



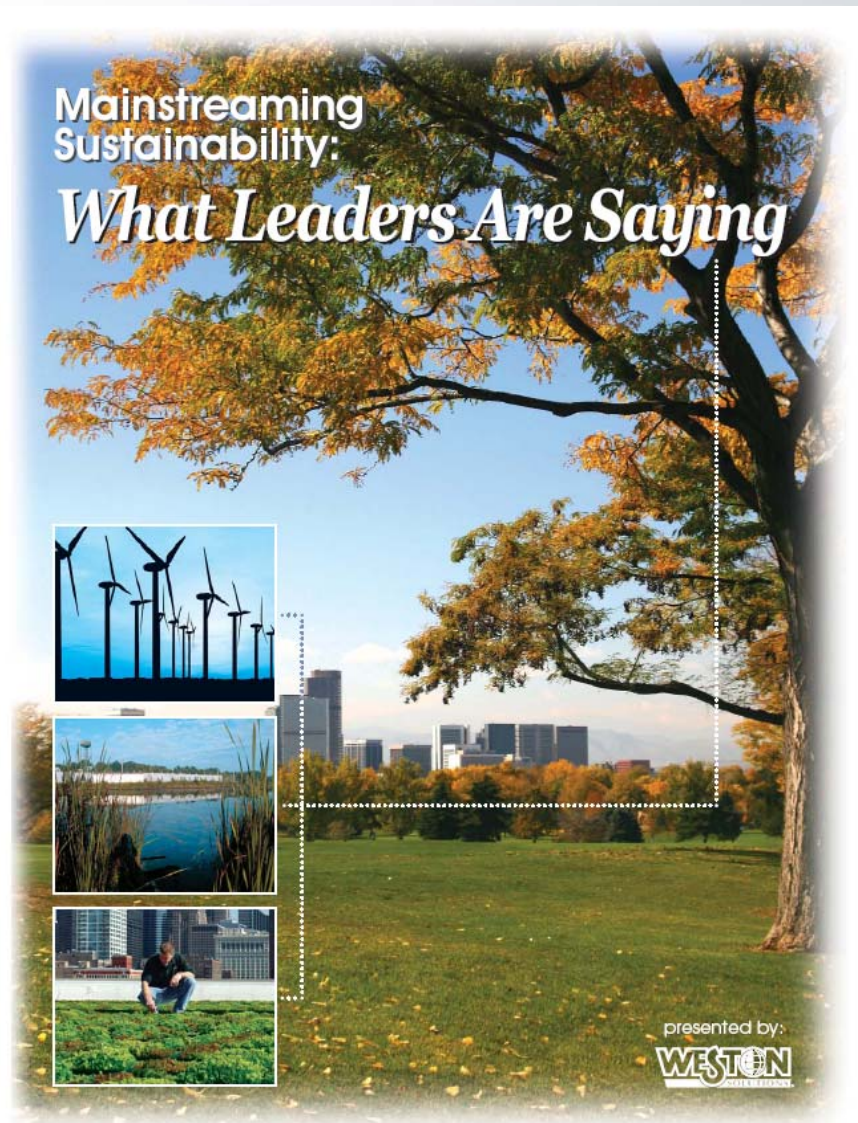
# **Sustainability at Ports: Global Challenges and Opportunities**

## ***Sostenibilidad en Puertos: Desafíos Globales y Oportunidades***

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# Key Drivers for Sustainability



- Supporting mission of organization
- Relationship with key stakeholders
- Resource limitations and costs

# Port-Specific Drivers for Sustainability



- Need for growth
  - Dredging
  - Infrastructure development
- Increasing sophistication of key stakeholders
- Importance of generating and maintaining political good will
- Economics

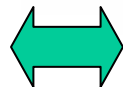
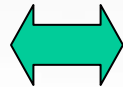
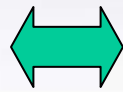


# Global Port Sustainability Challenges



## Port Issues

- Need for growth
- Facilitate global movement of people and goods
- Impacts created by tenants & customers



## Sustainability Principles

- Scale of projects should minimize impacts
- Local sourcing of products; reduce need for travel
- Increase transparency for all impacts





# Successfully Addressing Growth Challenges



- Understand and acknowledge sustainability drivers based upon appropriate scale
- Explicitly integrate sustainability goals into growth plans
- Maximize transparency during planning process

# Successfully Addressing Growth Challenges – Examples



- Massachusetts Port Authority
  - Environmental policy includes commitment to apply sustainable design principles
  - Voluntarily committed to “LEED Plus”
- Sustainable Dredged Material Management
  - Focus on the positive side of this activity
  - Highlight wetlands restoration



# Successfully Addressing Global vs. Local Challenges



- Understand and acknowledge demand for local sourcing of products
- Focus on LOCAL economic benefits of port operation
- Highlight environmental advantages of shipping vs. other forms of transit

