



***TAMA / SP***  
***3<sup>rd</sup> Quarter Membership Meeting***

***Panel on SP Signature Issues***

***September 8, 2011***



## *Panel on SP Signature Issues*

- **Chemicals In Products:** Pat Beattie, Arcalis Scientific
- **Materials Efficiency / By-Product Synergy:** John Bradburn, GM
- **Energy and Water:** Mark Werthman, Chrysler and Rahul Naik, ARCADIS
- **Technology and Networking:** Russell Brynolf, FTS Technologies and Dave O’Ryan, Asset Recovery



# Chemical Issues Work Group

September 8, 2011

**Pat Beattie, Ph.D.**

**Chair, Chemical Issues Work Group**

**Suppliers Partnership for the Environment (SP)**



# Chemical Issues Workgroup Overview

- Work group formed in 2006
  - Follow emerging chemical regulations
  - Develop strategic technical solutions
  - Share best practices
- Material Assessment Strategy (MAS)
  - Begun in 2007
  - Goal – develop a common health and environmental hazard, exposure and risk screening process for chemicals in vehicle parts/processes
  - Contracted Science Strategies to develop process



# Drivers: Regulatory Action

## REACH (EU Chemicals Directive)

- Requires companies to process risk assessments on many more of their products, including articles
- Other REACH-like regulations emerging

## California Green Chemicals Rule and Other State Product Chemicals Regulations (US)

- Requires flexible and efficient systems to respond to a range of stakeholders reporting requirements

## Toxic Substance Control Act (US)

- Bills for reauthorization introduced in 2010 and again in 2011



# Challenges

Assessment of articles\* represents a new paradigm for most companies in the auto sector and elsewhere.

- Manufacturers of articles are not chemical companies
- Limited or no toxicological expertise
- They are used to considering chemicals in formulations, but not articles

\*US OSHA and US EPA define “articles” as an object that during production is given a special shape, surface or design which determines its function to a greater degree than its chemical composition.



# Importance of MAS Process

- Address emerging chemical regulations and consumer concerns
  - Need for common process to address requirements for chemicals in articles
- Reduce business risk and cost
  - Add value to existing chemical information on parts
  - Common, shared process across OEMs and suppliers
- Process for addressing chemicals within Sustainability programs



# SP MAS Approach

- Phase 1 – Principles and Framework
- Phase 2 – Automotive interiors
- Phase 3 – Environmental exposures from friction materials and wear debris
- Phase 4 – End-of-life vehicle considerations



# Current Activities

- Following regulatory activities
  - TSCA
  - California Safer Consumer Products Regulation drafts
- Completing Phase 3 of MAS
- Re-visiting MAS Principles
  - Need for company “Chemicals Policy”

# Suppliers Partnership Materials Efficiency Group Update



*Next SP Meeting Location*  
*Starting from the 50,000 ft Level*  
*Strategy*





# New Mtls. Efficiency Projects

- Grinding Swarf
- Maintenance Paint
- Reuse/Recycle absorbents
- Foam Parts
- Sludge and other Composite Project

# Ongoing SP Projects

- Aevitas
- MPS
- Crystal Filtration, Waste Free
- Chemico
- State of Michigan/Green Schools
- Dave Briggs, Innovations
- GDC Inc.
- Allegiant Global
- Asset Recovery and Management Group

# SP Companies working in Materials Efficiency

- FTS Technologies
- Chemico Mays
- Peter Feamster and Assoc.
- Denso
- Federal Mogul
- Gage
- Gayle Technologies
- Goodwill industries
- BAE Industries

# SP Companies working in Materials Efficiency

- Quaker Chemical
- Environmental Quality Company
- The Polar Company



# Suppliers Partnership for the Environment (SP)

Energy Workgroup

Co-Chairs:

Mark Werthman (Chrysler Group, LLC)

Rahul Naik (ARCADIS)



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- Mission Statement
- What is an Energy Management System and The ISO 50001 Standard
- Benefits of ISO 50001
- Commonalities between ISO 14001 and ISO 50001
- Next Steps

