

Evaluation-Ready

A practical approach for
“no savings left on the table”

Lorene Flaming, PECl

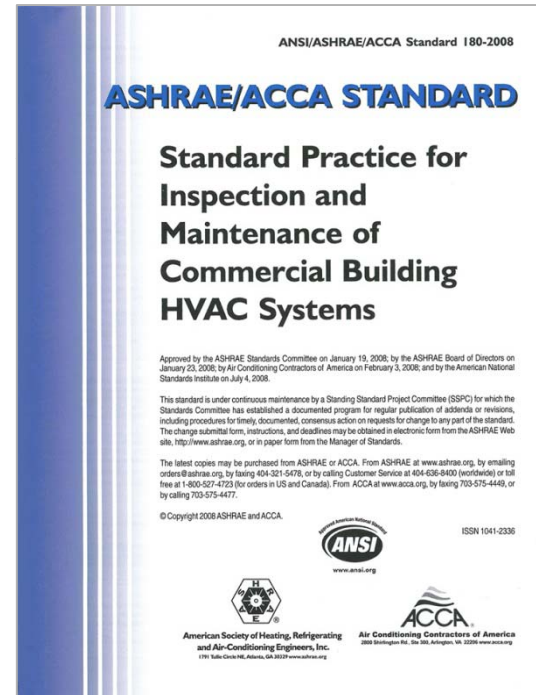
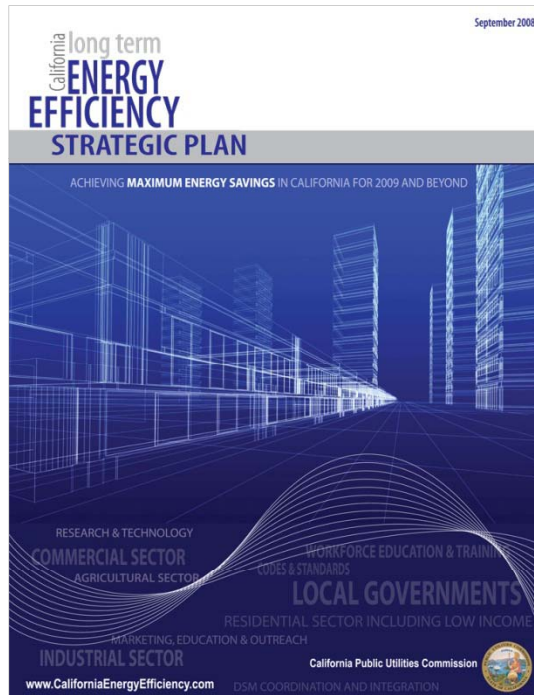
Keith Forsman, PG&E

