



Sustainability and Climate Change at Ports

Presentation to
AAPA Facilities Engineering Seminar



November 8, 2007

Presentation Outline



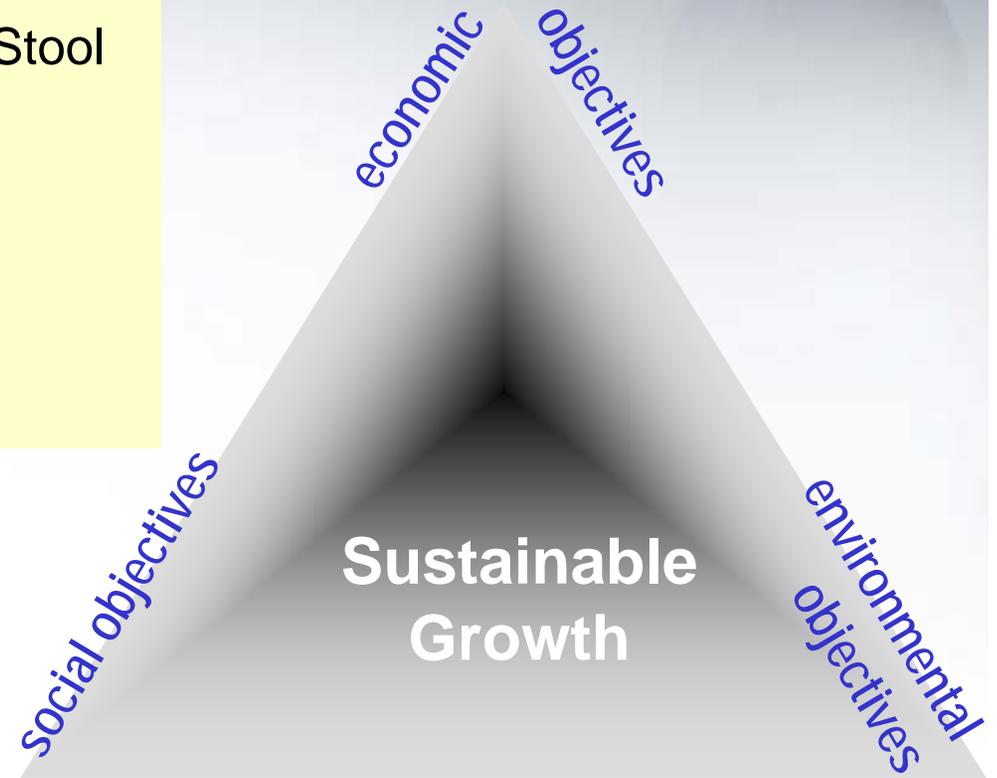
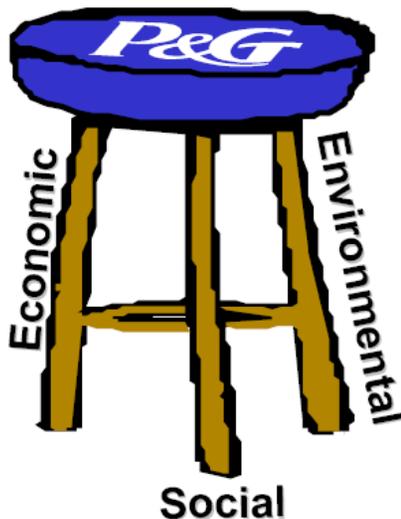
- Climate change in the context of sustainability
- Climate change drivers for ports
- How are ports responding
- What does the future hold?
- Framework for decision-making



Practical Interpretation of Sustainability



- Numerous conceptual frameworks
- Triple Bottom Line/Three-Legged Stool
 - Economics/profits
 - Environment/ecology
 - Social/community/people
- Key concept is to achieve balance between these three objectives



Key Sustainability Drivers/Trends Applicable to Ports



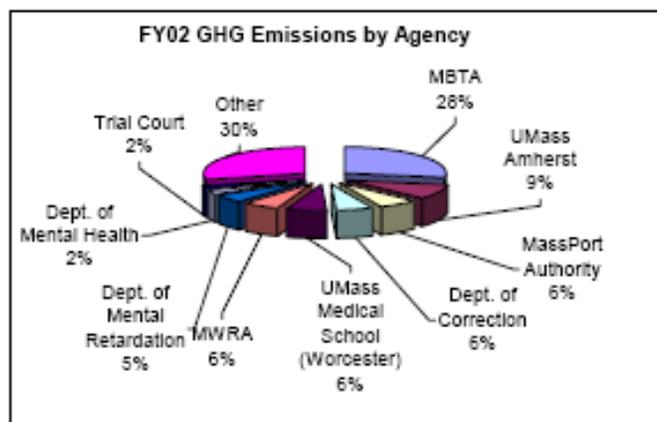
- **Stakeholder engagement**
- Increased reporting
- **Climate change/carbon management**
- Resource efficiency
- Green buildings/facilities
- Environmentally preferable purchasing