# Mission Statement

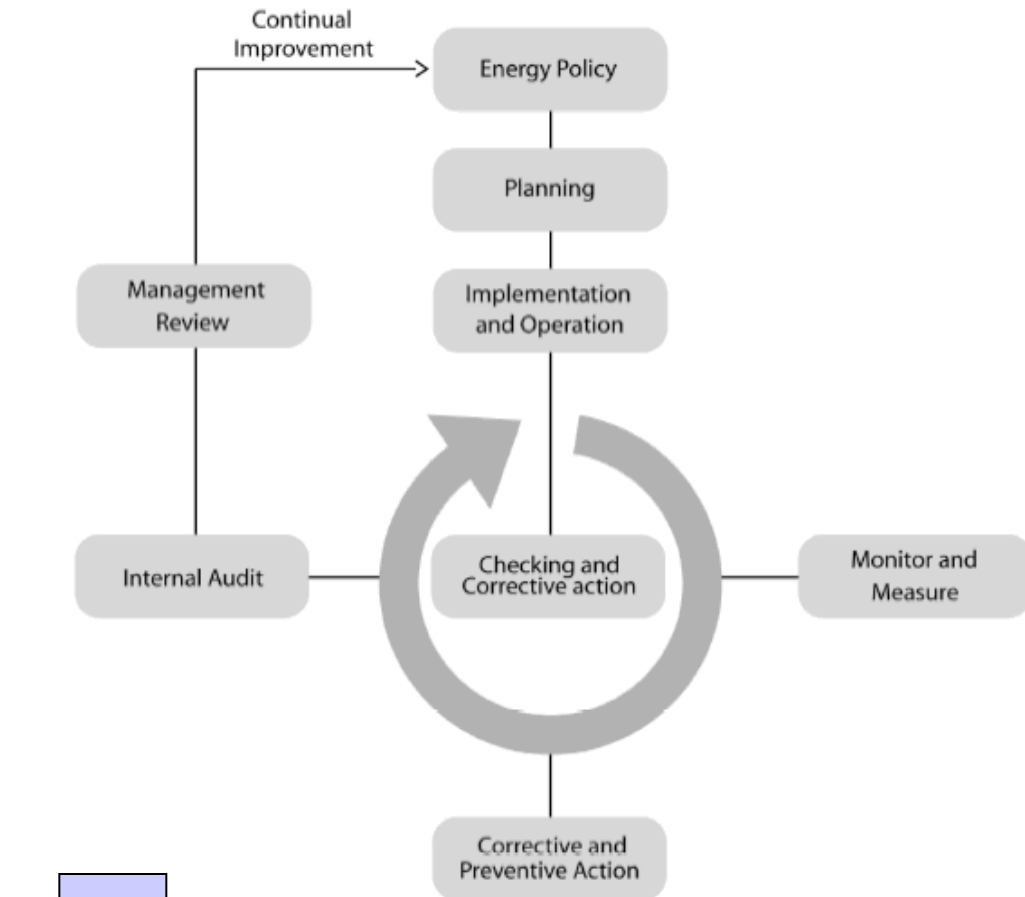
- Sponsor and support ongoing collection and dissemination of information, discussions and action between automobile OEMs, their suppliers and government entities, on energy and water issues affecting the operations of companies in the automobile supply chain.

# Energy Management System (ISO 50001)

- ISO 50001 – Energy Management System Standard launched in June 2011
- ISO Standard to be used for developing, implementing and maintaining a robust energy program
- The standard is applicable for all types and sizes of organizations and can be integrated with existing systems, such as ISO 9001 and ISO 14001.

