

GOAA: Leading the Way to Sustainability

Carey Hayo

Laurence Lewis

Andrea Ostrodka

Bill Kercher


April 28, 2010



GREATER ORLANDO
AVIATION AUTHORITY

AECOM

Definition of Sustainability



“Meeting the needs of the present without compromising the ability of future generations to meet their own needs”

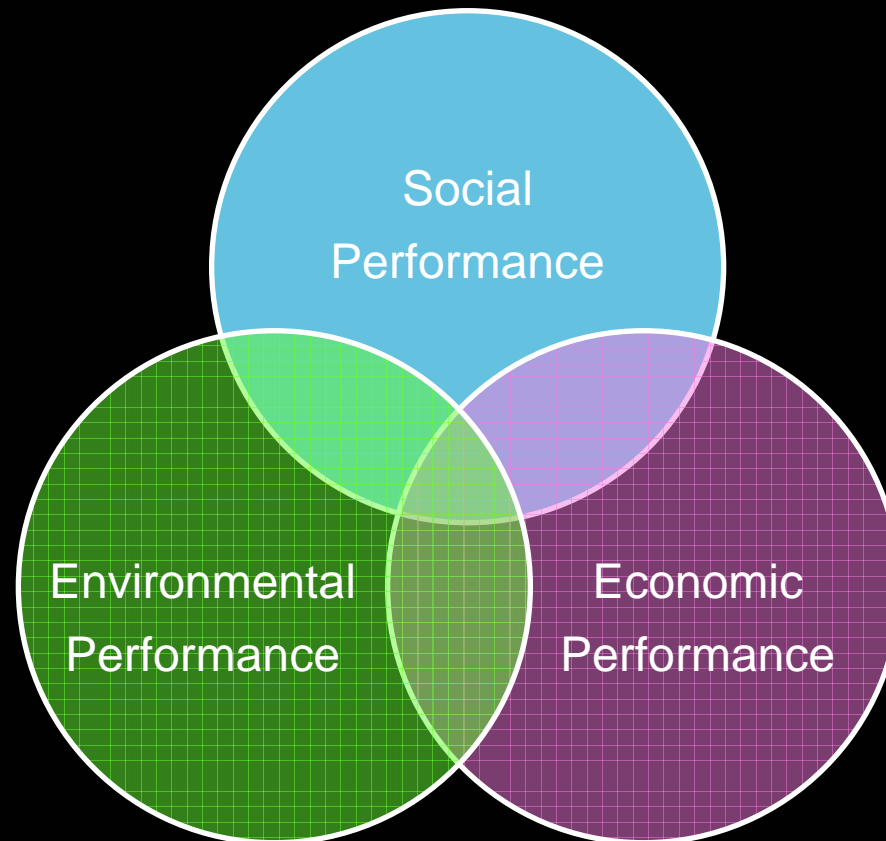
Source: UN: Bruntland Commission, Report of the World Commission on Environment and Development, 1987.

What is Sustainability?

- Dealing systemically with risk, uncertainty and irreversibility.
- Ensuring appropriate valuation, appreciation and restoration of nature.
- Integration of environmental, social and economic goals in policies and activities.
- Conservation of biodiversity and ecological integrity.
- A commitment to best practice.
- No net loss of human capital or natural capital.



What is Sustainability?



Sustainability

```
graph TD; S((Sustainability)) --> E((Economic)); S --> Env((Environmental)); S --> Soc((Social));
```

Economic

- Revenues, costs
- Jobs
- Tourism
- Retirees
- Development and redevelopment
- Infrastructure
- Transportation
- Property Values