# Successfully Addressing Global vs. Local Challenges - Example



## Economic benefits of the Port of Everett in 2006:

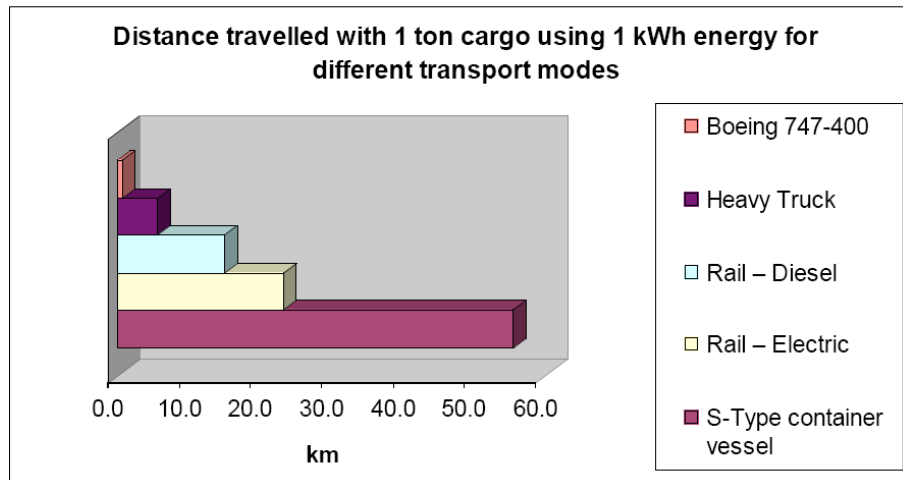
- Jobs: 3,670
- Related Aerospace Jobs: 2,912
- Income: \$170.5 million
- Revenue: \$152.5 million
- Local Purchases: \$218.6 million
- State & Local Taxes: \$16.8 million



- Highlight benefits to local economy



# Successfully Addressing Global vs. Local Challenges - Tools



SOURCE: Maersk Lines



SOURCE: US DOT Maritime Administration

- Demonstrate environmental advantages of ship vs. other forms of transportation

# Successfully Addressing Tenant/Customer Impacts



- Recognize that public does not distinguish between impacts by Port Authority vs. tenants
- Establish collaborative programs with tenants/customers
- Encourage transparency by all parties – including tenants and customers



# Successfully Addressing Tenant/Customer Impacts - Example



## Objectives for the CTP : Environmental, Port Operations, and Safety/Security

### Environmental

- Reduce emissions from drayage (port trucking) to comply with CAAP guidelines
- By 2011, CAAP requires an aggregate reduction in pollutants from all Port sources including trucks
  - 47% DPM
  - 45% NOx
  - 52% SOx
- Enable continued migration towards newer and cleaner technologies over time

### Port operations

- Improve stability of the port trucking market
  - Establish stable drayage service business
  - Avoid service disruptions during implementation
- Ensure long term sustainability
  - Truck fleet and market participants
  - Incomes that attract and retain drivers
- Enable green growth
  - Improve trucking operational efficiency and reliability

### Safety and security

- Ensure compliance with safety standards
  - Vehicle safety
  - Driver
- Ensure that port security objectives are met

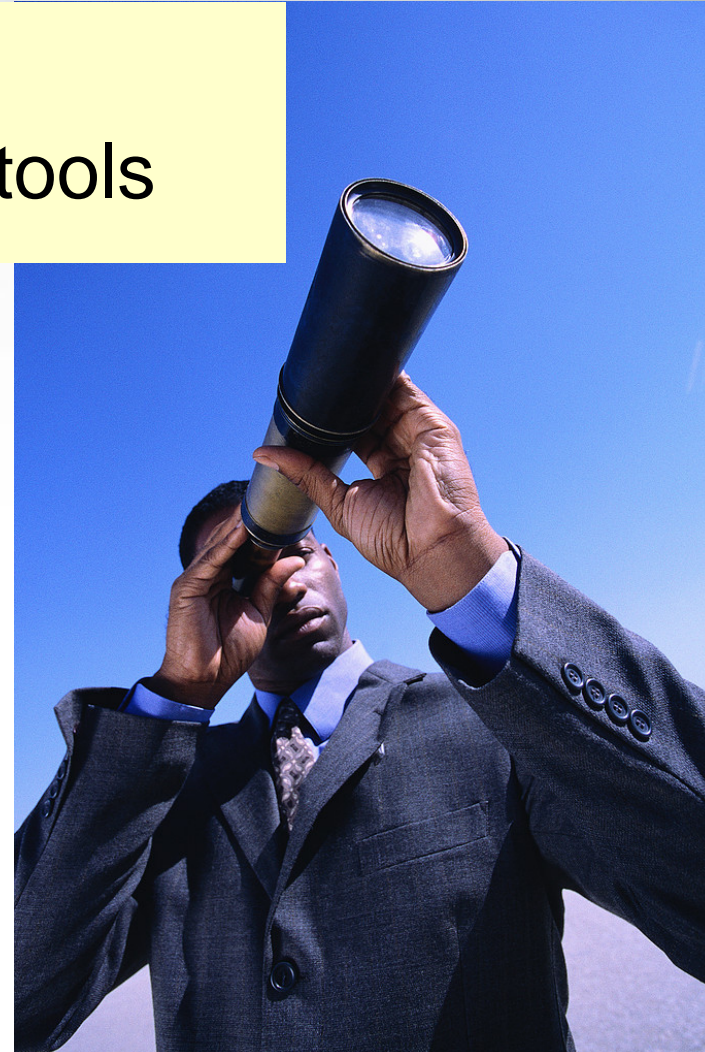
Source: CTP / CAAP presentations, 2006 CAAP Overview