# What Is an Energy Management Systems (EnMS)?

- **Objectives:**
  - Measure & baseline
  - Monitor & plan
  - Continually improve energy efficiency
- **Main criteria:**
  - Management System Approach
  - Requirement for a corporate policy to manage energy efficiency
    - PDCA and continuous improvement
    - Similar structure as ISO 14001 (different requirements)
  - Integration with QSE
    - Works as the “Energy module” of current management systems



Energy is considered one of the key corporate metrics

# Benefits of ISO 50001

- **Systematic framework for continuous improvement**
  - ISO 50001 energy management in line with other management system standards to continual improvement
  - Tools and resources to assist implementation and validation of energy performance improvements
- **Risk Management**
  - Preemptively manage risk presented by carbon footprint
- **Communication and Recognition**
  - Industry: increased awareness to reduce energy, acknowledging successes as a team and key pillar of sustainability within a company
  - Public: Recognized leader in sustainable use of energy resources (local and financial community)
  - Supply chain: Customers want responsible energy management from suppliers.
  - Shareholders: Provides a verified improvement in energy performance from a neutral third party.

# Commonalities between ISO 14001 and ISO 50001

ISO 14001	ISO 50001
<b>DOCUMENTATION</b>	
Scope	Scope
	<i>Energy baseline</i>
Environmental Key Performance Indicators (KPI)	<i>Energy KPI</i>
Environmental Policy	<i>Energy Policy</i>
Environmental Goals & Targets	<i>Energy Goals &amp; Targets</i>
Environmental Manual	Energy Manual
Document Control System (Procedures, Work Instructions and Forms)	Document Control System
Record Control System	Record Control System
<b>MANAGEMENT</b>	
Environmental management representative	<i>Energy management representative</i>
Environmental management team	<i>Energy management team</i>
<b>MANAGEMENT PLANNING</b>	
Environmental data management	<i>Energy data management</i>
Environmental impact profile	<i>Energy Profile</i>
Legal & Other Requirements	Legal & Other Requirements
Environmental Goals, Targets, Project Planning	<i>Energy Goals, Targets, Project Planning</i>
<b>OPERATIONS</b>	
Materials/Equipment Purchasing	<i>Energy Purchasing</i>
Systems design & selection	<i>Energy Systems design &amp; selection</i>
Systems & Process Control	Systems & Process Control
Project implementation	Project Implementation
Communications, training, awareness	Communications, training, awareness
<b>EVALUATION &amp; REVIEW</b>	
Monitoring	<i>Monitoring</i>
Internal audits	Internal audits
Corrective & preventive action	Corrective & preventive action
Management reviews	Management reviews

Legend

• *New for ISO 50001*

# Next Steps for the Workgroup

- Discuss the value add for sustained energy improvements using a systems approach
- Provide a survey to determine if development of tools and templates for the membership is value added
- Identify organizations for implementing a pilot program



# Suppliers Partnership for the Environment (SP)

## Technology & Networking Group



# Technology & Networking Work Group

**Supporting a forum for Tier 2 and Tier 3 suppliers to the industry so that their issues and ideas can be addressed by OE and Tier 1 supplier companies.**

**The work group provides a forum through which member companies share opportunities and processes for SP's smaller-sized companies to communicate directly and efficiently with the OEMs and Tier I suppliers in the organization and automotive industry.**



# Technology & Networking Work Group

- **2011-2012 Cost Reduction and Environmental Initiatives**
- **Small Business strategy:**
  - Refocus on facilitating solutions and services
  - Refocus on tiers and new members VS OEM's
  - Bring new fresh “BOB's” to the members
    - “Best of Best” which meet both cost saving and environmental improvements
    - Promoting Examples demonstrating SP collaboration



# Technology & Networking Work Group

## An Example:

### GM Permanent Media Trials

- **Paint Powder collection systems**
  - Have become the Bill of Process for 100% Recovery (6 years in use)



- **Machining Mist and Dust Filtration**
  - Installation at Flint Engine South (FES) HFV6 Plant (3 years in use)
  - Chrysler (7 years without changes)