Key Stakeholders Active in Climate Change and Ports



- Transportation sector generally of concern with regards to climate change
- Sophisticated public interest groups focused on ports
- Politicians and regulatory agencies responding to stakeholder concerns



Public Interest Groups/NGOs – Engaged on Climate Change



COMMUNITIES FOR CLEAN PORTS

GET ON BOARD
We want to build a community of 10,000 - You can help by joining us today.

Email:
Zip Code:

10,000
8,000
6,500 AS OF TODAY
4,000
2,000

It's been 347 days since Clean Air Action Plan passed, and 9 clean trucks service the ports.

TELL CARB TO FIGHT PORT POLLUTION AND GLOBAL WARMING

Last year California passed the Global Warming Solutions Act to cut greenhouse gas pollution. The Solutions Act also requires the California Air Resources Board (CARB) to create Early Action Measures to reduce greenhouse gases and other pollution from the air we breathe.

In California, the goods movement industry (the trucks, ships, and trains that come to, and pass through California ports) creates about 30% of all smog-forming **NOx**, and 75% of all **diesel Particulate Matter**. This type of pollution is responsible for 2400 premature deaths, higher cancer rates, and respiratory disease across California. Diesel Particulate Matter is also a greater contributor to climate change than the most well known greenhouse gas, carbon dioxide.

Shockingly, the pollution from the goods movement industry is being left out of the Early Action Measures.

Tell CARB not to leave pollution from the goods movement industry out of their plans for improving air quality and fighting global warming.

(For more information, please visit our [Early Action Measures](#) page)

Dear California Air Resources Board,

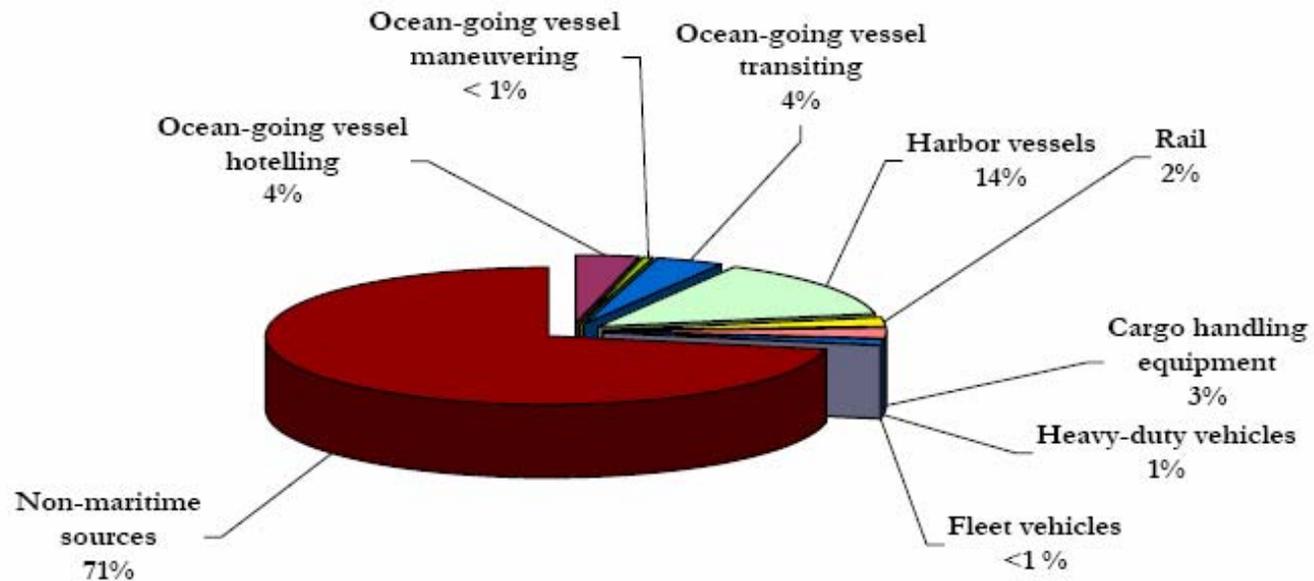
I urge the California Air Resources Board (CARB) and Governor Schwarzenegger to maintain California's status as the world's leader on global warming by adopting the strongest possible Early Action Measures as part of the implementation of AB 32, the Global Warming Solutions Act of 2006.

