

2014 DEQ Environmental Excellence Conference



Enhancing Environmental Management and Stewardship

Sustainability in Action: Perspectives from a Career Pollution Prevention Warrior

March 12, 2014

Cam Metcalf

KPPC Executive Director (Retired)

Volunteer (Currently!)

“Career P2 Warrior”



KPPC "Mr. No Good"





Technical Services Program

Communications, Outreach
& Technology Program



KPPC services are
**Free, Confidential &
Non-regulatory**
for KY businesses and
industries



The Big Squeeze is on!

There is a global business environment!



Public Concerns

Environmental

**Water, Climate, Resources
Life Cycle Management**

**Social –
“Interested Parties”**

**Responsibility & Roles
Transparency Accountability**

Core Values

**Corporate Values
Leader’s Values
Societal Values**

Our “Universal Backyard”



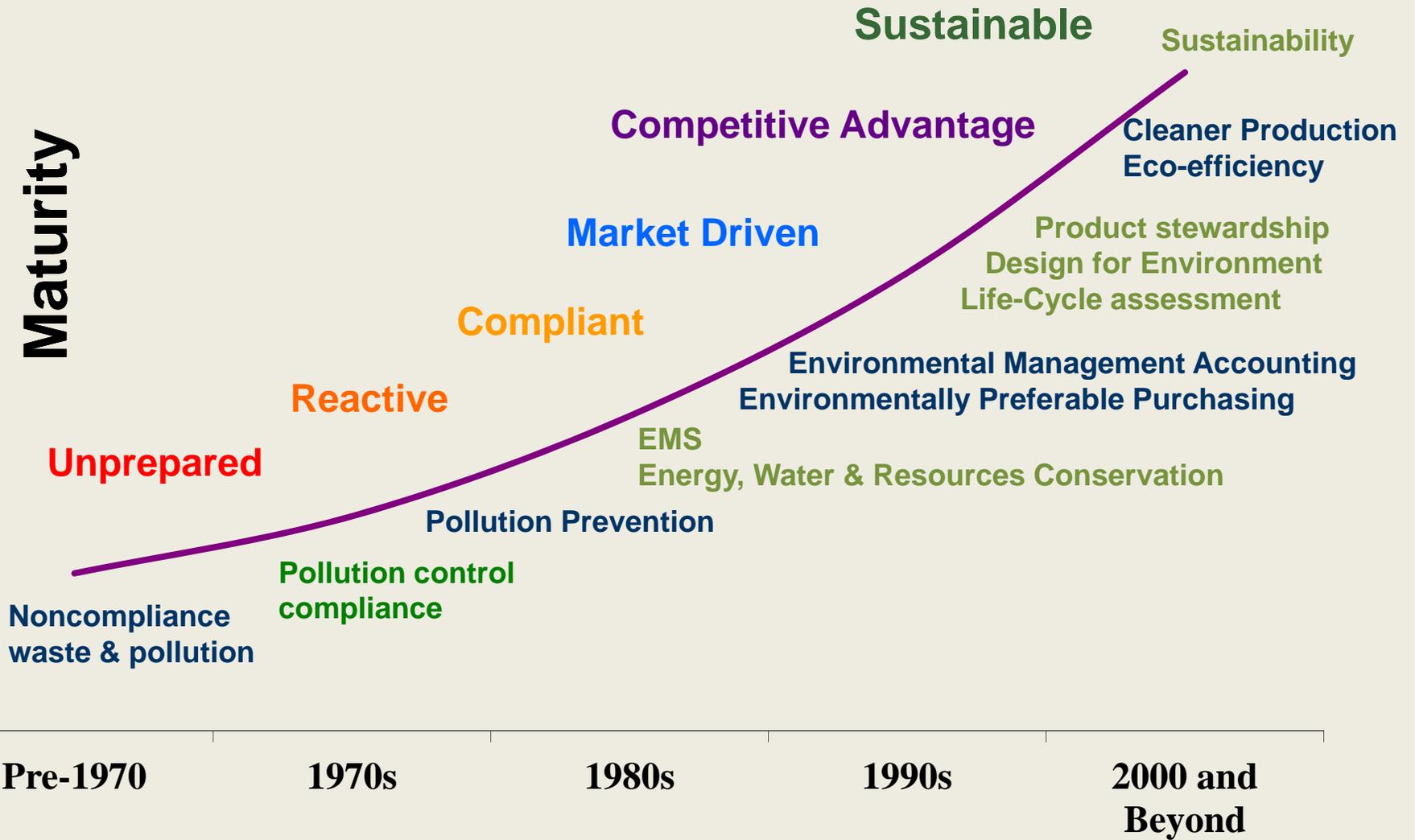
NIMBY
NOTE
BANANA
CAVE
NOPE



BAD
Shit

Evolution of Business

Maturity



Evolution of Definitions and Programs (Systems)

Waste Minimization (WM)

WM Program-in-Place

**Innovative & effective approaches to
reduce pollutants for WM**



WM Program-in-Place

Provide top management support

Characterize waste generation & waste management costs

Perform periodic waste minimization assessments

Maintain a cost allocation system

Encourage technology transfer

Implement program & conduct evaluations

Why a Systems Approach? It's Value-Added

Strengthens management focus

Creates opportunity for cultural shift

Introduces & sustains a systematic approach to efficiency

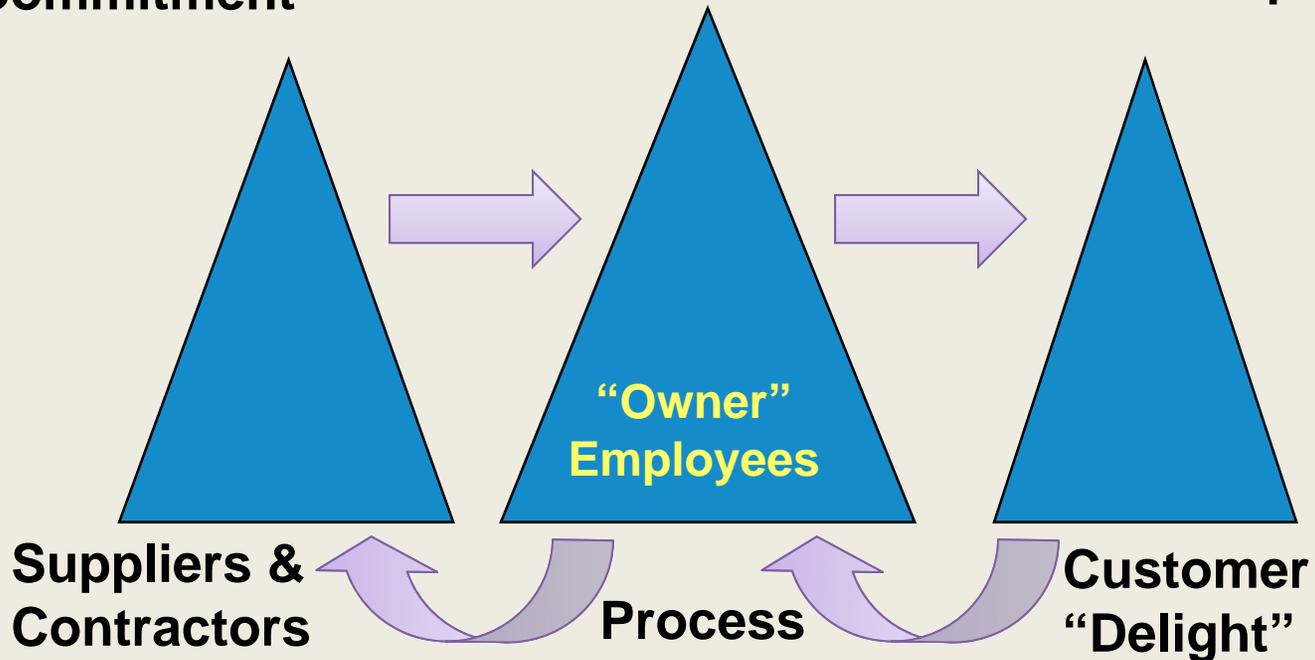
Requires management commitment of resources

