Urbanization in a Growing World Series

Climate Change is in our Business: *Urbanization and Economic Growth in the 21st Century*

November 15, 2012

**Moderator:** Constantin Abarbieritei
Abt Associates
Division Vice President, International Economic Growth
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Energy Efficiency Program Design, Marketing & Communications

• Why You Should Care:
  – Rising energy demands threaten energy security, economic growth, and the environment
  – Energy efficiency provides a low-cost, diverse, stable, and environmentally sound resource base
  – Consumers often don’t embrace the need to reduce energy use and don’t know how to do it

• What Are Your Next Steps:
  – Tailored energy saving programs that benefit the economy, reduce supply uncertainties, and mitigate climate change
  – Marketing that touches consumers, helps transform the marketplace for energy efficient products

• Cadmus Can Help:
  The Cadmus Group, Inc.:
  – Facilitates collaborative decision-making among multiple agencies and stakeholders
  – Factors in cost-effectiveness, economic stimulus, and reduced greenhouse gas emissions
  – Conducts market research to inform program design and consumer marketing
  – Orchestrates communications campaigns to produce sustained energy efficient choices
  – Evaluates the effectiveness of program and marketing initiatives

• Contact:
  – Linda Dethman, Linda.Dethman@cadmusgroup.com | (503) 467-7146
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- Managing water and wastewater services for public authorities and industry
- Designing technological solutions and building and managing the facilities and systems required to deliver these services
- Construction, rehabilitation and maintenance of networks and associated infrastructure

2009 Revenue $18.1 billion
95,000 employees

- Drinking water services to 95 million people
- Wastewater services to 68 million people
- Facilities managed +5,260 water +3,220
Socially Relevant, Practice-Oriented Graduate Study

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- MS & PhD in Environmental Studies
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- Resource Management and Conservation
- Environmental Education or Science Teaching
- Advocacy, Conservation Biology, and more

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Constantin Abarbieritei, Abt Associates’ International Economic Growth Division Vice President, oversees a portfolio of projects focused on the links between food security, climate change and private sector development. He has extensive experience working with companies and governments in Southeast Asia, the Middle East, Eastern Europe, and Central Asia to help design and implement economic growth programs. Prior to Abt he has managed international development divisions at IBM and PwC.
Session Agenda

• Introduction to the Panel: Constantin Abarbieritei
• Panel Presentations
  ➢ **Djordijja Petkoski**, UPenn Zicklin Center: sustainable development and competitiveness; incentives for large corporations
  ➢ **Marc Weiss**, Global Urban Development: metropolitan economic strategy and sustainable economic development
  ➢ **Michele Laird**, Abt Associates: incentives and the business case for small businesses and municipal policy support
  ➢ **Mathew Forstater**, UMKC Center for Full Employment and Price Stability: green jobs and the transitioning landscape of competitiveness
• Panel Discussion Questions
• Audience Questions: *Send your questions through the chat box*
• Summary Points
• Thank you!
  • *Please fill out the audience survey*
Dr. Djordjija Petkoski, Senior Fellow at the Zicklin Center, Wharton Business School, following a 20 year World Bank career, brings global expertise in competitiveness and sustainable development at the national and corporate levels.

Michele Laird, Principal Associate with Abt Associates, directs the USAID-funded Mexico Competitiveness Program as well as other economic growth and climate change programs in Latin America and Africa, promoting private sector innovation, advancement of climate change mitigation and adaptation actions, access to finance, and improved governance at the policy and institutional levels.

Mathew Forstater, Full Professor of Economics, University of Missouri—Kansas City, and Founding Director, Center for Full Employment and Price Stability, and a Research Associate at the Levy Economics Institute of Bard College.

Marc A. Weiss, Chairman and CEO of Global Urban Development (GUD), an international policy organization and professional network of 600 leaders and experts in 60 countries. GUD works worldwide on Metropolitan Economic Strategy and Sustainable Economic Development.
Climate Change is in our Business: Urbanization and Economic Growth in the 21st Century

Dr. Djordjija Petkoski
Wharton School
http://www.zicklincenter.org/contacts.html
djordjjapetkoski@gmail.com

Washington DC, November 15, 2012
Presentation Outline

• Global Challenges: New Normal
• Macro Response
• Corporate Response
• Examples
Today across the world:

- 1.3 billion people live on less than one dollar a day;
- 3 billion live on under two dollars a day;
- 1.3 billion have no access to clean water;
- 3 billion have no access to sanitation;
- 2 billion have no access to electricity.