The goods movement industry – the trucks, ships, and trains that come to and transport products here and to the rest of the country – is responsible for about 30% of all smog-forming NOx and 75% of all diesel Particulate Matter (PM) emissions in California. Annually, these "criteria pollutant" emissions are responsible for 2400 premature deaths, higher cancer rates, and respiratory disease across California. In addition to poisoning the air we breathe, diesel Particulate Matter and NOx, also contribute more to global warming than the leading greenhouse gas, carbon dioxide (CO2), as CARB has reported.

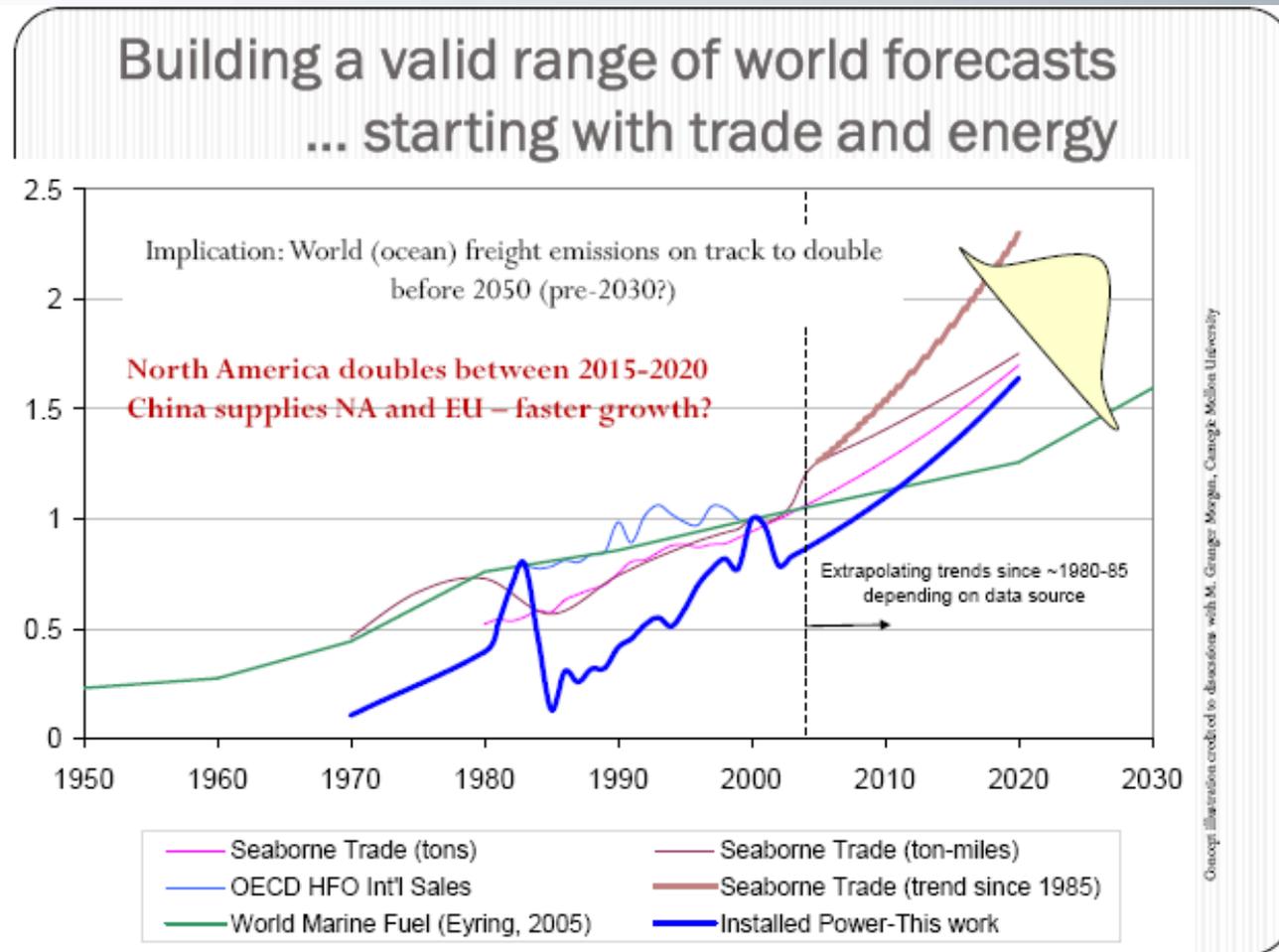
So I urge you to reverse your decision to leave goods movement pollution reduction strategies out of your Early Action Measures for addressing global warming. By limiting PM and NOx pollution as part of your AB 32 Early Action Measures, the Air Resources Board can act aggressively to improve air quality and reduce greenhouse gases.