Based on measurement & verification

Systems Approach: Value-Added Operational Tool

**Prevent Waste &
Reduce Energy Use:**
→ Involvement or
→ Commitment

Add Value:
→ Fulfillment
→ Expectations
→ Exceed Expectations



Customer Satisfaction is Worthless; Customer Loyalty is Priceless!

Sell Change: If it ain't broke...

A Systems Approach vs. Random Acts of Excellence

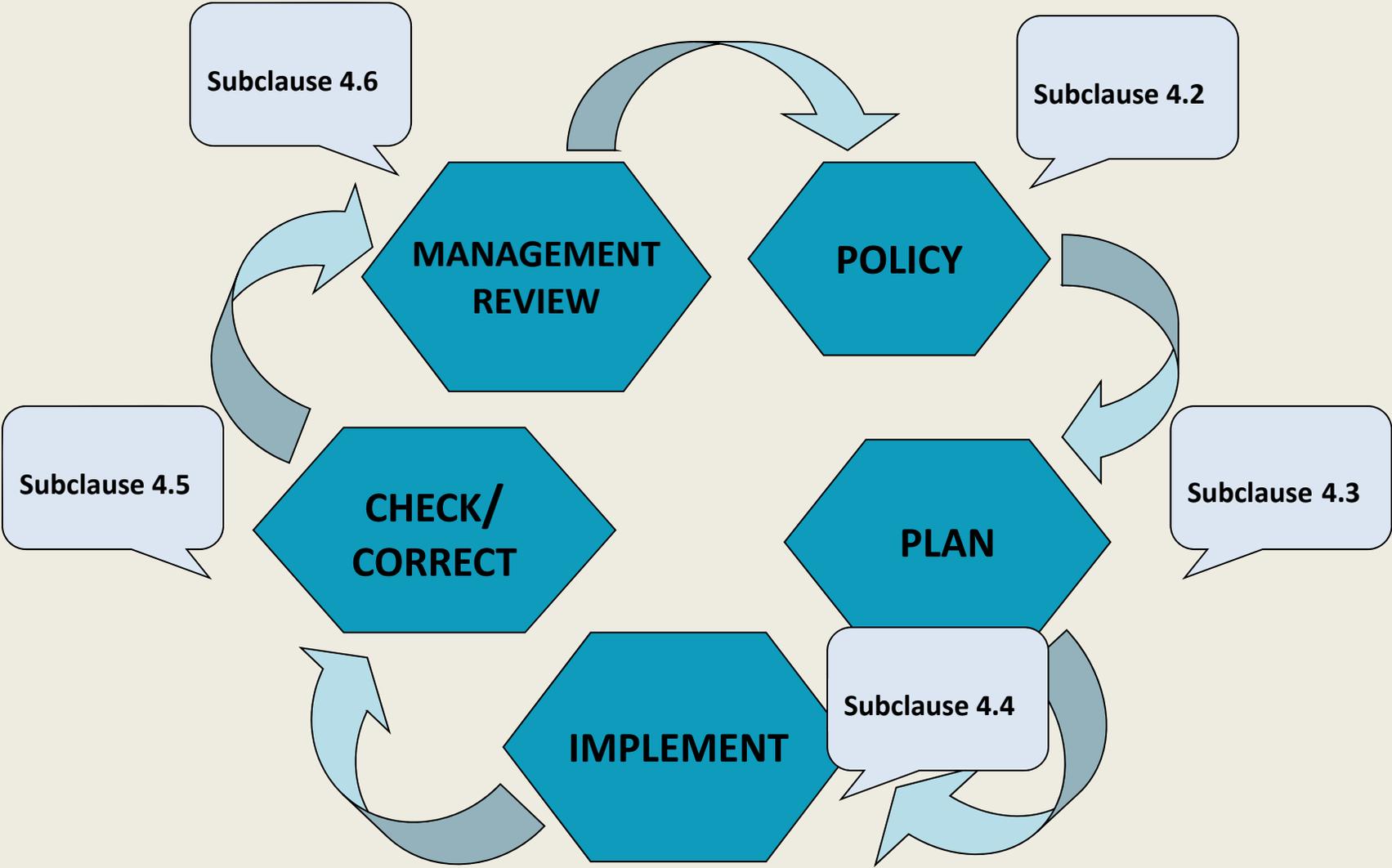
ENVIRONMENTAL Management System

Environmental Management ***SYSTEM***

Environmental ***MANAGEMENT*** System



ISO 14001 Requirements



Environmental Excellence

Is everyone working from the latest “how we do things” procedures?

***SAY WHAT YOU DO,
DO WHAT YOU SAY!***

IF IT MOVES, TRAIN IT!

IF IT DON'T MOVE, CALIBRATE IT!

