

Sustainability in R&D

ROR 08-02

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Sustainability in R&D; Seattle, WA





Sustainability in R&D

ROR #08-02

Purpose/Objectives: The working group will determine how to effectively incorporate sustainability into R&D by sharing experiences and best practices on the use of tools to assess the sustainability of a company's current products and manufacturing processes and by establishing baseline criteria on the methodology and use of such tools, while developing a framework to build sustainability into new products and processes.

Project Leadership

- **Co-chairs**: Rich Chapas, Kent Crawford, Leslie Kulis, Virginia Brandt
- **Subject Matter Experts**: John Sutherland, Purdue University

Project Status and Accomplishments

- **Stage ??? – Converting to a non-project entity (BOD review May 2, 2010)**
- **Survey of major companies and interests in sustainability**
- **List of certification processes**
- **Presentations from leading companies on sustainability: Crown, Alcan, Walmart, US BCSD, ERM, Innovolve Group, Five Winds International**
- **Presentation on educational tools from Alcan**
- **Presentations on regulations impacting industry: REACH, RoHS**
- **Presentation on Design for Sustainability**



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What to expect at Annual Meeting 2010

- Continuation of the topic with conversion to a “non-project” entity
- Development of content for in-depth roundtables

What we need from you, the ROR community

- Enthusiasm, interest, and energy in the topic.
- Continued sharing of best practices within your company.
- Continued sharing of challenges as sustainability continues to evolve
- Identification of practitioners to participate in topic specific in-depth roundtables

Other Resources

- Check out our wiki for the most current participant roster, meeting notes, and presentation material:

Major Findings, Discussion Points, or WIP

Sustainability in R&D

- Most recent work products:
 - Presentation of Design for Sustainability (DfS) by Five Winds International
 - Sustainability needs to be embedded in your overall design process
 - DfS is a systematic approach that considers the product's life cycle footprint
 - Customers are asking for “Greener products from Greener companies”.
 - Leading sustainability companies are using Life Cycle Screening and Opportunity Maps tools in the overall design process
- Work-In-Process items:
 - Development of a SIPOC describing R&D's engagement with Suppliers, Inputs, Process, Outputs and Customers in sustainability:
 - Recommended additions to the SIPOC: Renewability, Conservation of a material (Suppliers), IP Landscape, Market Information/Demand (Input)
 - Suppliers + Input = Your company's strategy for sustainability.

Sustainability in R&D

1. Internal vs. External functions – what are you already doing that is an opportunity?
2. **Cap and Trade/CO₂ regulations – What are the costs for mitigation or taxes? What are the tradeoffs? How are calculations done/assumptions?**
3. Regulatory – TSCA reform, EU Directives (incl. Recycling), other
4. Materials availability and at what \$
5. **Consumer expectations – what they perceive sustainability to be, what will they pay for?**
6. Sustainability vs. social responsibility (kill the messenger, education of the consumer, product design trade-off vs. marketing)
7. Sustainability as “PR”
8. **Sustainable vs. “more” sustainable (picking the right metrics, eliminate “yes, but” R&D thinking, advantage/disadvantage to be first)**
9. Backend Litigation
10. Defacto leader in certification space - it’s not what’s happening today, rather the future
11. **Design for Sustainability**
12. How do you articulate trade-offs (how to focus on opportunities?)
13. Where is the Vision statement for Sustainability
14. Sustainability in Stage Gate
15. NGO’s: Driver for Regulations, consumer behavior, company behavior
16. Year to Year Metrics
17. **Managing tension between Marketing & R&D**
18. Pay for Performance for Sustainable execution
19. Managing the fuzzy front end of sustainable projects



Sustainability in R&D

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 - What are the costs for mitigation or taxes?
 - What are the tradeoffs?
 - How are calculations done/assumptions?
2. Consumer Expectations
 - What they perceive sustainability to be, what will they pay for?
3. Sustainable vs. “more” Sustainable
 - Picking the right metrics
 - Eliminate “yes, but” R&D thinking
 - Advantage/disadvantage to be first
4. Design for Sustainability
5. Managing tension between Marketing and R&D



Forward Plan

Sustainability in R&D

- Next Deliverables
 - RTM article describing accomplishments
 - *Outline development this week*
- Next working group meeting dates/locations:
 - Launch 3 Roundtables on the topics selected
 - Report output of Roundtables at the Fall meeting
 - Select next Roundtable topics at the Fall meeting
- What do you need from the ROR Committee?
 - People from your organization to join/lead the roundtable discussions