Specifically, I believe that CARB should include the following Early Action measures:

Public Does Not Distinguish Between Ports and Related Activities



Scientific Community Engaged – Predicting Growth in CO2



Political Entities - Taking Action on Climate Change



**PEOPLE OF THE STATE OF CALIFORNIA,
ACTING BY AND THROUGH ATTORNEY
GENERAL EDMUND G. BROWN JR.,**

Petitioner,

v.

HONORABLE STEPHEN JOHNSON,

**In his official capacity as Administrator,
United States Environmental Protection
Agency**

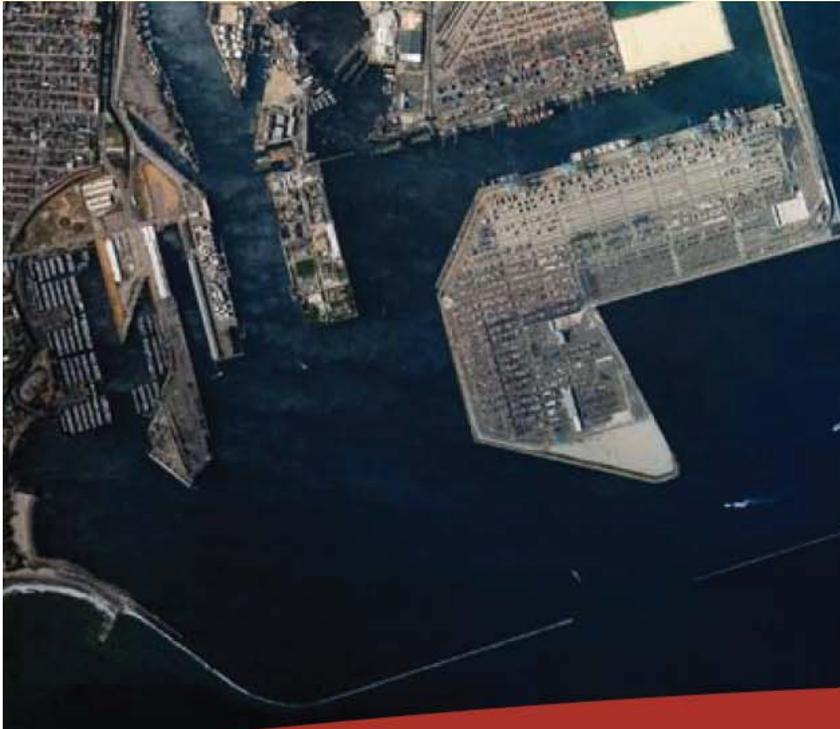
Defendant.

Docket No. _____

**PETITION FOR RULE MAKING
SEEKING THE REGULATION OF GREENHOUSE GAS
EMISSIONS FROM OCEAN-GOING VESSELS**

What Are Some Ports Doing In Response?

- Emission Inventories
- Climate Action Plans
- Alternative Marine Power/Cold Ironing



FINAL 2006
**San Pedro Bay Ports
Clean Air Action Plan**

OVERVIEW





Alternative Marine Power – Two Examples

Oakland LNG Mobile Cold Ironing

Goteborg Renewable Energy AMP

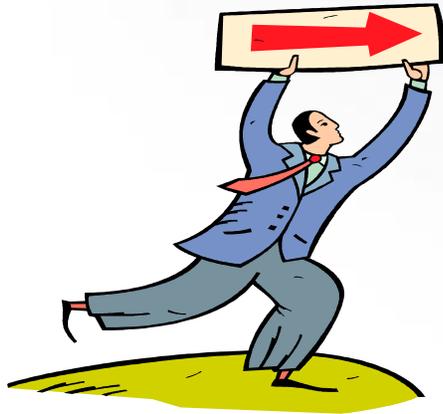


What Does the Future Hold?