***BUT NO MATTER WHAT YOU DO,
DOCUMENT IT!!!***

There Are Two Sides of Organizational Change

Management

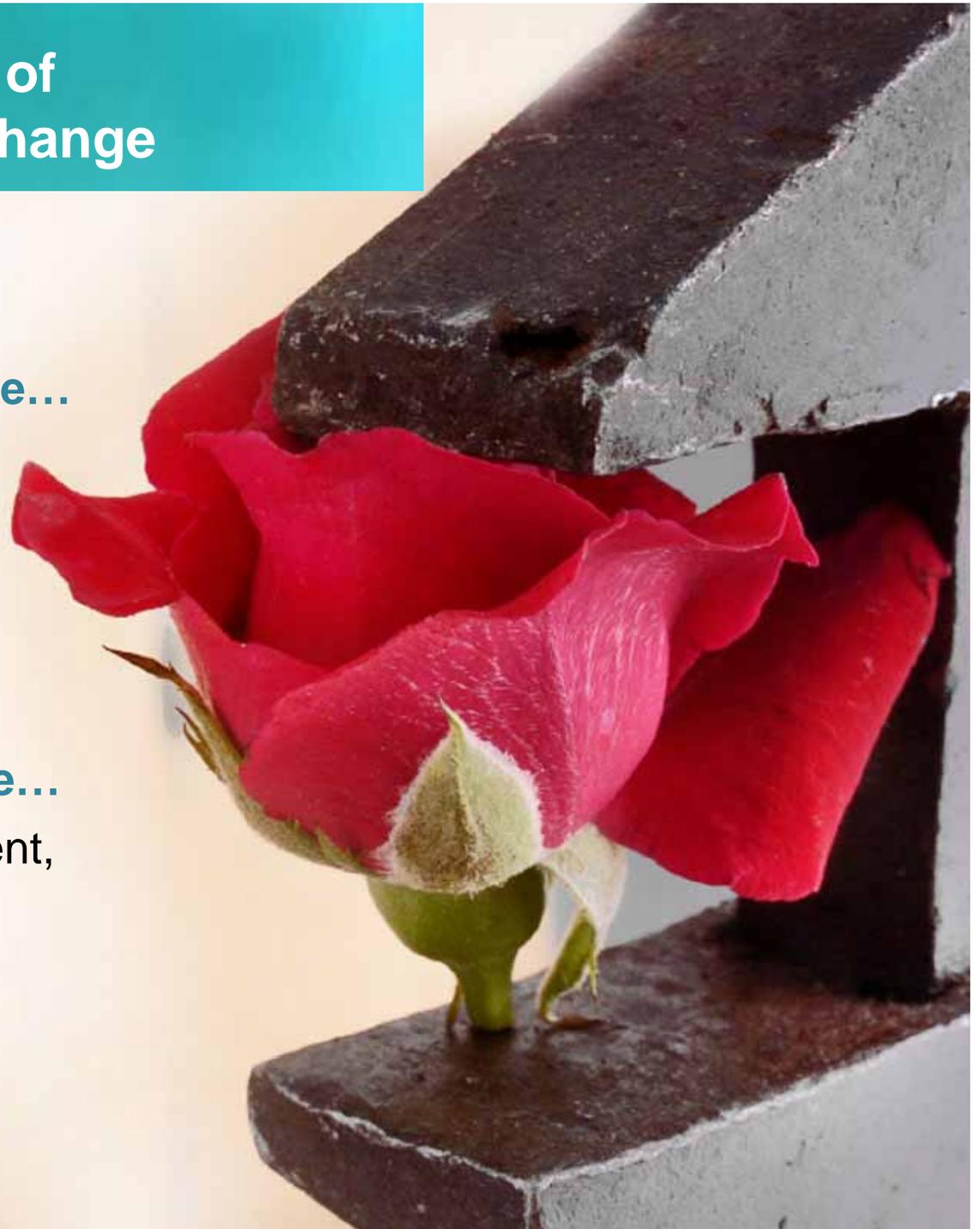
The HARD Side of Change...

Is about Processes,
Measurement, Tools,
Structures & Procedures

Leadership

The SOFT Side of Change...