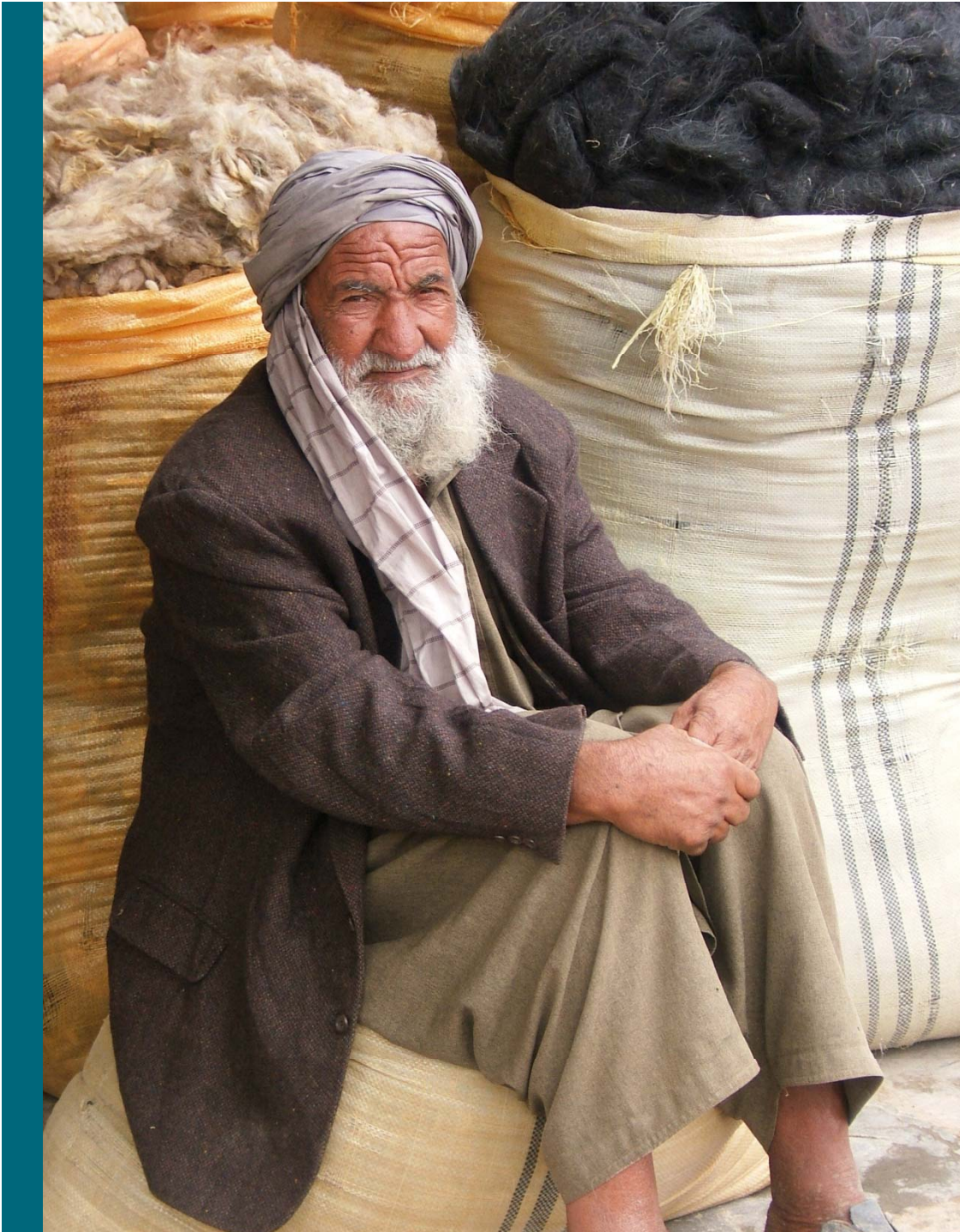
October 16, 2012



Introduction

Genesis of the Statewide Commercial HVAC Quality Maintenance Program



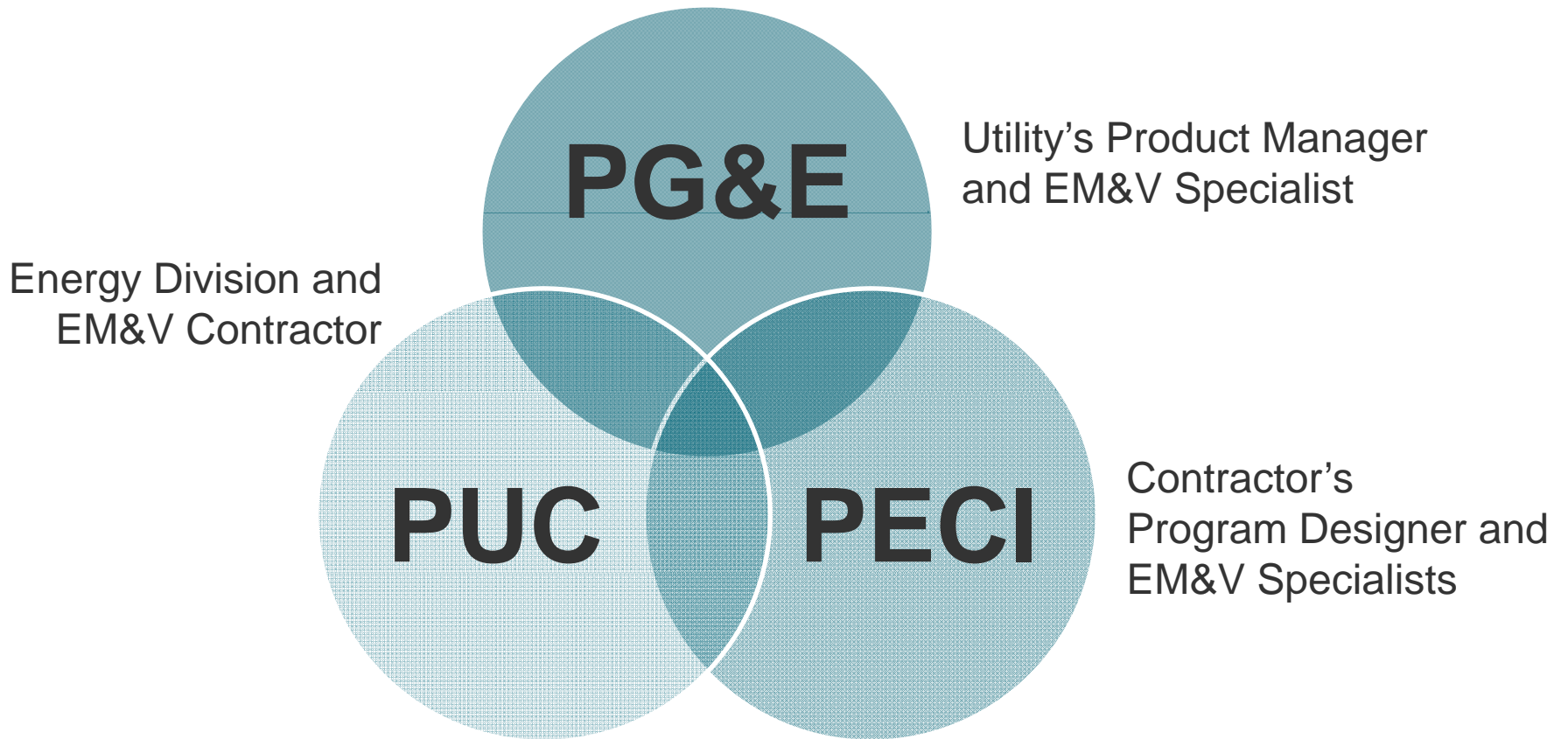


A story from Afghanistan

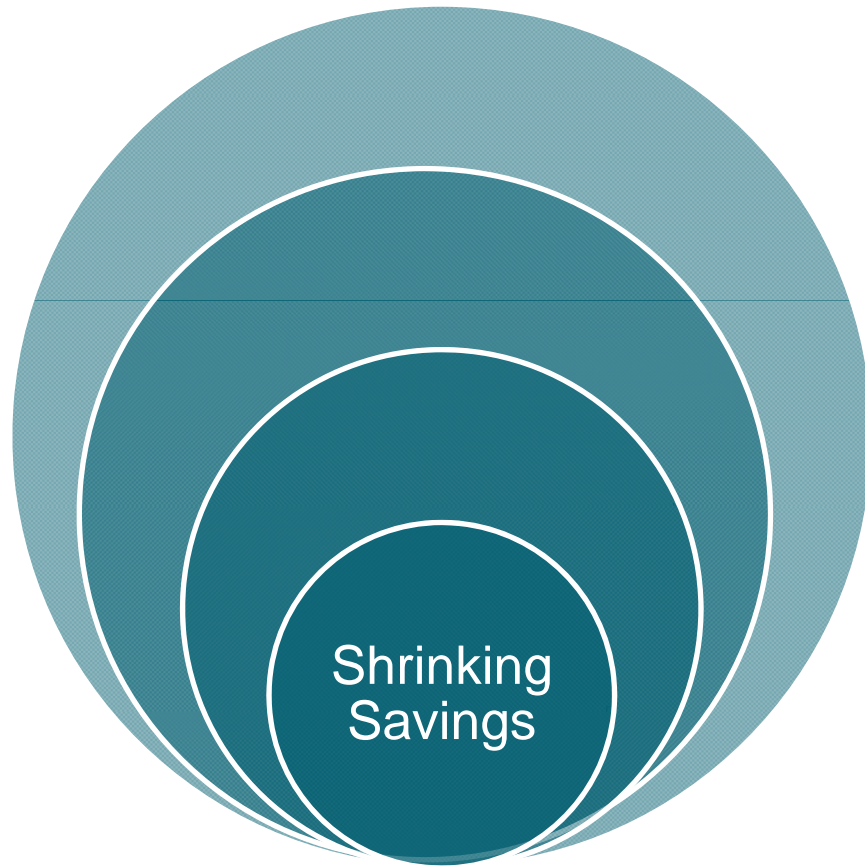


People Matter

Skills, Experience, Interest, Culture



Ways Programs Forfeit Savings



Missing customer data

Missing program theory

Evaluator interviews
wrong customer
representative

The Solution



Why Create a Performance Management Plan?

Early agreement on metrics

- Promote clarity and alignment.
- Create a richer vision.
- Capture critical data in real time.