- **Metal Removal Fluid (coolant) Filtration**

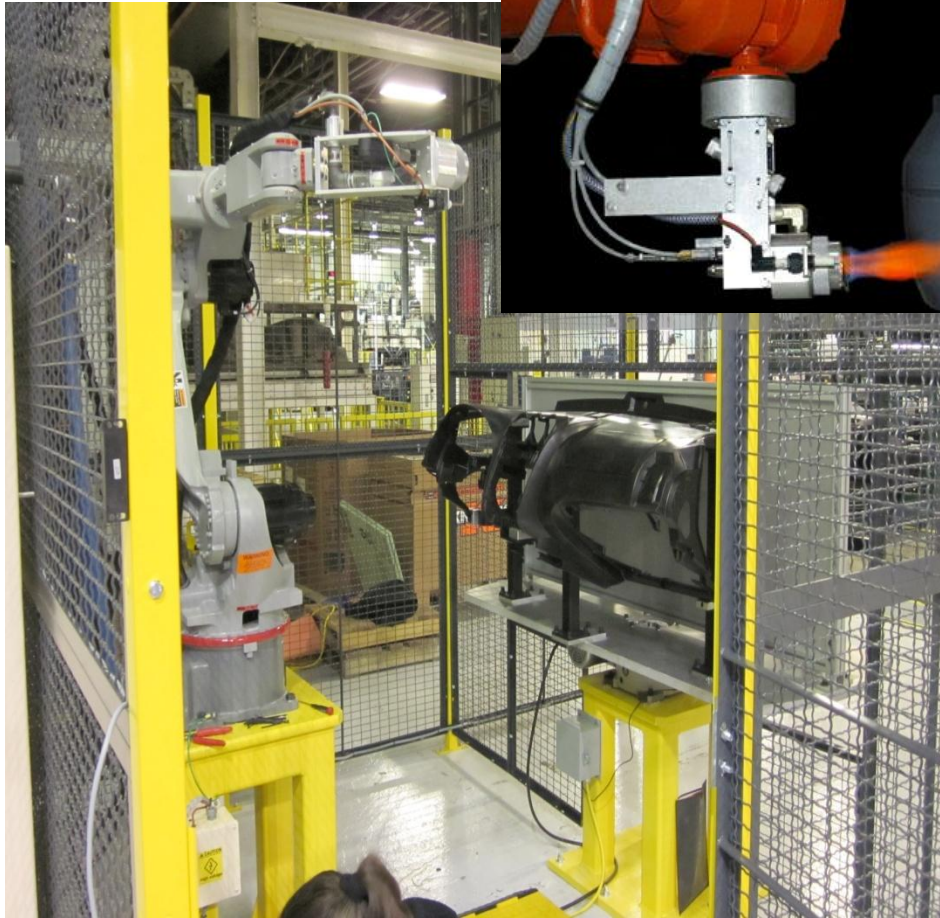


SAE Environmental  
E2T Award



# Technology & Networking Work Group

## An Example:

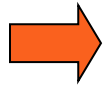
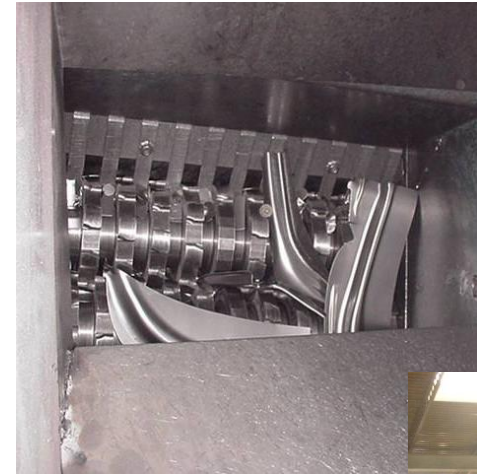


- Lower Costs:
  - Lower Energy Usage Over Traditional Processes
  - Lower Emissions - Carbon Footprint
    - Significant Reduction in CO2 Emissions
    - No VOC's or HAP's produced
    - Environmental Credits
- Zero Production of Solid Waste
  - No Clean Up Costs
  - No Disposal Costs
- Reduced Cost Of Compliance
- Reduced Risk Of Cost Of Non-Compliance