Environmental

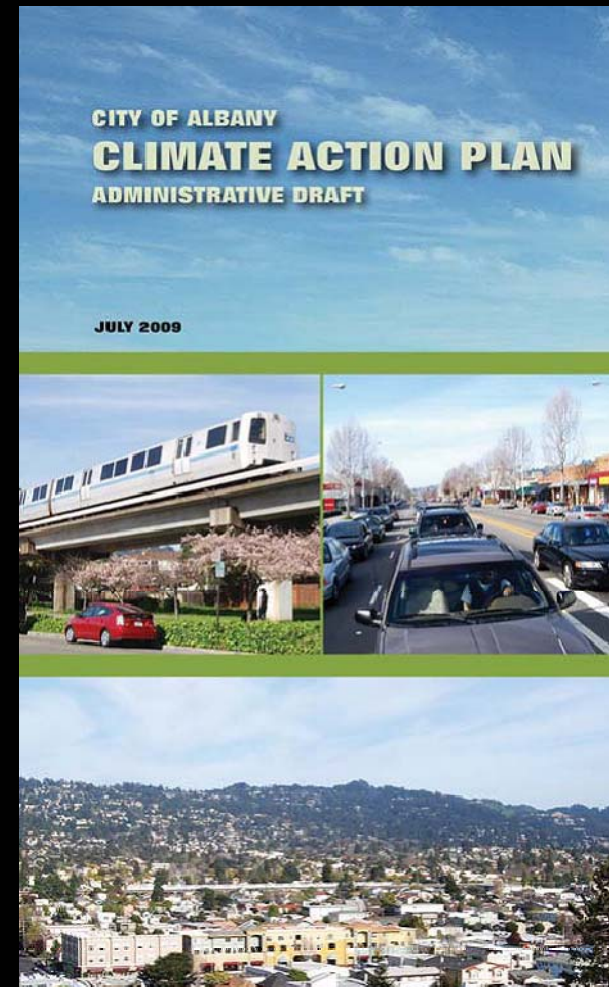
- Energy
- Air quality
- Water quantity and quality
- Biodiversity
- Climate change
- Agriculture
- Solid waste
- Hazardous materials

Social

- Health
- Safety
- Security
- Affordable housing
- Education
- Sense of place
- Identity
- Civic engagement
- Environmental justice

Who Needs Sustainability Plans?

- Cities
- Counties
- Private Institutions/Enterprises
- Private Developers
- Airports
- Hospitals
- Educational Institutions



A Sustainability Plan for GOAA

What are the benefits for GOAA?

- An improved bottom line
- More efficient use of all resources
- A cohesive “blueprint” for all GOAA actions
- Community partnerships
- Federal funding



The GOAA Sustainability Plan must:

- Respond to changing market conditions
- Incorporate new technology, security needs
- Be flexible, long-range
- Be comprehensive
- Address community needs
- Be resource-efficient
- Improve revenue, reduce cost
- Address federal and state regs



GOAA Sustainability Plan Characteristics



- Systematic focus on resource-efficiency
- Encompasses the entire organization, top-down
- Leverages existing systems
- Ranks opportunities
- Maximizes cost-benefit

Candidate Focus Areas for GOAA Sustainability Plan

- Land area
- Water resources
- Waste
- Transportation
- Noise
- Energy
- Building Efficiency
- Air Quality
- Community Outreach
- Green Procurement



Steps to creating a Sustainability Plan for GOAA....beyond compliance

- Conduct Baseline Analysis
- Identify Focus Areas
- Develop array of objectives and actions for focus areas
- Evaluate and rank objectives and actions based on social, economic and environmental cost and benefits
- Develop Sustainability Action Plan



Potential Funding Sources

- ARRA /EECBG Program
- FAA Advisory Circular for EMS Systems
- HUD Sustainable Communities Program
- Federal and State transportation initiatives



AECOM

Similar Sustainability Projects and Outcome

Philadelphia Airport Sustainability Plan – Focus Areas and Objectives

Air Emissions –
Stationary Sources

Comply with or exceed regulatory mandates for emission levels and achieve a 10% reduction in air emissions with 3 new boilers.

