp.us/what-we-do/recycling-and-manufacturing/.

[12] Grattan, Robert. "Austin among most income-segregated metros in nation," *Austin Business Journal*. Mar 19, 2014. Available at: http://www.bizjournals.com/austin/blog/at-the-watercooler/2014/03/austin-among-most-income-segregated-metros.html?page=all.

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