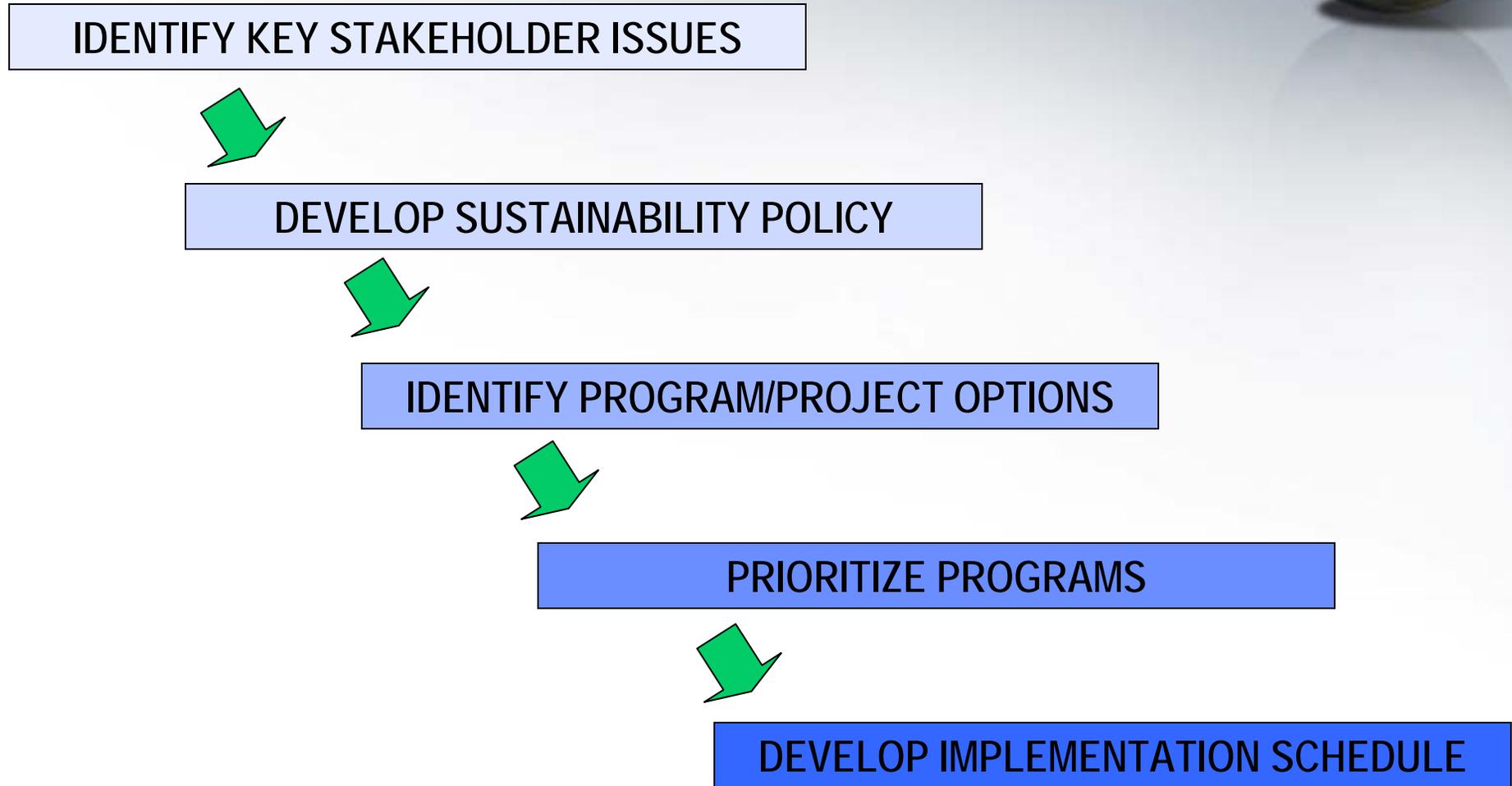
- Increasing stakeholder engagement on climate change
- More stringent regulatory environment with regards to carbon emissions
- Areas of activity for ports:
 - Carbon emissions inventories
 - Climate change action plans
 - Alternative marine power
 - Focus on inter-modal issues