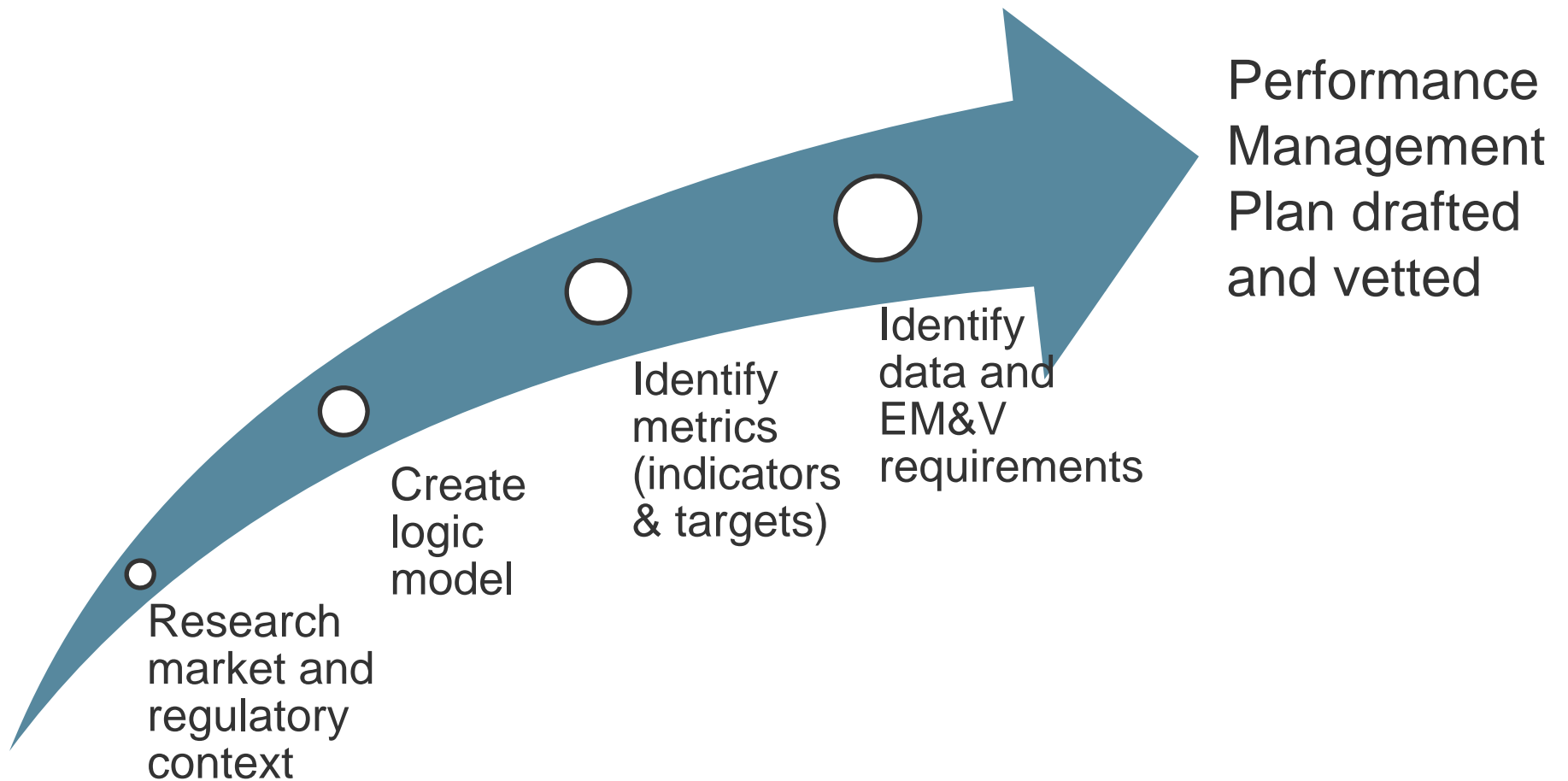
Forecasting and Feedback

- Track progress against targets.
- Support continuous improvement.

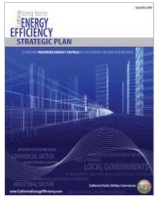
A sense of shared responsibility

- Achieve buy-in for documenting and achieving results.

Checklist: Program Design Phase



Market and Regulatory Context



Strategic Plan

Vision for HVAC Market:

Quality installation and maintenance become the industry and market norm.

EE Program Focus:

- + Less on short-term EE activities.
- More on long-term market transformation activities.