Challenges or opportunities?

Source: The World Bank Group
The old approach considers BOP residents as a monolith. They are mostly viewed as consumers.
Developing Country Share of the Global Economy Will Rise in Coming Years


Dr. Djordjija Petkoski
Climate change is expected to hit developing countries the hardest. Its effects—higher temperatures, changes in precipitation patterns, rising sea levels, and more frequent weather-related disasters—pose risks for agriculture, food, and water supplies.

At stake are recent gains in the fight against poverty, hunger and disease, and the lives and livelihoods of billions of people in developing countries.
Cost of poor governance and corruption

• According to World Bank estimates, the total volume of bribes paid annually is US$ 1 trillion ...

• ...which is nearly twice the gross domestic product (GDP) of Africa.
What Kind of Growth

• Green Growth
• Inclusive Growth
• Sustainable Growth
• Sustainable Development
Corporate Response

- Philanthropy
- Corporate Social Responsibility (CSR)
- Strategic Philanthropy
- Creating Shared Value
- Corporate Sustainability
Earning the Trust of the Community

Community Engagement:
• Engage community leaders as spokespersons to endorse the benefits of recycling and proper waste disposal
• Promote recycling programs in villages and schools with rewards of supplies and new schools

Cultural Sponsorship:
• Promote trash pickup and environmental awareness with a ‘cleaner’ Brazil
• Sponsor trash pickup during cultural events such as Carnival, World Cup

Job Creation:
• Hire agents within communities to collect recyclables; provide incentive-based pay
• Expand waste picker cooperatives
• Collaborate with MNC and government to build out recycling infrastructure
Eco Challenge 1: Social Entrepreneurs
Create a social venture or project that addresses an environmental problem.

Eco Challenge 2: Economic Entrepreneurs
Solve an environmental problem through an enterprise or business idea.

Eco-Challenge Caribbean
Nestle and the environment

- Manufacturing & management
- Environmental management

<table>
<thead>
<tr>
<th></th>
<th>Nestlé environmental progress</th>
<th>(variation 2002-2006)</th>
</tr>
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<tbody>
<tr>
<td>Water consumption</td>
<td>m³</td>
<td>- 35%</td>
</tr>
<tr>
<td>Energy consumption</td>
<td>gigajoules</td>
<td>- 28%</td>
</tr>
<tr>
<td>Greenhouse gases</td>
<td>kg CO²</td>
<td>- 32%</td>
</tr>
</tbody>
</table>

(per ton of product)

Source: Nestle
TAMKEEN: Saudi Corporate Sustainability Initiative

SCS initiative aims to:

• Contribute to the growth and sustainability of Saudi companies
• Activate the role of private sector in sustainable development
• Create job opportunities for Saudis
• Create new different investment opportunities
• Revise all needed governmental policies & procedures across all sectors to create the necessary environment for an active private sector role in development
# Business Lead Collective Action Against Corruption

<table>
<thead>
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<th>Top 5 NGOs</th>
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<tbody>
<tr>
<td><strong>NGO</strong></td>
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| Transparency International | • Leadership in topic  
                             • High visibility and credibility  
                             • Global presence, but independent local chapters |
| PACI (World Economic Forum) | • Private sector initiative  
                                • High visibility  
                                • Strengthen credibility via membership status (since Jan 2009) |
| IBLF | • Private sector related  
       • Has already initiated various projects in different regions |
| ICC (Commission on anti-corruption) | • High visibility  
                                      • Specific anti-corruption initiatives  
                                      • Siemens is member |
| CIPE | • Experience with business cooperation  
       • Significant field experience in various regions  
       • Providing practical experience |

<table>
<thead>
<tr>
<th>Top 2 IOs</th>
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<tbody>
<tr>
<td><strong>IO</strong></td>
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</table>
| UN Global Compact | • High visibility  
                     • Anti-corruption as one of 10 focus topics (10th principle)  
                     • Experience with business cooperation  
                     • More than 6 000 members, incl. Siemens |
| World Bank | • High visibility  
               • Global presence and regional units  
               • Numerous experts involved in the topic  
               • Siemens is part of Anti-Corruption Working Group |

NGO: Non-Government Organization  
IO: International Organization  
TI: Transparency International  
PACI: Partnering Against Corruption Initiative  
IBLF: International Business Leaders Forum  
ICC: International Chamber of Commerce  
CIPE: Center for International Private Enterprise  
ACN: Anti-Corruption Network