Is about Buy-in, Commitment,
Overcoming Resistance to
Change & Self Leadership



7-Step Process for **Energy Efficiency (E2)** Management Program

Management

Technical



**COMMITMENT TO
CONTINUAL IMPROVEMENT**



SET GOALS



ACTION PLAN



IMPLEMENT PLAN



EVALUATE PROGRESS



RECOGNIZE ACHIEVEMENTS



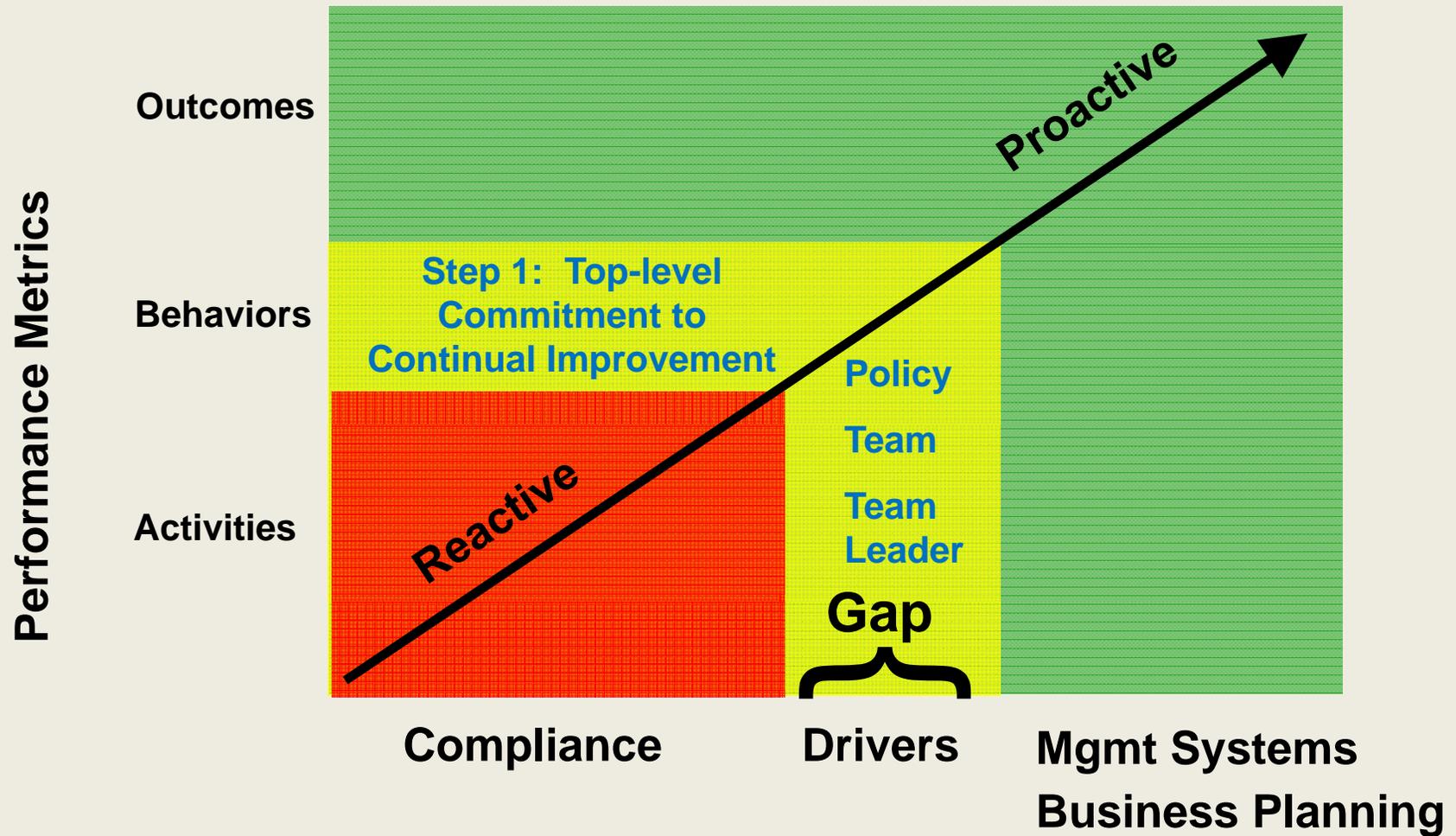
MONITOR & MEASURE

**DEVELOP BASELINE
FOR
**Energy Use &
Costs****

**E2 OPPORTUNITY
ASSESSMENTS**



Organizational Capability



7-Step Process for **Hazardous Waste** Management Program

Management

Technical



**COMMITMENT TO
CONTINUAL IMPROVEMENT**



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ACTION PLAN



IMPLEMENT PLAN



EVALUATE PROGRESS



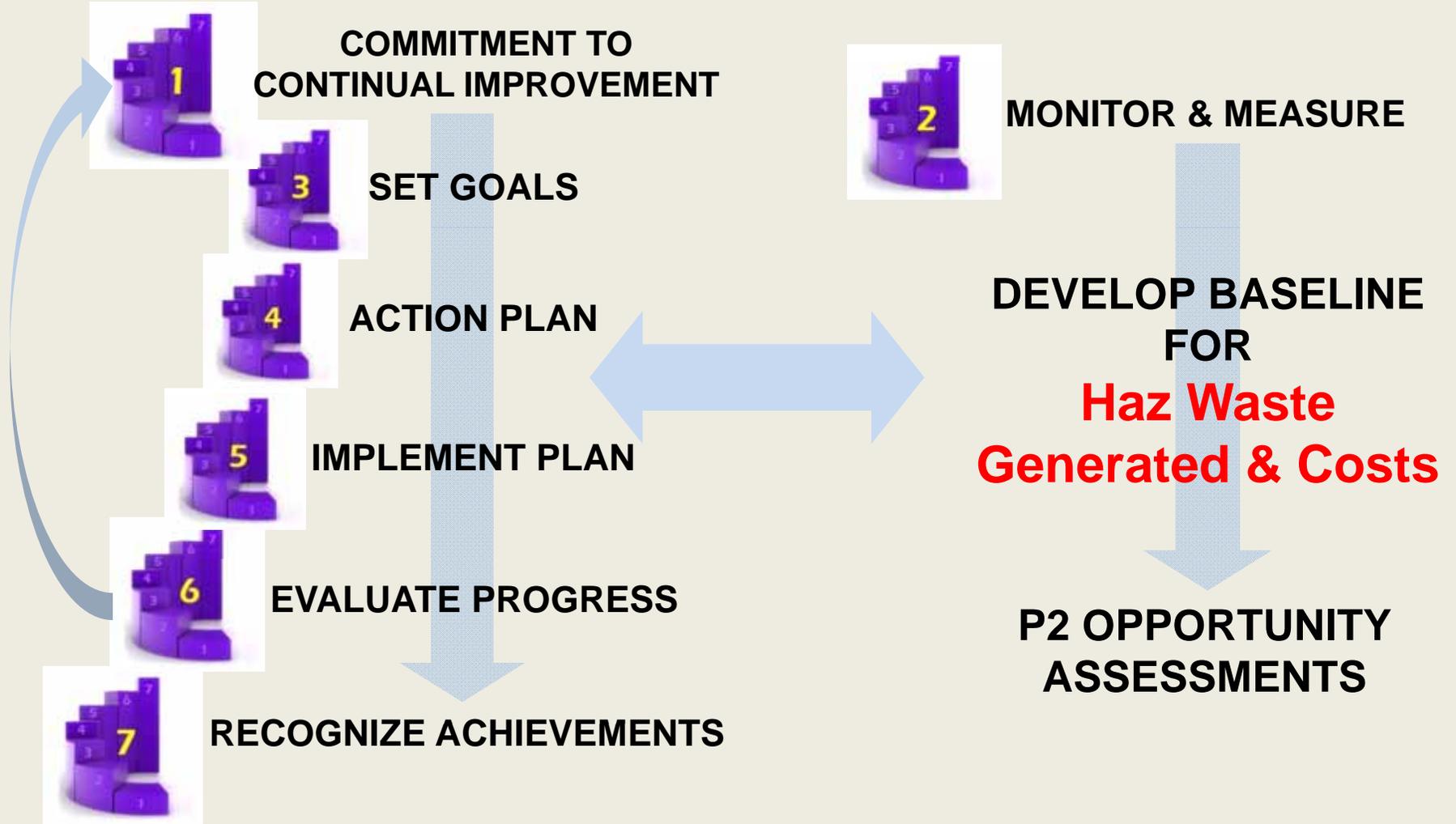
RECOGNIZE ACHIEVEMENTS



MONITOR & MEASURE

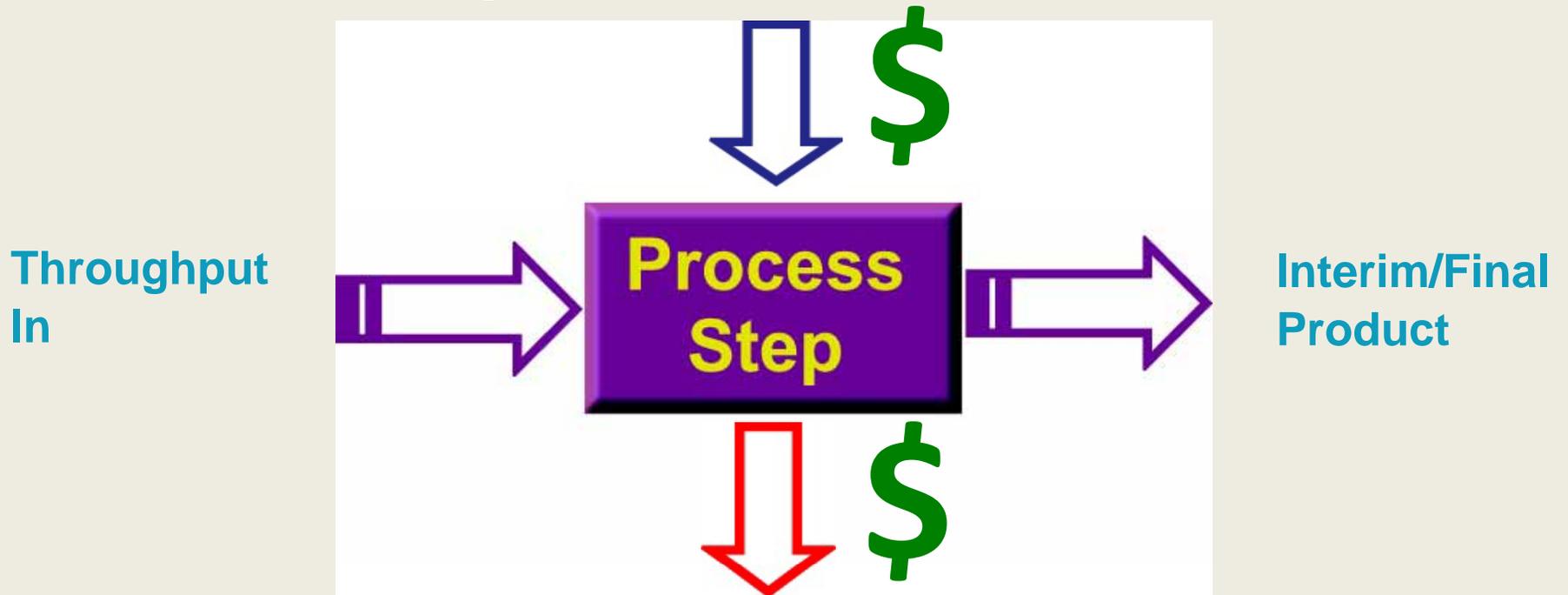
**DEVELOP BASELINE
FOR
**Haz Waste
Generated & Costs****