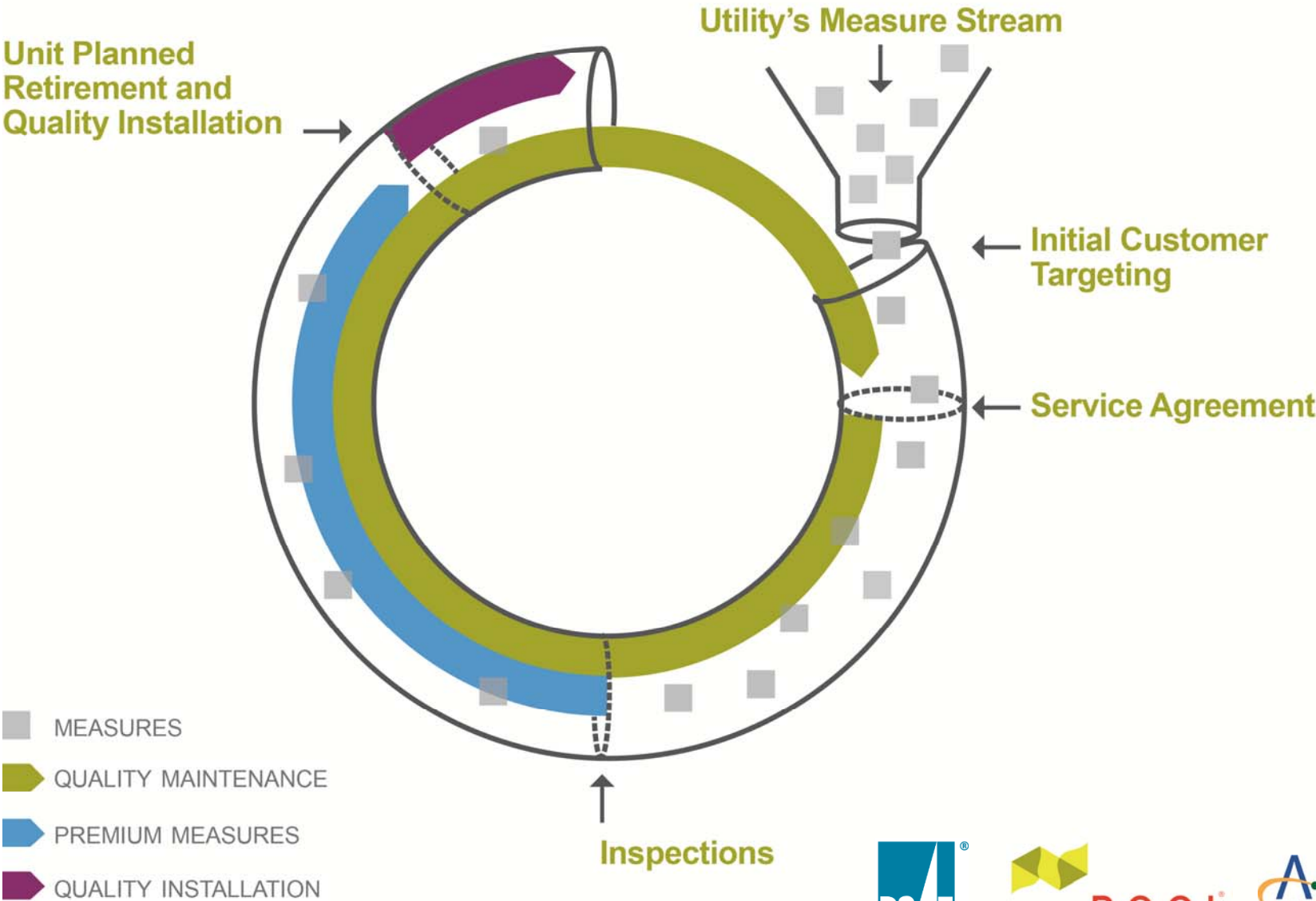
Standard 180

HVAC Maintenance Plans

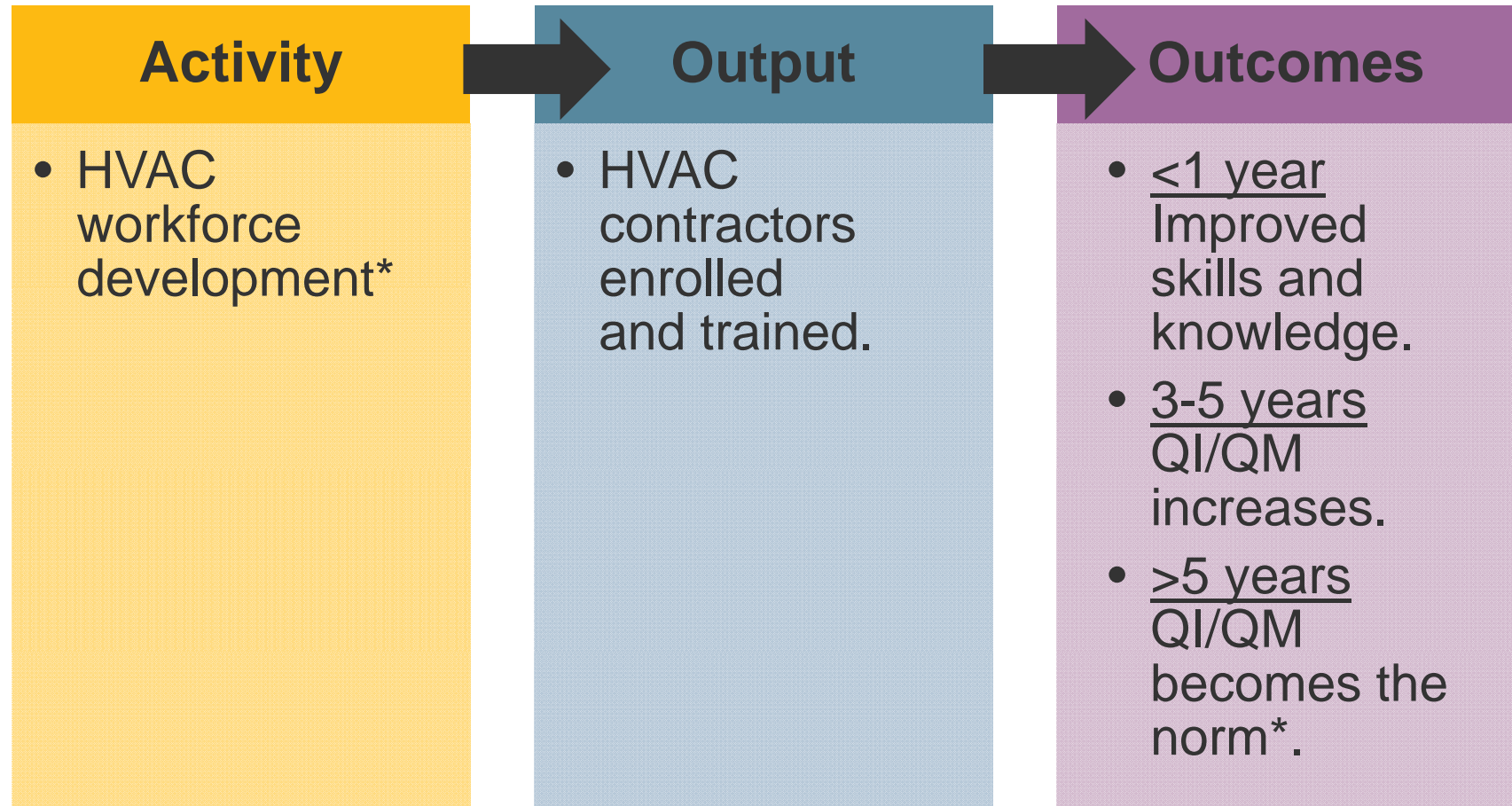
- ✓ Inspection and maintenance tasks
- ✓ Equipment inventory
- ✓ Performance objectives
- ✓ Condition indicators
- ✓ Customer Reports

Measure Pipeline for Each HVAC Unit

A best fit approach and ongoing engagement deliver deeper savings.



Example: Program Logic



Example: Program Metrics

Indicators and Targets

Market Effect Indicator

- Number of individuals trained (technical and operational)

Process Indicator

- % of leads from Utility Reps that result in a signed Maintenance Agreement.

Impact Indicator

- Annual gross kWh saved.

Vetting & Streamlining Metrics

In (What Counts?)

Short Term

1. Service Agreements and HVAC units.
2. Enrolled HVAC contractors.
3. Training courses and trainees.
4. Leads from Utility Reps that result in a Service Agreement.
5. Treatments (measures).
6. Incentives (\$).
7. kWh, kW, therms saved.
8. Customers satisfied.
9. Applications processed within 1 week.

Mid Term

10. Customers adopt premium measures (pursue deeper savings).

Long Term

11. Customers renew a Service Agreement without incentives (“graduate”).

Out

Too Difficult to Track

- Change in unplanned service calls.
- Change in repair costs.

Importance Unclear

- Funds leveraged from other sources.

Example: Data Requirements

Who, What, When, Where

Indicator

- % of leads from PG&E Reps that result in a signed Service Agreement.