Dr. Djordjija Petkoski
Some Relevant Publications

1. “Managing Anti-Corruption at Siemens“, Harvard Business School Multi Media Case Study, (2012);
2. “Segmenting the Base of the Pyramid”, Harvard Business Review, June, (2011);
Security and Sustainability Forum

“CLIMATE CHANGE IS IN OUR BUSINESS: URBANIZATION AND ECONOMIC GROWTH IN THE 21ST CENTURY”

Metropolitan Economic Strategy: Advancing Sustainable Prosperity, Innovation, and Quality of Life

Dr. Marc A. Weiss
Chairman and CEO
Global Urban Development (GUD)

November 15, 2012
Metropolitan Economic Strategy: The Key to Prosperity

Metropolitan Economic Strategy is now essential for every nation and urban region to generate sustainable prosperity and quality of life.
Metropolitan Economic Strategy in Brazil
Clinton Administration *Metropolitan Economic Strategy*
National Policy Initiative

*America’s New Economy And The Challenge Of The Cities*

A HUD Report On Metropolitan Economic Strategy

U.S. Department of Housing and Urban Development
STATE POLICY APPROACHES TO PROMOTE METROPOLITAN ECONOMIC STRATEGY

BY
DR. MARC A. WEISS

PUBLISHED BY
THE NATIONAL GOVERNORS ASSOCIATION CENTER FOR BEST PRACTICES

OCTOBER, 2002
“Getting Richer by Becoming Greener”
Sustainability in Business

CONFESSIONS OF A RADICAL INDUSTRIALIST
PROFITS, PEOPLE, PURPOSE—DOING BUSINESS BY RESPECTING THE EARTH

RAY C. ANDERSON
with ROBIN WHITE
Sustainability: From Companies to Communities

• Sustainable Economic Development Strategies adapt sustainability concepts from leading businesses such as:
  
  GE, IBM, Toyota, Interface, IKEA, DuPont, Disney, Wal-Mart, Google, Nike, Stonyfield Farm, Seventh Generation, Siemens, Cisco, Philips, Applied Materials, and Johnson Controls

• Sustainable Economic Development Strategies apply these sustainability concepts to sub-national economies, including:
  
  States, Provinces, Regions, Districts, Counties, Cities, Towns, Villages, and Neighborhoods
From the California Commission on Industrial Innovation to Green Innovation and Clean Technology
California’s $56 Billion Green Savings

Per Capita Electricity Sales (not including self-generation)
(kWh/person) (2006 to 2008 are forecast data)

United States

California

2005 Differences
= 5,300kWh/yr
= $165/capita

Source: Energy Efficiency: The first and most profitable way to delay Climate Change
UCLA Institute of the Environment Oppenheim Lecture February 25, 2008
Arthur H. Rosenfeld, Commissioner California Energy Commission
The Economic Value of Quality of Life

“Over the long term, places with strong, distinctive identities are more likely to prosper than places without them. Every place must identify its strongest, most distinctive features and develop them or run the risk of being all things to all persons and nothing special to any...Livability is not a middle class luxury. It is an economic imperative.”

MIT Economics Professor Robert M. Solow
Winner of the 1987 Nobel Prize in Economic Sciences
Economic Development Strategy for Berkeley, California
June 1981

ECONOMIC DEVELOPMENT:
AN IMPLEMENTATION STRATEGY FOR THE CITY OF BERKELEY

Marc Allan Weiss
Ann Raell Narusen

Working Paper No. 354
June 1981

Institute of Urban and Regional Development
University of California, Berkeley

*This paper is the summary report of a larger project researched and written by the Berkeley Economic Development Project group, which includes Margorie Bennett, Daniele Farber, Linda Garnett, Jay Jones, Joyce Klemperer, Nancy Leigh-Preston, Neil Mayer, Michael Pels, Amy Shoans-Coty, Matthew Stohle, and Paul Rusemann, all associated with the University of California and the Planners' Network. Copies of the related papers are available from the Institute of Urban and Regional Development, University of California, Berkeley.