**P2 OPPORTUNITY
ASSESSMENTS**



Resource Accounting

Non-product Resource Use



Non-product Resource Loss

Resource Management

What Business Leaders want to Know (and will likely ask you!)

What is the benefit to me?

- How many dollars?
- How quickly do the dollars accrue?
- What is the risk of investing?
- What is the risk of not investing?

What's the most I should pay for it?

How does it compare to other ways to use the same money?

KPPC Kentucky's Resource Center for Environmental Sustainability

The “New Economy”

We need a Fresh Perspective

- Emergence of ‘new thinking’ on budgets
- Evaluation across the organization
- Rethinking organization’s structure and external partnerships
- Revisiting organizational management principles
- Emphasis on communications and community engagement

7-Step Process for **Recycling** Management Program

Management

Technical



**COMMITMENT TO
CONTINUAL IMPROVEMENT**



SET GOALS



ACTION PLAN



IMPLEMENT PLAN



EVALUATE PROGRESS



RECOGNIZE ACHIEVEMENTS



MONITOR & MEASURE

**DEVELOP BASELINE
FOR
**Solid & Haz Wastes
Generated & Costs****

**Reuse & Recycling
Markets OPPORTUNITY
ASSESSMENTS**



7-Step Process for **Water Conservation** Management Program

Management

Technical



**COMMITMENT TO
CONTINUAL IMPROVEMENT**



SET GOALS



ACTION PLAN



IMPLEMENT PLAN



EVALUATE PROGRESS



RECOGNIZE ACHIEVEMENTS



MONITOR & MEASURE

**DEVELOP BASELINE
FOR**

**Water Usage &
Treatment Costs**

**P2 OPPORTUNITY
ASSESSMENTS**



7-Step Process for **Green Chemistry** Management Program

Management

Technical



**COMMITMENT TO
CONTINUAL IMPROVEMENT**



MONITOR & MEASURE



SET GOALS



ACTION PLAN



IMPLEMENT PLAN



EVALUATE PROGRESS



RECOGNIZE ACHIEVEMENTS

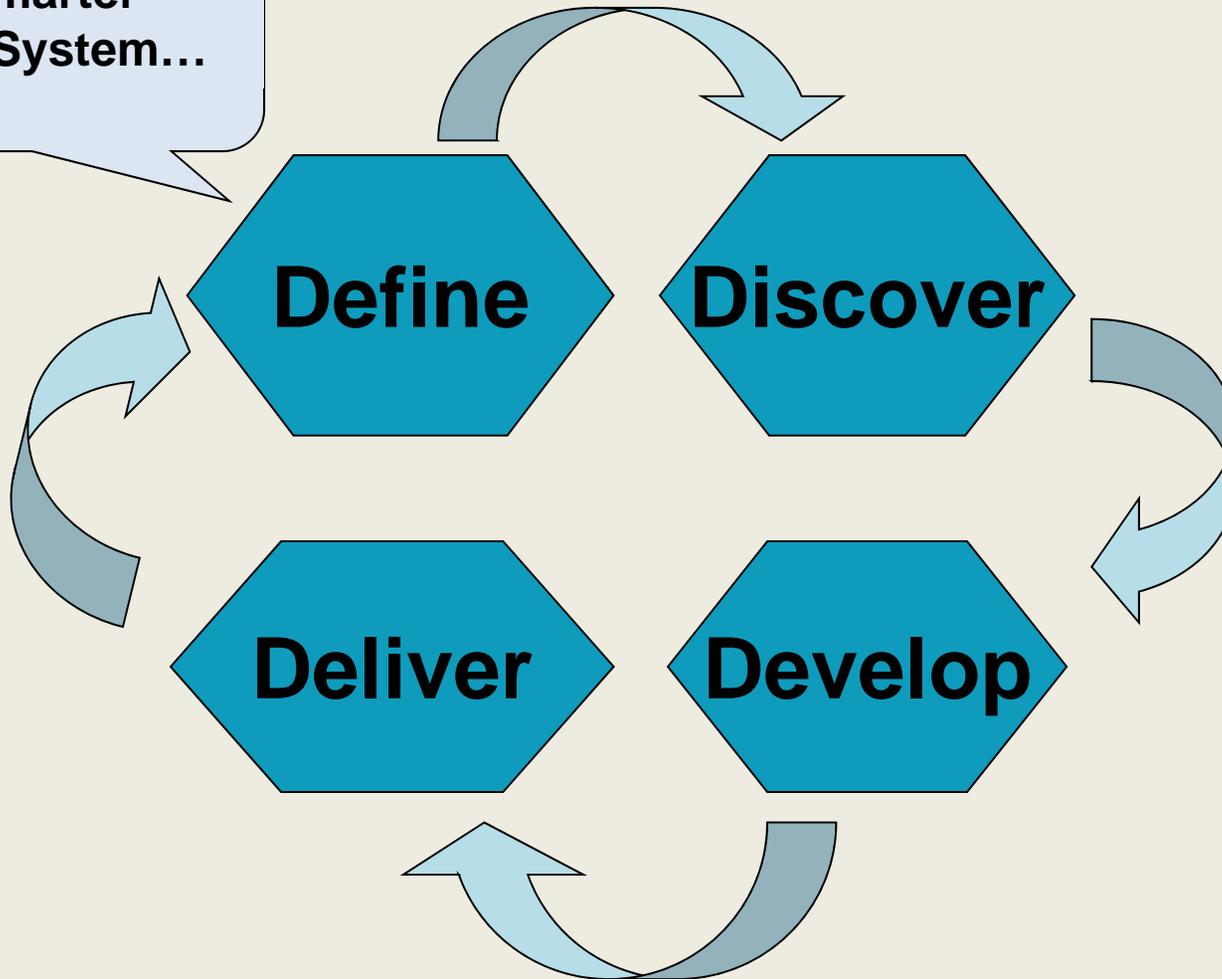
**DEVELOP BASELINE
FOR
**Toxic Materials
Usage & Costs****

**Safer Materials
OPPORTUNITY
ASSESSMENTS**

“Green Engineering”

Innovation Engineering

The new “smarter”
Innovation System...