Energy Use

Reduce the use of non-renewable energy by 5% annually from the FY2006 baseline by 2015.

Fuel Use

Reduce the use of petroleum-based fuels from a FY 2006 baseline by a 5% reduction by FY 2010 and a 10% reduction by FY 2015.

Habitat Restoration

Minimize negative impact on wildlife habitat and comply with regulatory requirements and best management practices.



Philadelphia Airport Sustainability Plan – Focus Areas and Objectives

Noise

Improve public perception of noise presence and ensure that any land use within the 65 dnl criteria is to be compatible. Reduce complaints based on irregular operations and meet or exceed FAA noise criteria.

Regulated Waste

Reduce the amount of non-recyclable regulated waste from DOA operations by 50% from the FY 2008 baseline in 5 years and ensure compliance with waste disposal regulations resulting in zero regulatory violations.

Solid Waste Generation

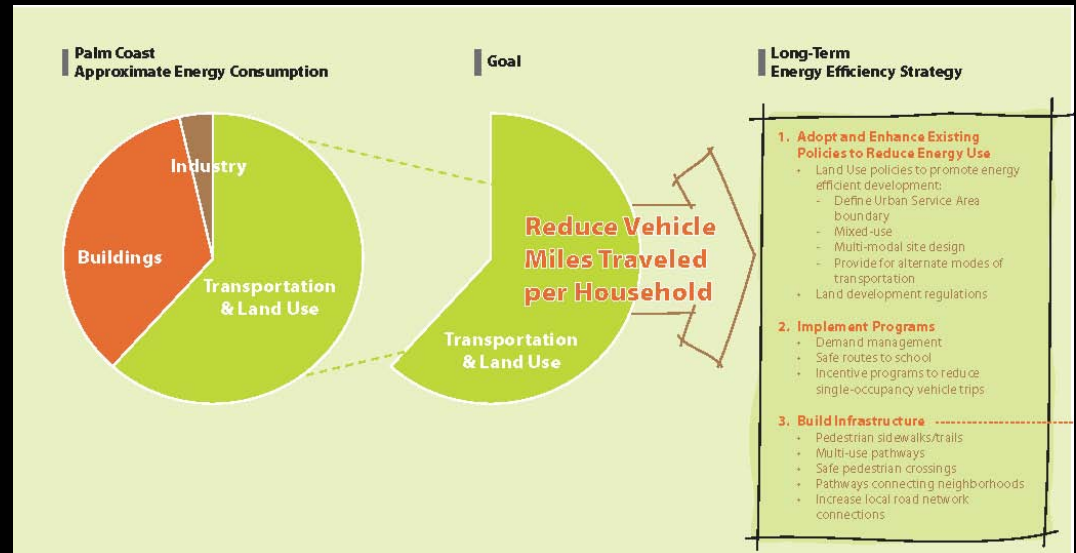
Reduce waste going to landfill by 5% annually and increase the amount of recycling by 50 tons annually.

Spills-Runoff

Minimize frequency and magnitude of spills by 20% for each criteria (by events and by magnitude).

Energy Efficiency, Climate Action & Sustainability Plans

- City of Palm Coast, FL
- Oklahoma City, OK
- Town of Cutler Bay, FL
- NASA KSC EMS
- Alameda County, CA
- San Bernardino, CA
- NASA Goddard EMS
- Albany, CA
- Piedmont, CA



Examples of GOAA Sustainability Actions

- Rental cars on-site
- Recycling programs
- Water efficiency measures
- Environmental Solutions Group
- Reduced runway lighting
- Enforced no-idling rules
- Use of green products
- Outreach program



Denver Airport Sustainability Plan – Results

Objectives	Percent Reduction Annually	Dollars Savings Annually
Office Paper Reduction	12%	\$5K
Reduction in Hazardous Waste Disposal	7.8%	\$10K
Insurance Premium Reduction		\$150K
Reduction in Noise Complaints	12%	
Reduction in Vehicle Fuel Use	5.2%	\$160K
Deicing Fluid Recycling	8%	\$850K
Recycling Savings	1432 Tons	\$110K