**The authors would like to thank the City Manager's Office of the City of Berkeley, the staff of the Institute of Urban and Regional Development, and the College of Environmental Design, University of California, Berkeley, for material support. We also wish to thank Barry Rosen, City Manager's Office, who acted as the City's liaison on this research project.
10. Portland, Oregon Metropolitan Region

Overview

After a deep recession in the early 1980s, metropolitan Portland underwent a transformation from a slow-growing natural resource-based economy to an increasingly technology-based economy that is growing rapidly. The metropolitan Portland economy today is driven by a large and diverse Electronics and Communications industry cluster centered mainly around semiconductors and computer manufacturing. Industry clusters are groups of related firms connected by producer-supplier-distributor relationships, shared research bases, common technology, workforce skills, and other key elements used in producing goods and services.

Metropolitan Portland also serves as a transportation hub for products that are distributed throughout the western United States and Canada, as well as overseas to countries across the Pacific Ocean. The Electronics and Communications and Transportation and Trade Services clusters, together with a growing Business and Professional Services (Software) cluster, have helped fuel metropolitan economic growth over the past decade.

Metropolitan Portland’s evolution to a new economy is due in part to a targeted strategy by regional leaders to invest in new industry clusters, while preserving the region’s attractive environment and quality of life. Metropolitan Portland enjoys a unique geography that includes surrounding mountains, lakes, rivers, easy access to the Pacific Ocean, wine country and a favorable climate. Sustaining the metropolitan region’s quality of life is a high priority for its residents.

Source: 1996 HUD Metropolitan Economic Strategy Report
Singapore: a model for sustainable development?

As a pioneer in sustainable development, Singapore has been approached by the World Bank to provide technical assistance on urban planning in neighbouring countries. Vicente Carbona analyses Singapore’s successful development and reveals the latest initiatives in the city-state.
The Four Greens

- **Green Savings** — cutting costs for businesses, families, communities, and governments by efficiently using renewable resources and by reducing and reusing waste

- **Green Opportunities** — growing jobs and incomes through business development and expanding markets for resource efficiency, sustainability, and clean technologies

- **Green Talent** — investing in fundamental assets such as education, research, technological innovation, and modern entrepreneurial and workforce skills, because people are now the world’s most vital green economic resource

- **Green Places** — establishing sustainable transportation and infrastructure, and protecting and enhancing the natural and built environment, to create more attractive, livable, healthy, vibrant, prosperous, productive, and resource-efficient areas and communities.
Green Savings

(Pathways to a Low-Carbon Economy, McKinsey & Company, 2009)
$3.6 Trillion Global Business Investment in Green Opportunities since 2007

GREEN TRANSITION SCOREBOARD®

More than $3.6 trillion has already been invested by the private sector in sustainable companies and technologies globally since 2007.

www.greentransitionscoreboard.com
Climate Prosperity
A Greenprint for Silicon Valley
San Antonio

Mission Verde

Building a 21st Century Economy
State of Delaware
Prosperity in Paradise: Summary Strategy Map

**Context**
- Historical reliance on tourism & construction
- New to diversified economic development
- Historic perception of an unfriendly business climate
- Need for political consensus
- Some good recent progress with EDC plan and incentives

**Mission**
To create jobs by positioning Sarasota County as a location of choice for Clean Tech and Green Businesses and Eco-Smart Real Estate Development.

**Vision**
The Sarasota County region is recognized as a premier location for starting and growing Clean Tech and Green Businesses and Eco-Smart Real Estate Developments, especially for second-career entrepreneurs and developers.

**Strategic Assumptions**
- There is an authentic sustainability branding opportunity
- It is about attracting entrepreneurial talent
- Some catching up to do on the basics
- Good assets to build on
- Will require political consensus and will
- Have to be in for the long haul

**Recommendations**
1. Initiate a Business Development Network
2. Expand the Green Business Partnership
3. Establish a Clean Tech Support Infrastructure
4. Launch a Green Energy/Resource Recovery Park
5. Innovate Eco-Smart Development in the EEZ and Elsewhere
6. Organize a Green Talent Response System
7. Formulate a Communications Strategy
Planning for Sustainable Economic Development Across the Americas

Schedule

07th June | Tuesday

08h30 | Registration

09h00 | Opening and Welcome

Cid Blanco Junior, Cultural Infrastructure Director, Ministry of Culture
Stewart Sarkozy-Banocy, Department of Housing and Urban Development
Washington, DC, USA

W. Paul Farmer, American Planning Association – Washington, DC, USA

Luciano Ducci, Mayor of Curitiba

Edson Ramon, President, Associação Comercial do Paraná (ACP) – Curitiba, Brazil

Eduardo Guy de Manuel, President of the Regional Council on Administration, Amcham Curitiba