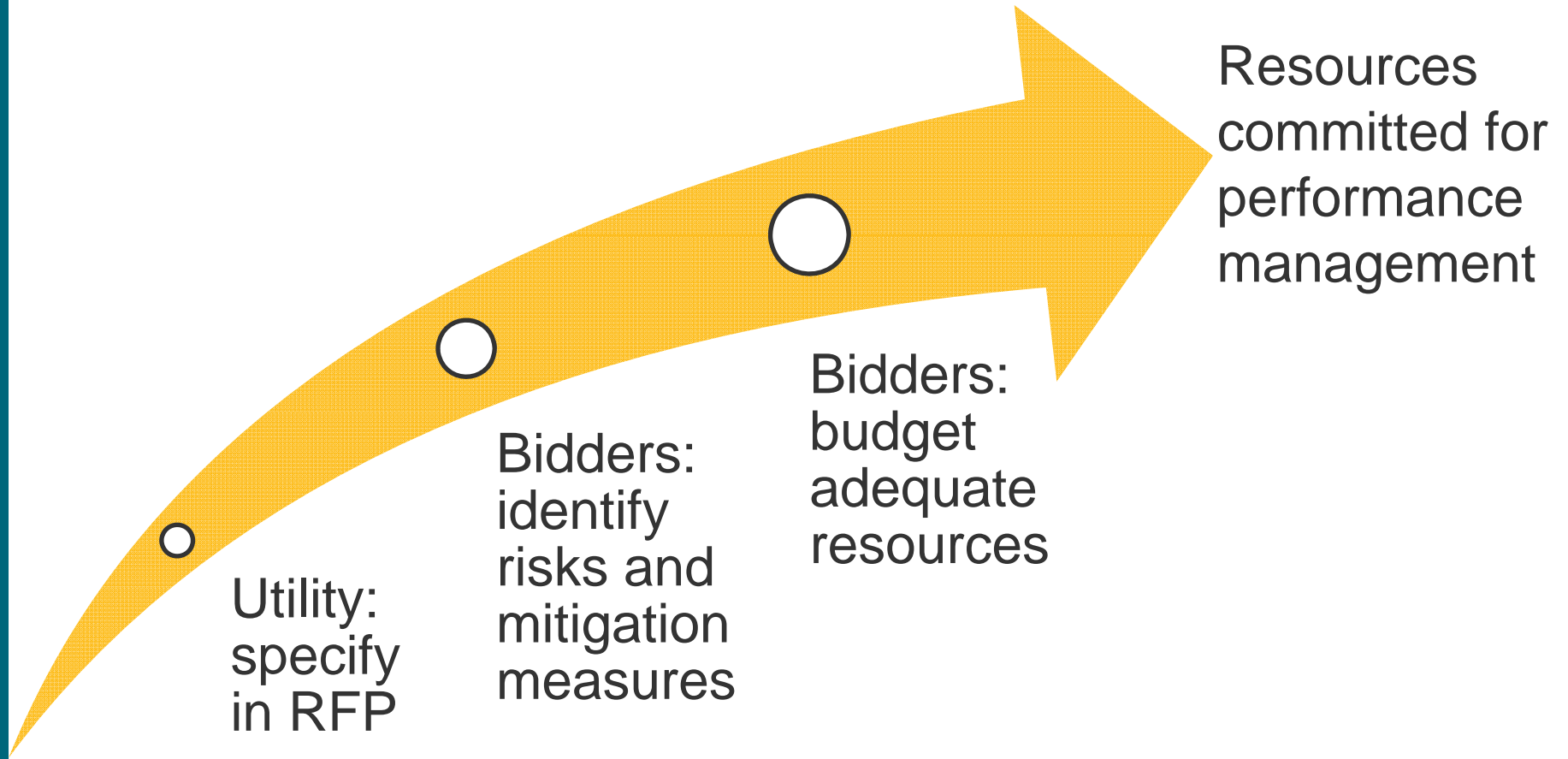
Data Collection

- Reps will provide a list of leads.
- Implementer will assign to Contractors through program portal, based on guidelines.
- Tracked in Implementer's database.