- Clean truck program acknowledges shared responsibilities/benefits

# Moving Forward Successfully

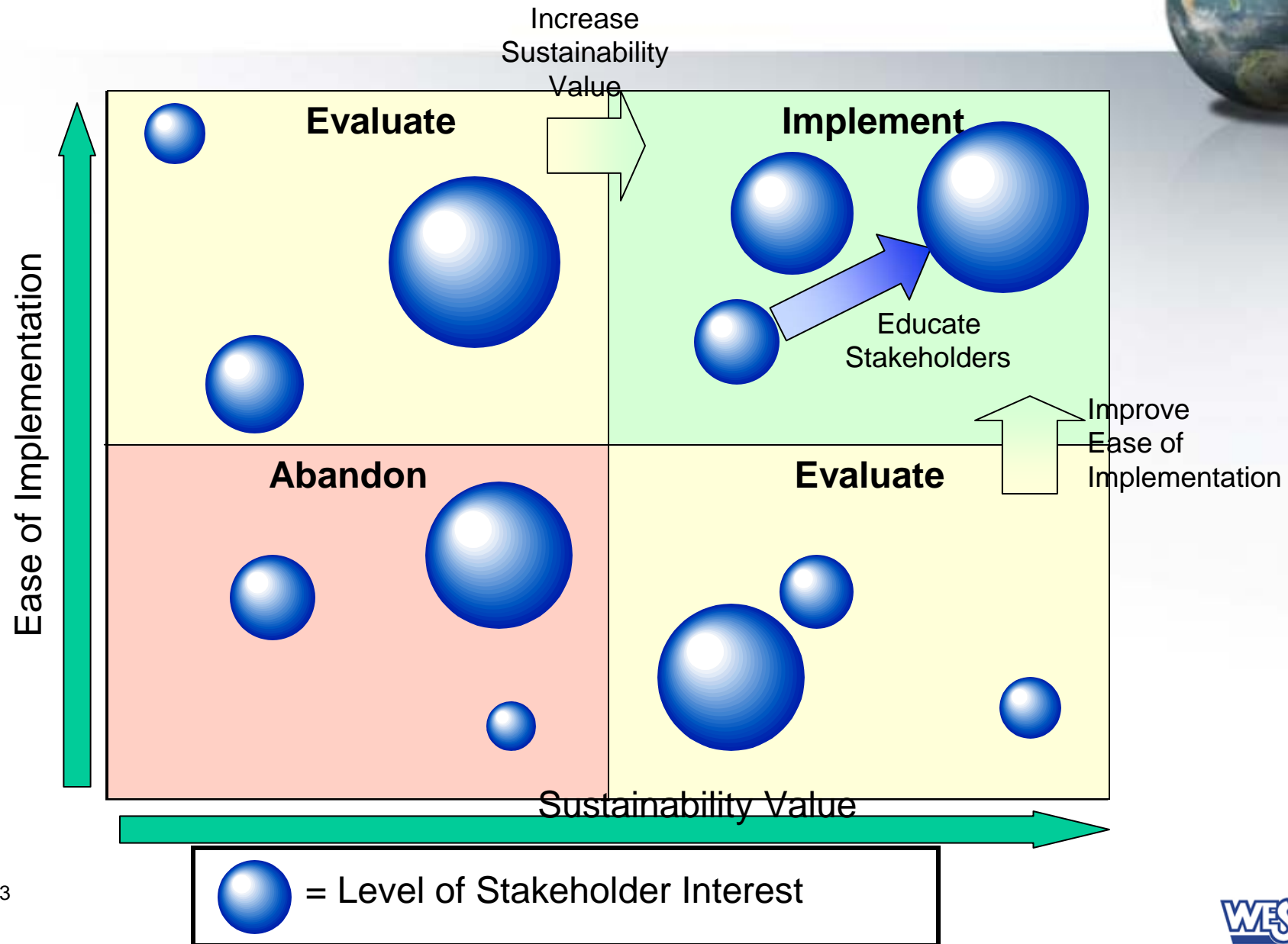


- Prioritizing programs
- New financial analysis tools





# Program Prioritization Tool



# New Financial Analysis Tools Required



- Life-cycle economic analysis required for decision-making
  - Cost/benefit analysis
  - Return on investment
- Collaboration needed between organizational units
- Decision-makers need to buy into use of these new tools
- EMS can help implement decisions



# Conclusions



- Sustainability pressures and drivers will continue to grow
- Some sustainability drivers pose unique challenges for ports
- If properly addressed, sustainability enhances ability to meet goals
- Successful approaches require new types of analysis, collaboration and communication

# Questions and Answers

## *Preguntas y Respuestas*



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