Odone Fortes Martins, Coordinating Vice-President of Conex-RI, ACP – Curitiba, Brazil

10h00 | Coffee Break

10h30 | Keynote Speaker: A Vision for Urban Sustainability

Jaime Lerner, Urban Planner

11h30 | Sustainable Economic Development: An Overview

Panelists

Marc Weiss, Global Urban Development – Washington DC, USA

Emilia Queiroga Barros, President, Brazil 2020 Agenda – Lauro de Freitas, Bahia, Brazil

Moderator: Eduardo Guimarães, Municipal Secretary for International Relations and Ceremonies – Curitiba, Brazil

14h30 | Case Studies: Planning for Sustainable Economic Development in the Americas – Part 1

Panelists

Rob Bennett, Executive Director, Portland Sustainability Institute – Oregon, USA

Stephanie McLellan, Clean Energy Economy Policy Advisor, Office of the Secretary, Department of Natural Resources and Environmental Control, State of Delaware – Dover, Delaware, USA

Gil Polidoro, President, Coordenação da Região Metropolitana de Curitiba (Comec)

Moderator: W. Paul Farmer, CEO, American Planning Association

16h00 | Coffee Break

16h30 | Case Studies: Planning for Sustainable Economic Development in the Americas – Part 2

Panelists

Larry Zinn, Chairman, San Antonio Green Jobs Leadership Council – San Antonio, Texas, USA

Paul Krutko, President and CEO, SPARK, (former Chief Development Officer of the City of San Jose, and current Secretary-Treasurer of the International Economic Development Council) – Ann Arbor, Michigan, USA

Ken Heatherington, Executive Director, Southwest Florida Regional Planning Council

Fort Myers, Florida, USA

Moderator: Rodrigo Rocha Loures, President, Industrial Federation for the State of Parana (FIEP) – Curitiba, Brazil

18h00 | Cocktail Reception
February 29, 2012

NoMa: The Neighborhood That Transit Built
By Rachel MacCleery, Jonathan Tarr

An infill transit station, built with significant private sector funding, helped transform a desolate swath of Washington, D.C., into a vibrant, vital, mixed-use neighborhood.

The neighborhood that has become NoMa (short for north of Massachusetts Avenue), now home to luxury apartments, high-end offices, and dozens of construction cranes raising new buildings, just ten years ago was marked by abandoned warehouses, windswept parking lots, vacant properties, and a methadone clinic. Located just a few blocks north of the U.S. Capitol and the busy Union Station railway hub, the area was adjacent to elevated transit tracks but was not served by a station. Now, eight years after a remarkable financial collaboration by the federal government, the District of Columbia, and local landowners helped build a new infill transit station, the area is undergoing a transformation.

The station, opened in 2004 and now called NoMa-Gallaudet U, has been key to the neighborhood’s revitalization, which in turn has contributed to the city’s financial recovery. It was built on the Red Line of the Metro regional heavy-rail system, which has been operated by the Washington Metropolitan Area Transit Authority (WMATA) since 1976. The Red Line is the Metro system’s oldest segment. Despite the fact that the Red Line ran through the area on elevated tracks, the transit system’s original planners, using traditional measures of potential ridership that focus on existing development, had not blessed it with a stop.
The Economic Resurgence of Washington, DC

Citizens Plan for Prosperity in the 21st Century

By the People, For the People

The Strategic Economic Development Plan for Washington, DC, and The Economic Summit are co-sponsored by the District of Columbia Government, the Financial Responsibility and Management Assistance Authority, the United States Department of Commerce Economic Development Administration, the Local Initiatives Support Corporation, Fannie Mae, and the World Bank.

Coordinators: Richard Montell and Dr. Marc Weiss
District of Columbia Department of Housing and Community Development

November 1998
1998 WASHINGTON, DC ECONOMIC PLAN

NoMa

ACTION 26: Develop NoMa as a Technology, Media, Housing, and Arts District

ACTION 29: Build a Metro Station at New York Avenue to Spur Development
NoMa’s New Fundamental Assets

Getting Richer by Becoming Greener

• Compact
• High-Density
• Resource-Efficient
• Transit-Oriented
• Walkable
• Bicycle-Friendly

• Mixed-Use
• Green/LEED Buildings
• Broadband Infrastructure
• Smart Growth
• New Urbanism
• Livable Community
Office Net Absorption in DC
2009-2010