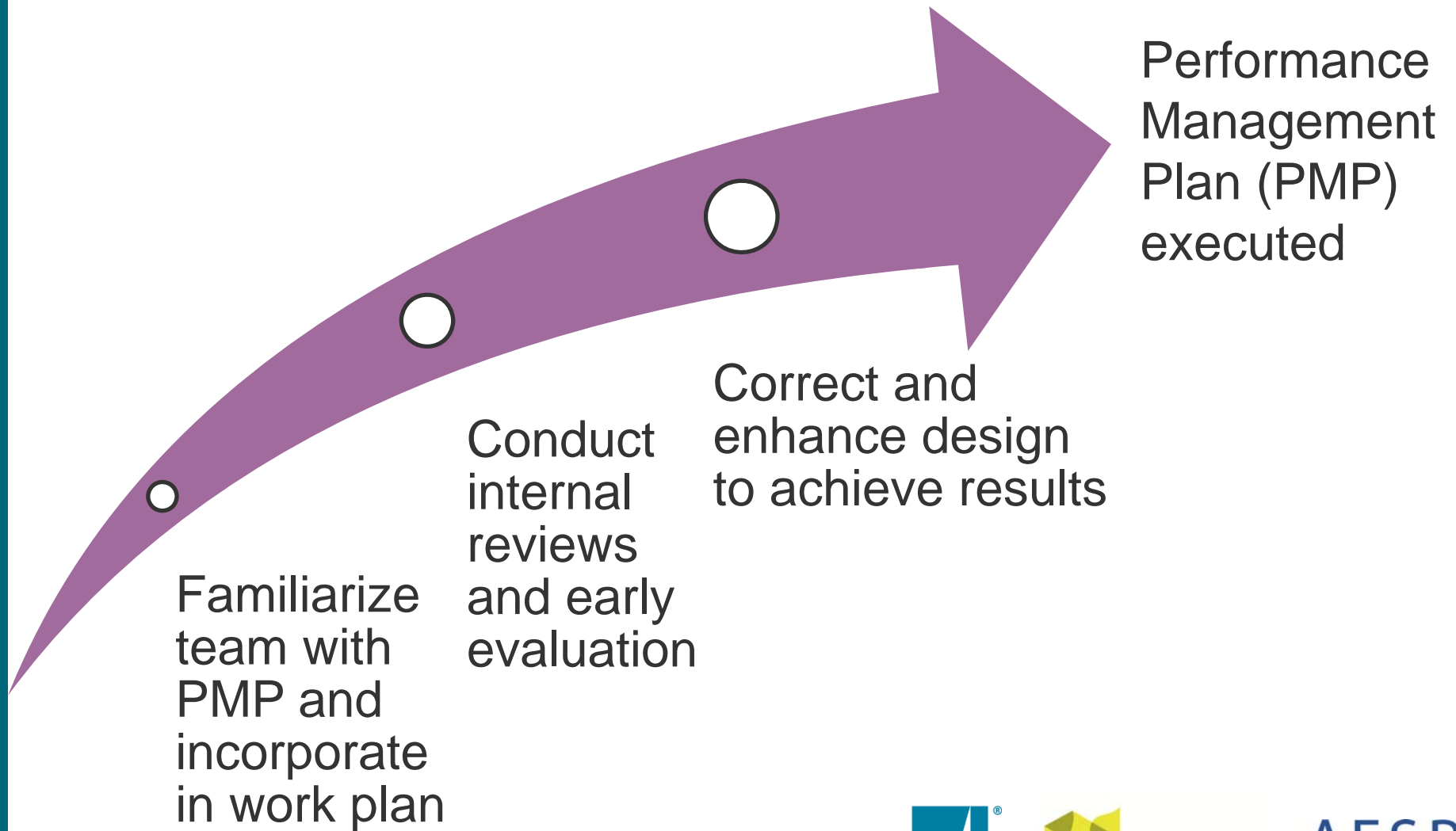
Reporting

- Implementer's Progress Reports

Checklist: Contracting Phase



Checklist: Implementation Phase



Example: Feedback Loops

- **Stakeholder forums:** contractor forums and Western HVAC Performance Alliance.
- **Data QA/QC:** trend analysis, triangulation, spot checks, instincts.
- **Periodic internal evaluations:** team meetings and data quality assessments.
- **Early 3rd party evaluations:** market effects study (Spring 2012) and impact evaluation (Fall 2012).

Example: Program Improvements

- **Training** modified in response to consistent errors.
- **Application process** streamlined.
- **Enrollment criteria** modified.
- **New measures** for heat pumps and split systems added.
- **Questionnaire** streamlined.

Lessons Learned

- **Streamline.** Start simple.
- **Requires resources:** staff time, database.
- Some tasks require **M&V expertise**. Most do not.
- **Buy-in critical.** It takes a team.
- **Organizational values matter:**
 - ❑ *transparency*
 - ❑ *accountability*
 - ❑ *evidence-based decision making*
 - ❑ *continuous learning and improvement*
 - ❑ *results*
 - ❑ *etc.*

Additional Information

PG&E's Commercial HVAC QM Program

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Evaluation Ready Approach

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Save the Dates

Jan. 28-31, 2013

AESP's 23rd National
Conference & Expo
Orlando, FL

Apr. 29-May 1, 2013

AESP's Spring Conference
Dallas, TX

For more information - www.aesp.org