# Technology & Networking Work Group

## Multiple Group Member Roles:

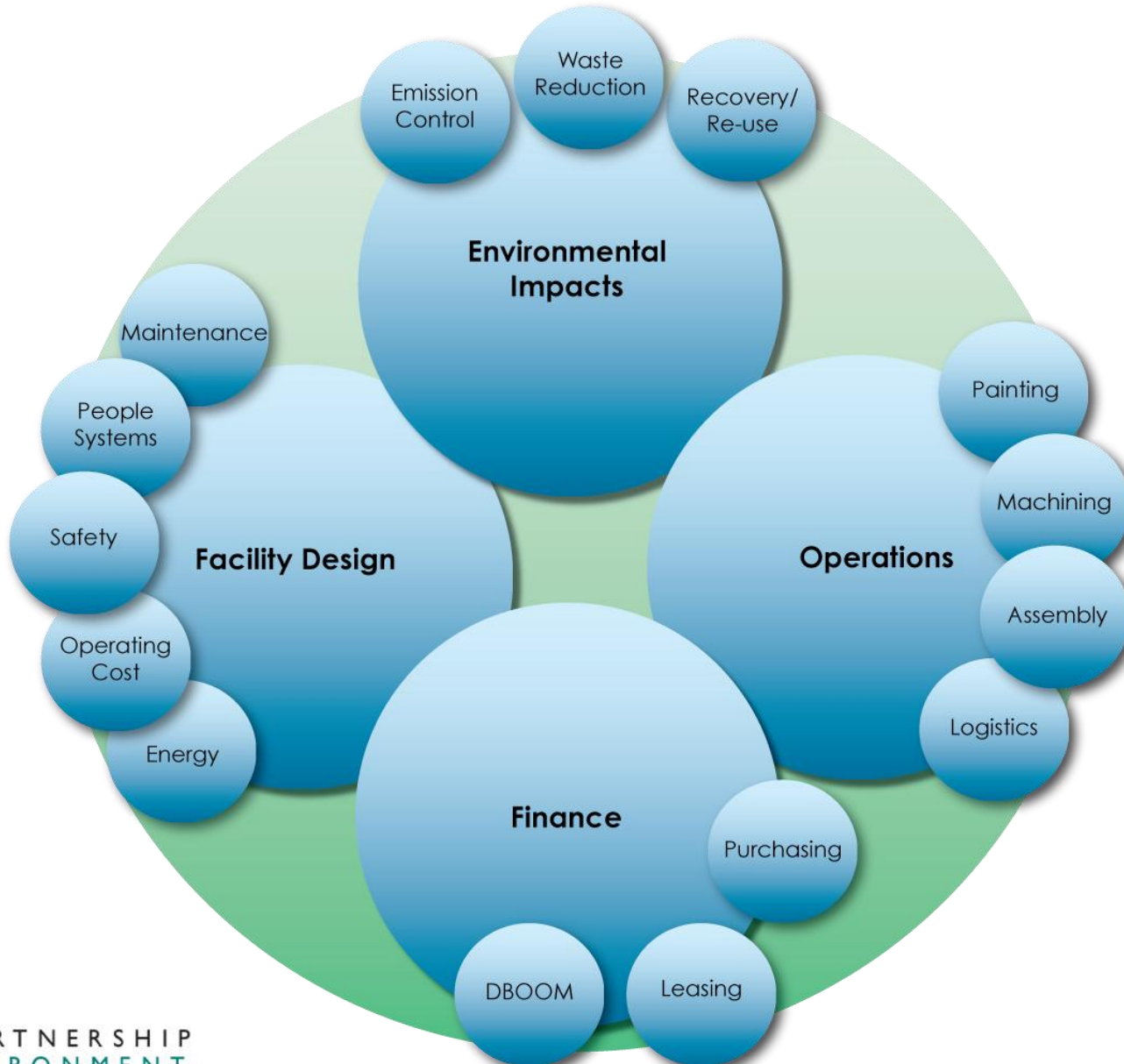
- Variety of Materials
  - Paper
  - Metals
  - Plastic
  - Glass
- Increasing Values
- Increasing likelihood of reuse & recovery





# Technology & Networking Work Group

## Mentoring/Coaching Group to Grasp Total Process





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