Nearly half of all office growth in DC occurred in NoMa in the past 2 years.
NoMa – DC’s Newest Neighborhood

At Full Build-Out:

26 million SF planned

- 14 million SF office
- 10,000 residential units
- 1,300 hotel rooms
- 1 million SF of retail

$9 billion private investment
REPORT FOR THE OECD AND THE GOVERNMENT OF WALES ON THE NOMA (NORTH OF MASSACHUSETTS AVENUE) STRATEGIC ECONOMIC DEVELOPMENT INITIATIVE IN WASHINGTON, DC

Dr. Marc A. Weiss, Chairman and CEO, Global Urban Development

May 2008

1. Rationale for the initiative

Problem to address: In 1997 the city of Washington, DC was suffering from slow job growth, insufficient new investment and development, population loss, declining government revenues, and troubled low-income neighborhoods. Formulating and implementing a major new private sector-oriented economic development strategy had become a vital necessity.

Policy context: During August 1997, the US Congress passed legislation, signed by President Clinton, entitled the National Capital Revitalization Act. This law was primarily designed to address long-term structural fiscal imbalances harming the financial viability of the District of Columbia Government, such that it was running substantial budgetary deficits, unable to raise sufficient revenue to meet its expenditure obligations. Two years earlier, the federal government created the District of Columbia Financial Responsibility and Management Assistance Authority (the “Control Board”) to order substantial reductions in personnel and spending, and to directly manage the DC government. In 1997 the Control Board was tasked by Congress with producing a strategic economic development plan designed to grow private sector businesses and jobs for DC residents, among other reasons, in order to increase the tax and revenue base.

Action concept: In the fall of 1997, Dr. Andrew Brimmer, Chairman of the Control Board, hired Richard Monteilh as the Director of the Office of Economic Development and Department of Housing and Community Development, and then hired me as the Senior Adviser to Mr. Monteilh, and as the Coordinator of the Congressionally mandated strategic economic development plan. Within one year Richard Monteilh and I, working with literally thousands of city and regional stakeholders from business, government, labor, civic, community, and faith-based leadership, including a 40-member steering committee, produced an Economic Summit held at the World Bank, attended by more than 2 000 people, and published The Economic Resurgence of Washington, DC: Citizens Plan for Prosperity in the 21st Century. The city’s first-ever comprehensive, private sector growth-oriented economic development strategy focuses on three broad categories: strategic industries (six key industry networks/clusters, plus growing businesses and jobs across the private sector), strategic populations (workforce development, plus attracting and retaining residents) and strategic areas (downtown and neighborhoods). The centerpiece of the plan was 40 strategic actions whose implementation was committed to begin within one year of the plan’s publication in November 1998. Among these 40 actions were two that are central to this report: Action 26—Develop NoMa (North of Massachusetts Avenue) as a Technology, Media, Housing, and Arts District; and Action 29—Build a Metro Station at New York Avenue to Spur Development.
For more information,

please visit the GUD website:

www.globalurban.org

email me at:

marcweiss@globalurban.org
“Is Climate Change Our Business?”
SMEs and Sustainability

Michèle Olivier Laird
Principal Associate

Abt Associates Inc.
November 15, 2012
What makes a sustainable city?
Many elements are needed
What drives economic growth?
The importance of SMEs

- SMEs are a powerful “engine of economic growth and jobs”
- Small businesses drive innovation, create 21st century jobs and increase competitiveness
- More than half of the population in cities either own or work for a small business
- A thriving SME sector is critical to inclusive economic growth and job creation
- Anchor businesses rely on SMEs as suppliers
Why do SMEs matter in the context of sustainability?

- **Global Emissions:**
  SMEs account for 60% (Source: UN Corporate Sustainability Forum)

- **Anchor Company Emissions:**
  Supply chain accounts for up to 86% (Source: Mathews, Hendrickson, Weber 2008)

- **Company Example:**
  Siemens found only 6% of emissions under direct control; 80% of total environmental footprint was with suppliers (Source: Chief Sustainability Office, Siemens)

Graph showing:
- 80% Supply Chain
- 14% Raw Materials and Consumer Use
- 6% Anchor Control

Source: FOMIN presentation by Nancy Lee
So why don’t more SMEs implement environmental management systems?