How to Move Forward

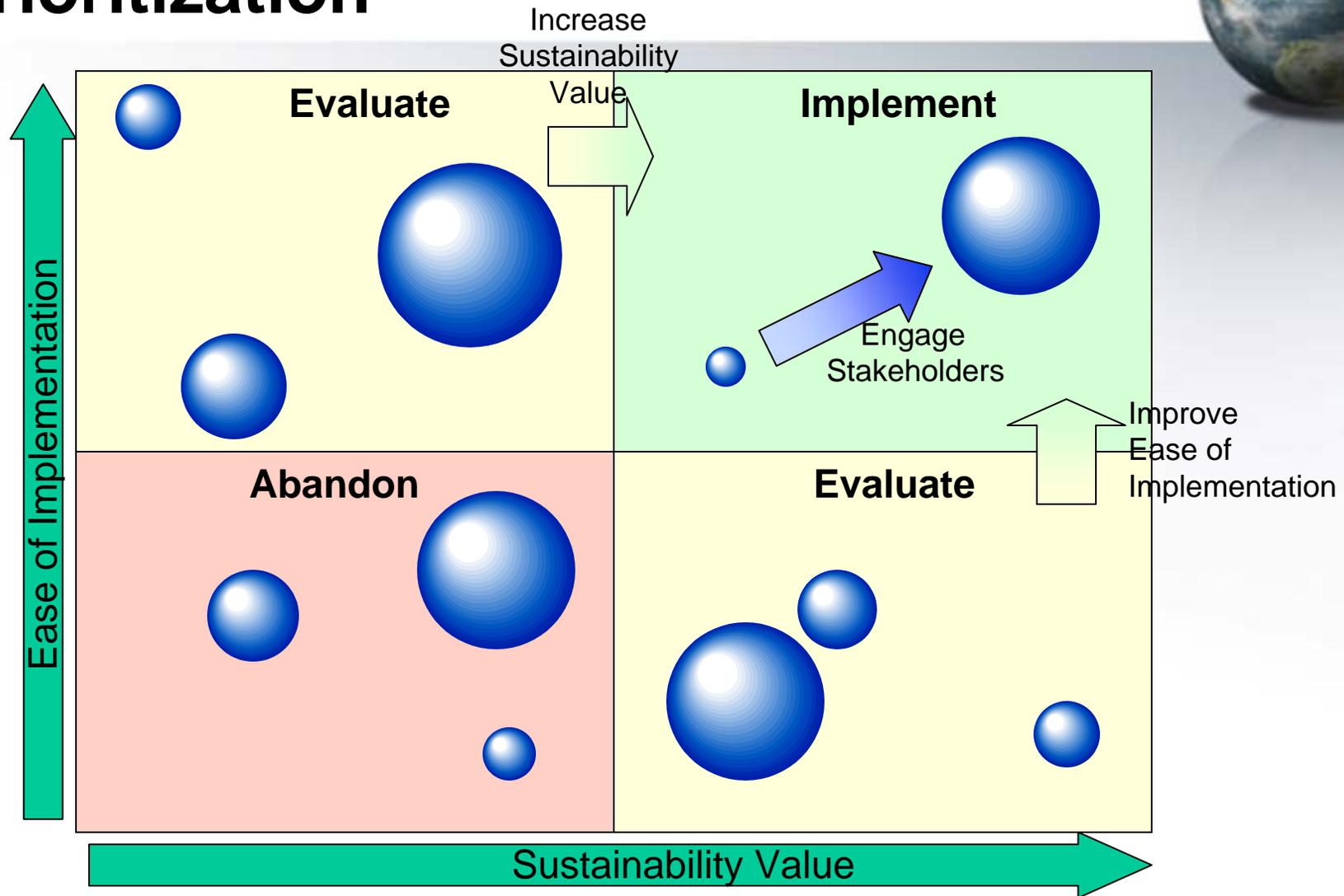


- Given the broad range of climate change issues, it can be hard to prioritize how to move forward
- There are a number of tools available to help identify, prioritize and manage sustainability programs
- The key is a systematic approach with clearly defined objectives

Addressing Sustainability – A Phased Approach Maximizes Value

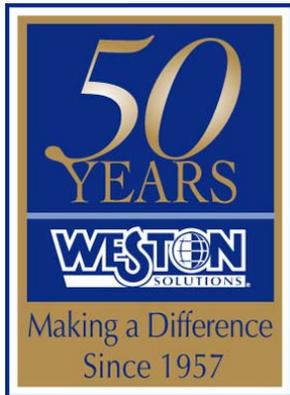


One Approach to Program Prioritization



 = Level of Stakeholder Interest

Contact Information



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