P2 Systems Approaches -- Can you make them work?

Systems approaches for quality, economics, energy, environment & innovation

Leadership & management commitment to continual improvement

Moving from creating P2 awareness to promoting action plans through a systems approach process

Sustainability Training Focus for “Teams”

Training to enable economic growth for organization to succeed in a sustainable business environment

Training to enhance ‘green’ skills & capabilities for workers to address Pollution Prevention (P2), Energy Efficiency (E2) & Sustainability challenges

Creating workers *certified* in a variety of 'green' skills

Operational Controls

Help meet regulatory requirements & reduce potential significant environmental impacts.



KENTUCKY
SAVE ENERGY
NOW

Goal:

Reduce energy use in
energy-intensive facilities
by 2.5% per year for 10
years

*“What gets recognized
gets repeated!”*



Kentucky Save Energy Now

Technical Assistance for Energy-Intensive Facilities



Recognition Program – Implement the 7-Steps

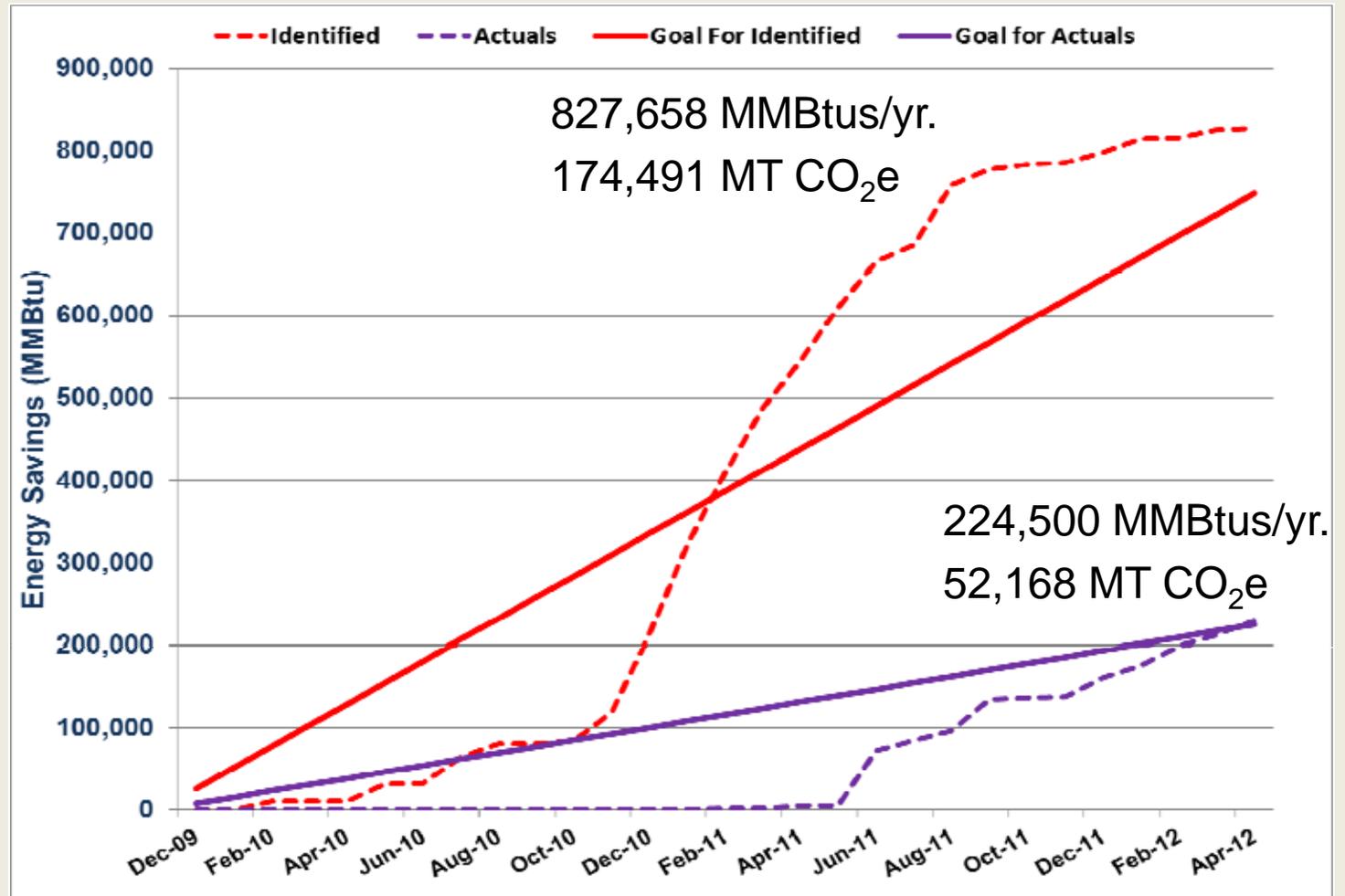
Achievement Level	Necessary Attributes
	<ul style="list-style-type: none">• Sign KY SEN Pledge• Establish Energy Use Baseline
	<ul style="list-style-type: none">• Institute Energy Management Policy• Establish Cross-Functional Energy Team• Attend Energy Management Training
	<ul style="list-style-type: none">• Assess operations for Energy Saving Opportunities• Develop Energy Action Plan (must include 2.5 percent/year minimum goal)
	<ul style="list-style-type: none">• Implement Energy Action Plan• Evaluate Progress of Energy Management Program
	<ul style="list-style-type: none">• Develop Internal Recognition Program• Mentor KY SEN Participants