- Lack of awareness that their businesses cause impact
  - The 2011 npower Business Energy Index showed that 7 out of 10 SMEs think that large businesses and government have a greater impact on emissions
- Lack of knowledge of resource usage, potential savings or increased profit
- Financial constraints (cost of equipment and implementation)
- Human resource constraints (skill mix and time for personnel)
- Inappropriate technology
- Lack of guidance and support
There are generally four maturity levels with regard to sustainability management:

- Defensive
- Proactive
- Managed
- Integrated

Most SMEs are in the “Defensive phase.”
Brief case studies

Let’s explore SMEs and sustainability looking at two examples:

- Mexico

- Austin
ClimateScope™ snapshot of Mexico

Mexico City

NORTH AMERICA

Mexico

$1,661.6bn GDP

3% 6-Year Economic Growth Rate

111 million Population

$5.8 billion Total Clean Energy Investments, 2006-2011

59 GW Installed Power Capacity

3% Renewable Share

9,567 GWh Total Clean Energy Generation

Top Energy Authority: Secretariat of Energy

6th Overall

1st in GHG accounting and management

Wind and Solar value chains nearly complete

Availability of green microfinance – 9% of MFIs making green loans

OVERALL SCORE

1.67

OVERALL RANKING

6

ClimateScope is produced by the Multilateral Investment Fund and Bloomberg Finance
Why does sustainability matter for SMEs?

Green Technology + More Efficiency = Cost Savings

Average results per SME (146 pilot projects in Mexico)

- **Payback of 8 months**
- **Savings value $746,366**
- **NPV creation $150k**

- **Water savings** 1,900 m³/year
- **Electricity savings** 42,000 kWh/year
- **CO₂ emissions reductions** 61 t/yr
- **Waste disposal reductions** 1,455 t/year

Source: "Evaluating Mexico's Green Supply Chains Program" (Lyon and Van Hoof, 2010)
Sustainability can also be a product

- Mexican innovators and entrepreneurs have identified opportunities and are leading a movement that can foster a green economy for truly sustainable development and growth.

- Cleantech Challenge Mexico supports clean technology startups through an open incubation/acceleration program and tournament. It transforms innovative business ideas into viable businesses: promotes supply of clean goods and services, not just demand.

- Access to finance for businesses and access to investments for financiers.

- In the first two years of this competition, participating entrepreneurs have created 70 new businesses and over 800 new jobs, and have filed 60 patent applications. Over half of these businesses are still in operation, demonstrating a much higher success rate than most new companies.
Cleantech Challenge Mexico winner

Concreto Ecológico (Mexico City) produces a porous concrete that allows the soil beneath to absorb rain water and filter into subterranean rivers.
Austin: supporting SMEs sustainably
Benefits of the AGBL program to Austin businesses:

- Business owners have an opportunity to promote their business by utilizing the marketing tools, provided by the city, to bring in new customers.
- Reducing waste, water and energy usage will save money for businesses.
- Being formally recognized and branded as a “green” local business offers a way to stay competitive.
- AGBL businesses have an opportunity to learn and share best practices with each other at networking events hosted by the city.
- The program will help move the city towards its goals of becoming a livable and sustainable place to live, work and play.
AGBL program advances city’s sustainability goals

- Providing an opportunity for business owners and employees to track the greening of their own operations allows them to become more aware of their actions and impacts.

- City raises awareness of sustainability goals, promotes available rebates and incentives, and involves more partners such as local businesses.

- Providing technical assistance, feedback, marketing assistance and small incentives supports local business community and involves them in sustainability efforts.

- Creating ways to recognize businesses for their greening efforts, such as promoting them on the city website, giving them marketing materials and having the Mayor recognize their efforts provides an attractive incentive for small and large businesses.

- Creating peer networking opportunities and utilizing social media helps generate dialogue around sustainability.
Sustainability incentives for SMEs

- To support businesses in accessing Austin’s rebate programs and services geared towards going green, the City of Austin Office of Sustainability and the Small Business Development Program (SBDP) collaborated to produce **Green Pages**.

- Consists of services and programs that provide small businesses with incentives, services, or products aimed at going green.
What is still needed?

