



Panel 2 Discussion: "Technology Gaps Ripe for Industry Collaboration"

ORGANIZERS

Eric Amis, (*Chair*), United Technologies Research Center
Frances Houle, Lawrence Berkeley National Laboratory
Julia Phillips, Sandia National Laboratories

PANELISTS

Duane Dimos, Sandia National Laboratories
Sergio Loureiro, Pratt and Whitney
Delia Milliron, Lawrence Berkeley National Laboratory
Stefan Wurm, SEMATECH






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Characteristics of Previous Successful Technology Collaborations

- Personal relationships
- Committed relationships
- Incubation of startup company
- Relevance balanced with novelty
- Precompetitive process development
- Part of multilevel engineering problem
- Commercialization of characterization tool
- Industry initiated questions of “what if” and “how does”
- Enabling success along a forward looking industry roadmap



Seeking to generalize from past examples

Relationships

Several, Goodyear, skin in the game

Novelty

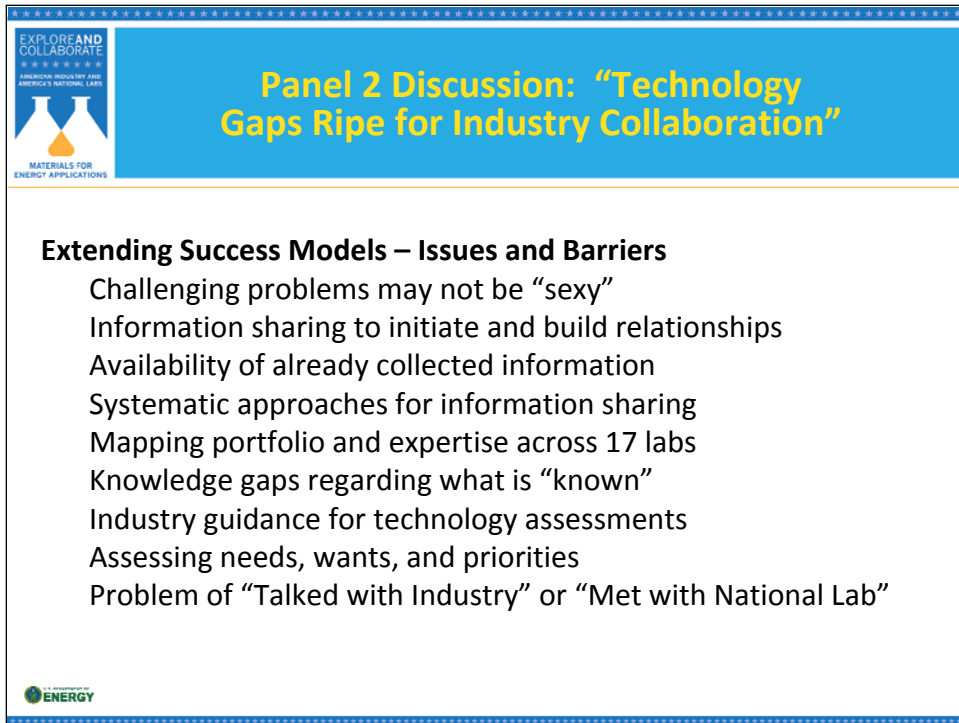
Nanocrystals, Manufacturing

Precompetitive

Solid State Lighting, Wind Energy, Asylum,

(Not) Critical Path

Several, SEMATECH



The slide features a blue header with the title "Panel 2 Discussion: 'Technology Gaps Ripe for Industry Collaboration'" in yellow text. On the left side of the header is a logo for "EXPLORE AND COLLABORATE" with the text "AMERICAN INDUSTRY AND FEDERAL RESEARCH LABS" and "MATERIALS FOR ENERGY APPLICATIONS" below it. The main content area is white with a list of bullet points under the heading "Extending Success Models – Issues and Barriers". At the bottom left of the slide is the U.S. Department of Energy logo.

EXPLORE AND COLLABORATE
AMERICAN INDUSTRY AND FEDERAL RESEARCH LABS
MATERIALS FOR ENERGY APPLICATIONS

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Extending Success Models – Issues and Barriers

- Challenging problems may not be "sexy"
- Information sharing to initiate and build relationships
- Availability of already collected information
- Systematic approaches for information sharing
- Mapping portfolio and expertise across 17 labs
- Knowledge gaps regarding what is "known"
- Industry guidance for technology assessments
- Assessing needs, wants, and priorities
- Problem of "Talked with Industry" or "Met with National Lab"

U.S. DEPARTMENT OF ENERGY

Mention of "mundane" topics – e.g. manufacturing
Scientific papers and professional meetings are not enough to publicize technology – partly because industry attendance has dropped

DOE seems complex to outsiders

As often happens in science, sometimes we reinvent the wheel – without knowledge of what industry already knows

Technology assessments without industry input or review is likely to miss needs or priorities

Interactions needed at multiple levels, good impedance match, and with people who can speak to priorities



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Recommendations

Take a systematic approach to information sharing across labs

- Include assessment of TRL and MRL
- Look for and highlight transferable technology
- Evaluate availability and suitability for potential partnerships

Engage industry in technology reviews and assessments

- Identify immediate needs
- Assess priority needs
- Create challenges in pursuit of Holy Grails

Create and be creative to socialize information exchange

- Convene and sustain industry focus groups
- Industry days
- Crowdsourcing