Kentucky Save Energy Now

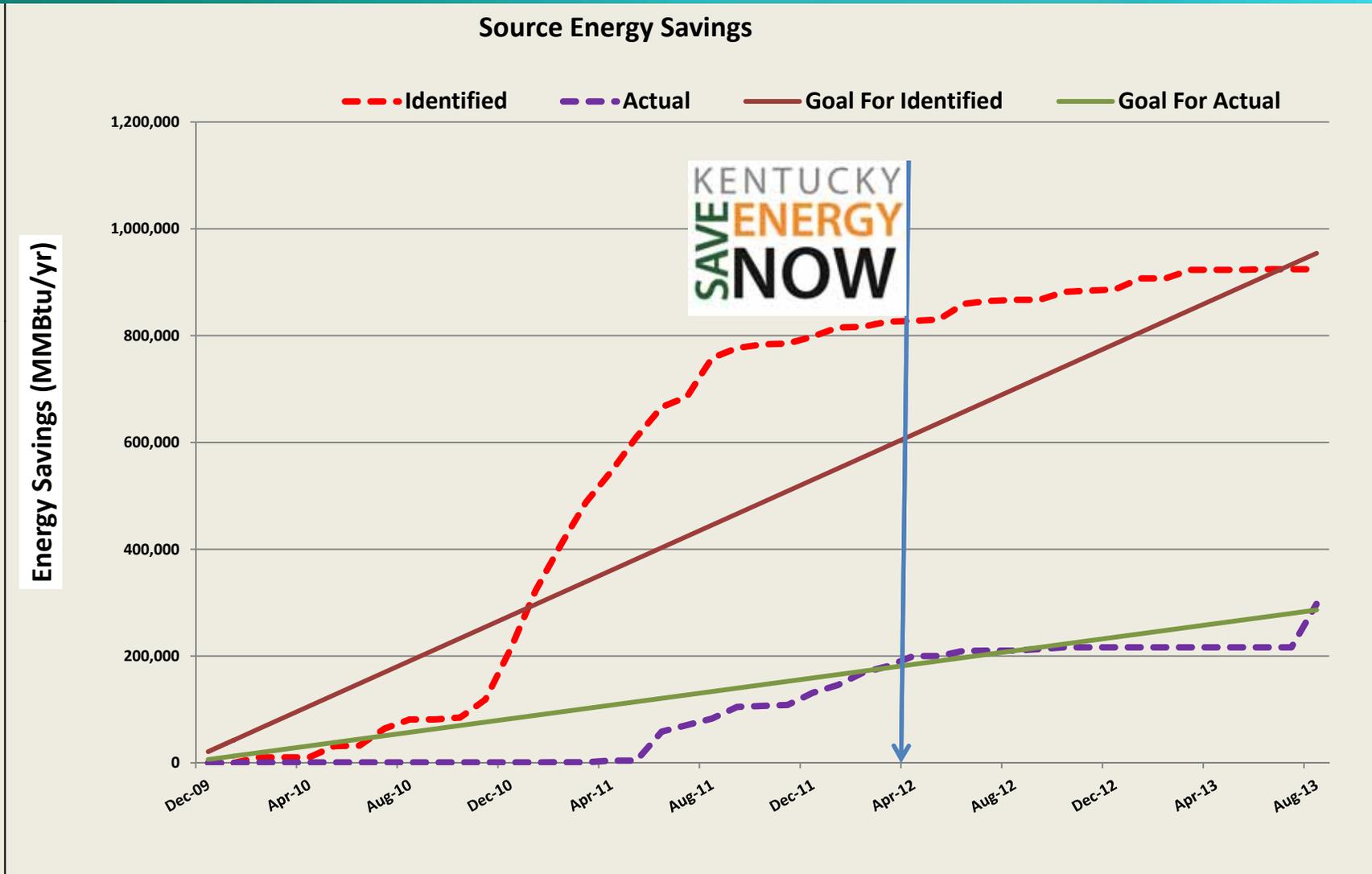
Technical Assistance for Energy-Intensive Facilities



Progress toward KY SEN goals

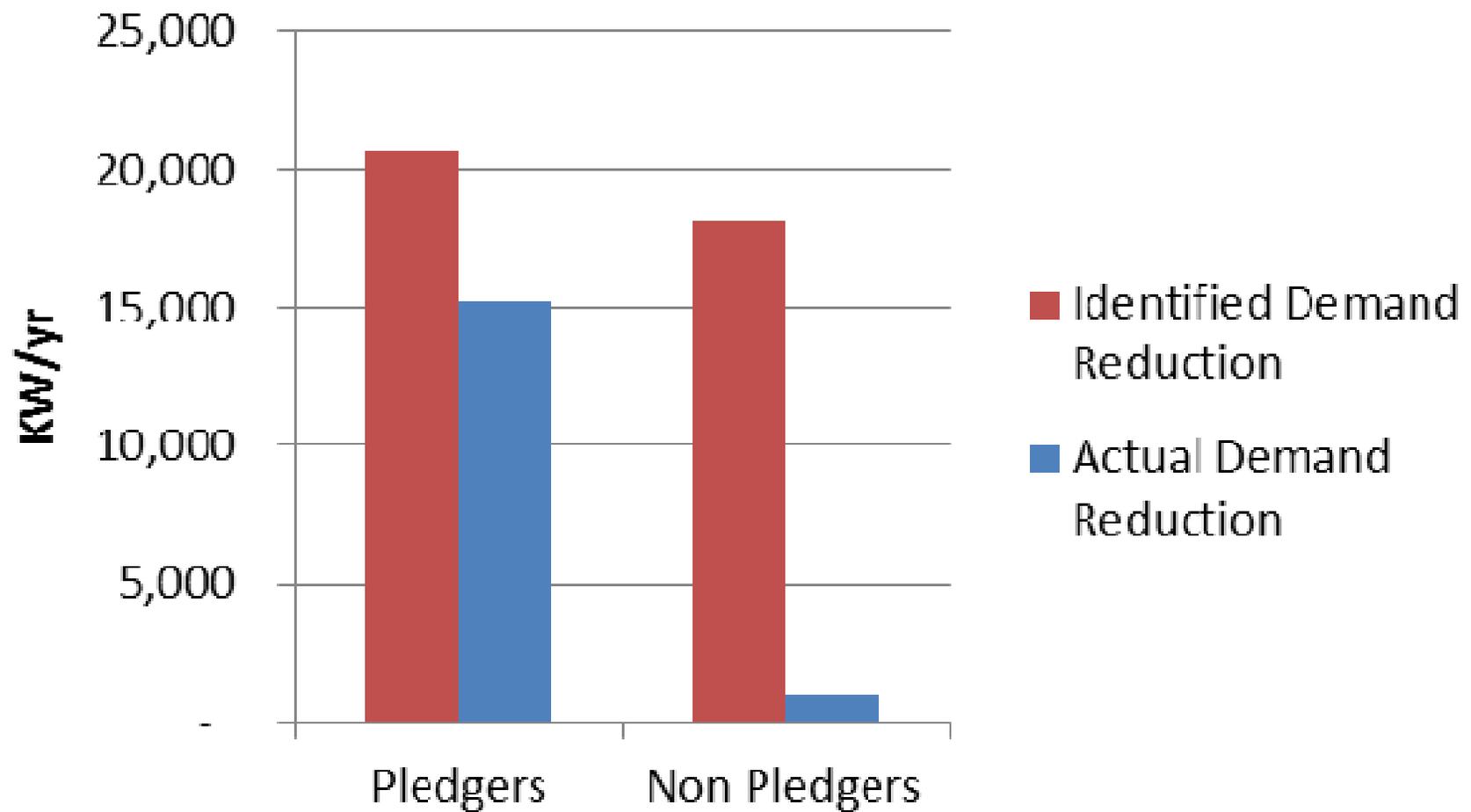


KPPC 's Energy Efficiency (E2) Program's Progress



Energy Demand Results

Demand



KPPC – A Nationally Recognized Center of Excellence



Improve Market Conditioning

Stakeholder groups are a powerful tool!