- Education
- Enabling environment
- Access to finance
- Incentives from private sector and public sector
- Demand
Thank you!
Green Jobs/Green Infrastructure for Urban Economic Prosperity & Environmental Sustainability in the 21st Century and Beyond

Mathew Forstater
University of Missouri—Kansas City

forstaterm@umkc.edu
Envisioning a Secure & Sustainable Future

**ecological economics** –
- interdisciplinary alternative to conventional environmental economics

**consensus concerning the first step** -
- a clear, practical, feasible, socially shared vision of the secure, stable, sustainable society we wish to achieve
SUBURBAN SPRAWL

RAPID EXPANSION OF CITIES & METROPOLITAN AREAS

LAND CONSUMING PATTERN OF GROWTH

NORTH EAST & EAST US
Forest Canopy Loss, Atlanta Metro, 1974 to 1996
Youth Employment
Green Jobs

- community and industrial recycling
- improved insulation/efficiency for residential and commercial structures
- public transportation
- rooftop gardening and urban landscaping
- solar energy applied to the public infrastructure
- monitoring and enforcement, environmental education, and research support
# Employment in Germany’s Renewables Sector, 1998, 2004, and 2006

<table>
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<tr>
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<tbody>
<tr>
<td>Wind power</td>
<td>16,600</td>
<td>63,900</td>
<td>82,100</td>
<td>6.8</td>
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<tr>
<td>Solar energy</td>
<td>5,400</td>
<td>25,100</td>
<td>40,200</td>
<td>49</td>
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<tr>
<td>Hydropower</td>
<td>8,600</td>
<td>9,500</td>
<td>9,400</td>
<td>n.a.</td>
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<tr>
<td>Geothermal</td>
<td>1,600</td>
<td>1,800</td>
<td>4,200</td>
<td>74</td>
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<tr>
<td>Biomass</td>
<td>25,400</td>
<td>56,800</td>
<td>95,400</td>
<td>37</td>
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<tr>
<td>Services</td>
<td>10,000</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<tr>
<td>Subtotal</td>
<td>66,600</td>
<td>157,100</td>
<td>231,300</td>
<td>n.a.</td>
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<tr>
<td>Information</td>
<td>n.a.</td>
<td>3,400</td>
<td>4,300</td>
<td>n.a.</td>
</tr>
<tr>
<td>Renewables (capacity expansion)</td>
<td>n.a.</td>
<td>5,800</td>
<td>23,500</td>
<td>n.a.</td>
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<tr>
<td>Total</td>
<td>66,600</td>
<td>166,300</td>
<td>259,100</td>
<td>n.a.</td>
</tr>
</tbody>
</table>
Functional finance and ecological tax reform

- tax ‘bads’ (pollution, resource depletion, unsustainable behaviors), not ‘goods’ (employment, income, innovation)
- money as accounting information versus ‘real’ resources subject to laws of physics
- deficits can be too big, but they can also be too small
- environmental taxes, subsidies, quotas, etc.—reward green behaviors, punish ‘dirty’ behaviors
“Jobs vs. Environment”
or
Jobs AND Environment
summation
— Full Employment is good for everyone
— Given the proper policies and incentives, competition will reward firms with clean, green behaviors and punish the real ‘monsters of inefficiency’
— Tax bads (pollution, resource depletion), not goods (income, employment, innovation)
— Green Jobs and Green Infrastructure can help reverse global climate change
— Longer time horizons for estimating profitability increases environmental efficiency
We have talked about the business case for sustainability, relating to large corporations, SMEs, municipalities, and the labor force.

What is the most influential barrier against everyone catching on?
STREAMLINING: How do we do it?

What is the best way for a company or municipality to integrate sustainability into their long-term strategies?

How should it be communicated to customers or residents?
TRANSITION: What support is needed?

How can institutions support the transition for communities and businesses to hold themselves to new standards of competitiveness to meet today’s challenges?
Audience Questions
• Environmental sustainability cannot be divorced from economic growth, they need to both be achieved and supported by policies taken at all levels
• Sustainable economic development is ‘getting richer by becoming greener’
• Sustainable economic development will lead to growing and declining sectors – policies will need to support this transition: incentives, training
• Corporations have a role to play in meeting 21st century challenges, they can leverage resources to engage governments and communities
• SMEs are essential for economic growth and for sustainability. They promote innovation, create jobs and with proper management contribute to a better environment.
• Establishing a shared vision of what a sustainable future might look like is important in establishing goals and benchmarks – shared by communities, private sector, governments
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UPCOMING Webinars:
Sustainability in Your Sector: Exploring the Potential of Professional Sustainability Certification
Tuesday, November 27, 2012 1:15-2:45 EST

Shaping Urban Resilience: Business, Government and NGOs Working Together for Disaster Response and Preparedness
Thursday, December 13, 2012 1:15-2:45 EST