Denver Airport Sustainability Plan – Results

- Dedicated deicing pads
- Deicing fluid collection, conveyance and storage
- Onsite glycol recycling facility
- Municipal solid waste recycling
- Onsite CNG stations
- Underground fuel hydrant system
- Electricity and preconditioned air supplied to gates
- Alternatively fueled vehicles
- Terminal and concourses designed to enhance natural daylight
- Bathroom plumbing retrofits
- Photovoltaic Project generating 3.5 mkwh annually



GOAA Sustainability Opportunities

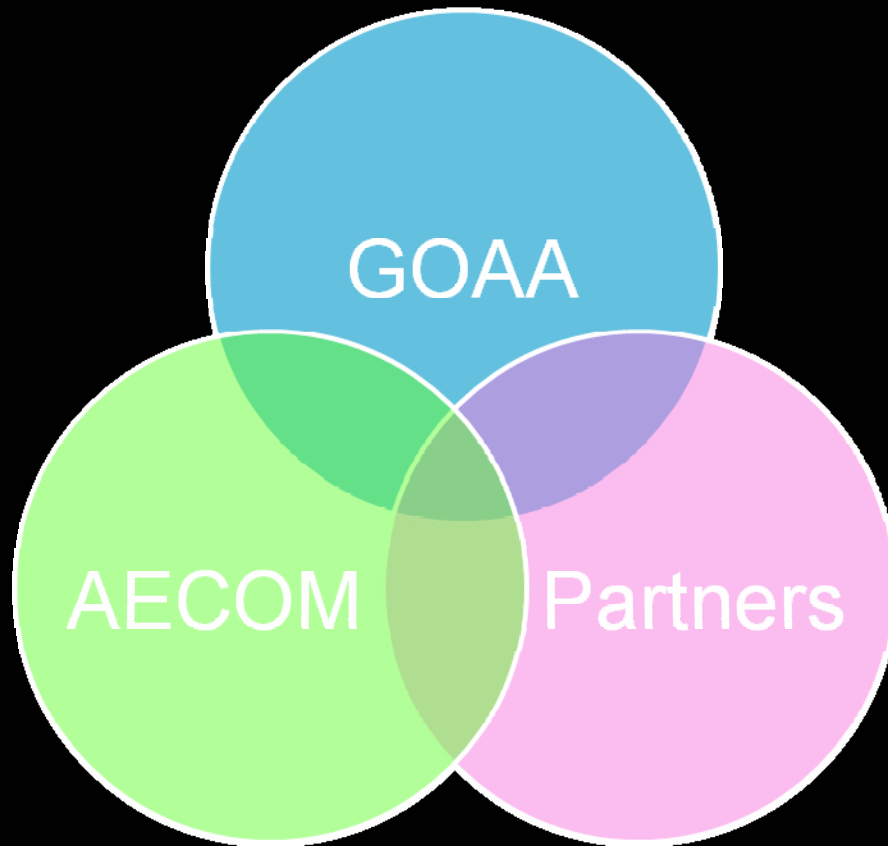
- Planned regional multimodal center
- Alternative energy
- Reduced energy use in buildings
- Partnerships with City, County, OUC, others
- New programs & policies
- EMS for GOAA



GOAA

**Beyond Compliance...Leading the
Way to Sustainability**

GOAA as a Community Leader in Sustainability – Tools to Use



- Climate Action & Sustainability Planning
- Carbon Sequestration
- Economic/Market Analysis
- Energy Audits/Building Systems Audits
- Architecture
- Low Impact Development
- Airport Master Planning
- Alternative Energy
- Community Outreach

Bottom Line Benefits for GOAA

Economic Growth

Environmental Stewardship

Social Responsibility

Community Partnerships

Thank You!

Discussion