Figure 1 ADOP²T™ Program Process Map



Sell Change

Water

Air

Solids & Liquids (HW & SW)

Time

Energy Efficiency (E2)

Economy – Energy – Environment (E3)

A Public/Private Partnership
for Supporting Manufacturing
and Economic Growth

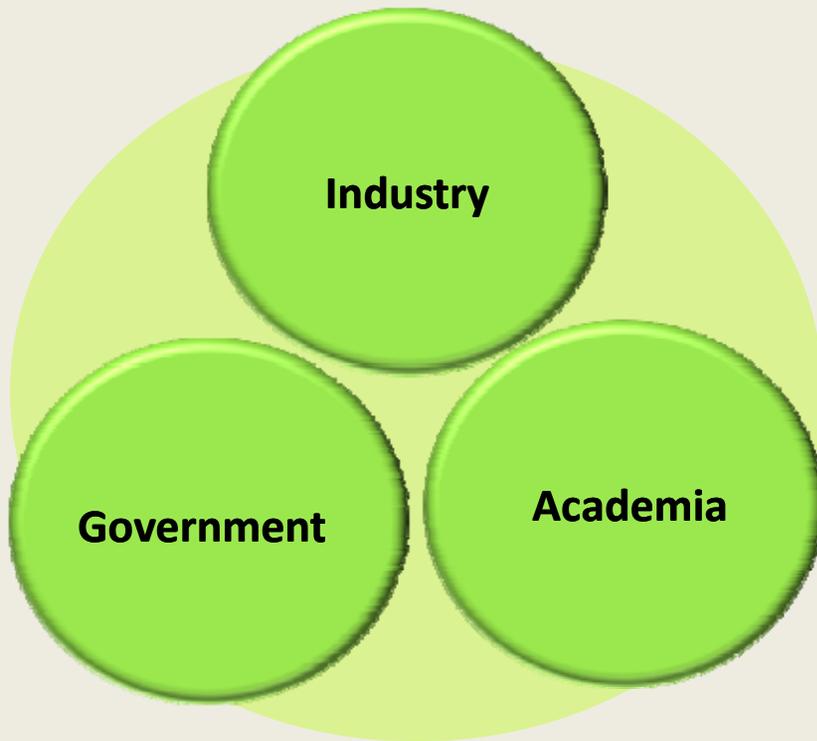


Learn more about regional and national E3 initiatives at the [Environmental Sustainability Resource Center \(ESRC\) website](#)



Clean Energy Council Development

Advanced Manufacturing Cluster



Jointly develop **Policies, Communications & Outreach and Advocacy** to:

Establish community connections

Advocate for clean energy business, research and industry

Promote research, innovation & public information

Educate industry, government representatives and the public about a clean energy economy

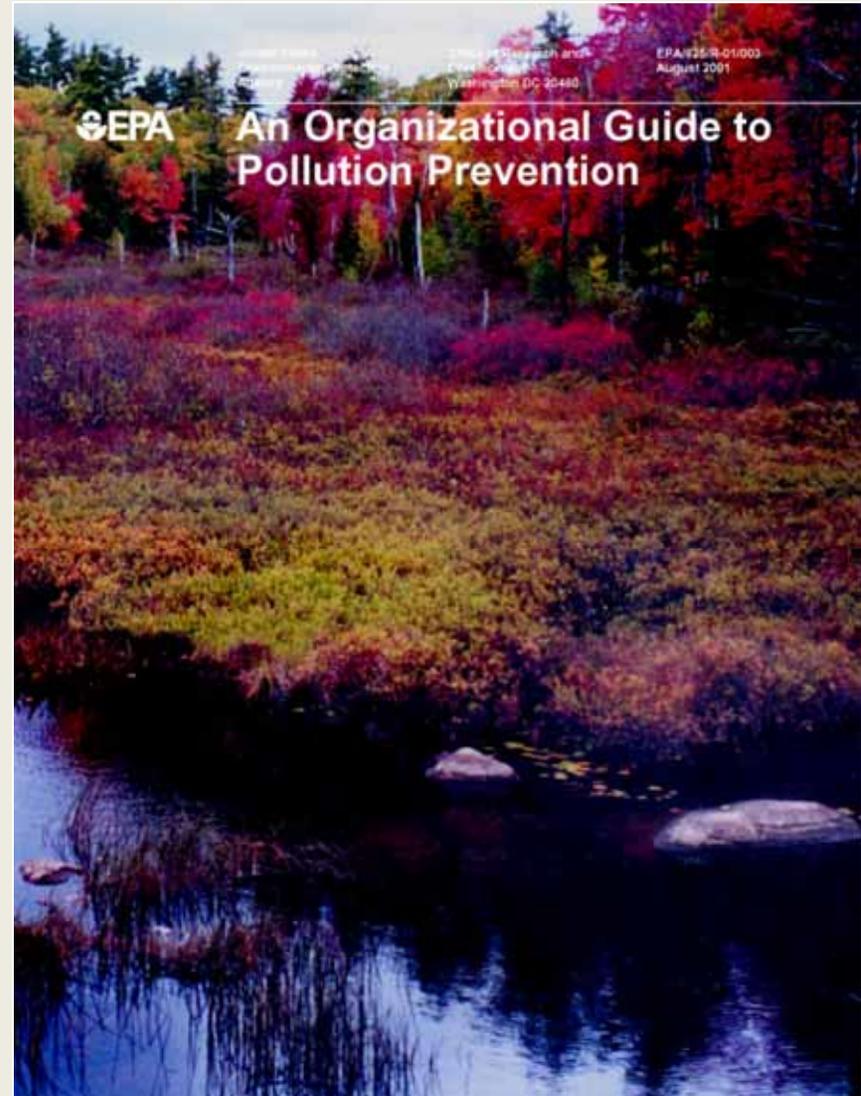
An Organizational Guide to Pollution Prevention

**Publication #
EPA/625/C-01/003**

**A new approach, unlike
previous assessment manuals**

**Basic P2 Concepts and Tools
(Chapters 1-4)**

**P2 Program Implementation
Approaches
(Chapters 5-8)**



STAY FOCUSED ON THE TASK



“My Old Kentucky Home”

