

TechnoBusiness Forum -- 2005

Lessons Learned & Path Forward

The Institute of Paper Science and Technology
and
The Center for Paper Business & Industry Studies
At the Georgia Institute of Technology

Lessons Learned

“Open Innovation – A Leadership Challenge”

- Understanding that the industry needs to provide:
 - ✓ *Innovation that creates new products, since “low-cost commodity producers” are being forced offshore*
 - ✓ *The Vision, Support & Decisiveness to create an Open, Innovative, and Collaborative Culture*
 - ✓ *Support for the development of opportunities and the creation of partnerships that focus on the enterprise Vision*
 - ✓ *A common understanding of the intellectual property boundaries – what needs to be protected, and what is less important*
 - ✓ *Definitive support for Knowledge Sharing across the enterprise and with focused partners, as a foundation of collaborative research and innovation*

Lessons Learned

“Open Innovation – A Leadership Challenge”

- Understanding that the industry needs to *develop & build*:
 - ✓ *Internal and external relationships of trust, as a basis for knowledge sharing, decision making, and collaboration both internally across the enterprise, and externally with partners and valued customers*
 - ✓ *A mind-set and culture that's open to new Value-Added processes and products* [Nanotechnology, new uses for fiber and paper, and innovative processes]
 - ✓ *Collaborative partnerships to help define and measure the social and economic impacts of innovative processes and products* – [e.g. Biorefinery and Nanotechnology products and processes]
 - ✓ *Public & industry awareness that Nanotechnology and Biorefineries offer alternative value-added uses of a sustainable, renewable resource*

Lessons Learned

“Open Innovation – A Research Opportunity”

- Understanding that the industry needs to:
 - ✓ *Identify and deploy existing simulation models designed to help reduce the uncertainty of research and development opportunities by framing the decision making with more understandable and measurable levels of risk*
 - ✓ *Consider that economic analyses of the potential product mixes are critical, along with sensitivity analysis of the optional products and pricing*
 - ✓ *Leverage existing Biorefinery & Nanotechnology research knowledge and resources from the Forest Products Industry with government and other industry and academic partners*

Lessons Learned

“Open Innovation – A Research Opportunity”

- Understanding that the industry also needs to:
 - ✓ *Incorporate systems analyses for new technological platforms (such as Biorefineries) that allow for more comprehensive understanding of value propositions where:*
 - *Simultaneous assessment of multiple products and production routes are incorporated, and*
 - *Considerations of process structures depend congruently on market prices, trends & feedstocks availability, and optimized product distribution outcomes for differing scenarios*
 - ✓ *Determine the contacts and steps the Forest Products Industry and its stakeholders must take to become active innovation partners in both the National Biomass Initiative and the National Nanotechnology Initiative*

Path Forward

- **Agenda 2020 will spearhead steps to have the Forest Products Industry:**
 - ✓ ***Become a National Nanotechnology Initiative Partner, and***
 - ✓ ***Participate in national collaborative programs to leverage Biorefining research development and deployment***
- **Forum attendees need to educate and engage their organizational leadership on the issues of open innovation and new potential products and markets possible through collaborative partnerships**

Path Forward

- There is a need to build a collaborative Agenda 2020 research initiative to evaluate *the social, economic, and political impacts* associated with potential Biorefinery and Nanotechnology products and processes
- Defining *an economic value model for cellulose based raw materials* by analyzing the potential energy value obtained and *not limiting the value solely to wood products and paper* is a need
- There is an opportunity/need to identify vehicles, such as *the Wood Promotion Network [WPN]*, to engage the public and build awareness of these initiatives and the image/perception of the paper/forest products industry

Path Forward

- IPST should collaborate with Agenda 2020 and other related technology oriented initiatives *to advance an open innovation approach* to stimulating effective development and deployment of biorefinery and nanotechnology advancements
- CPBIS should collaborate *in an open innovate manner* on efforts targeted at further evolution of decision trees and “guide posts” (concepts and structures) *as inputs to the creation of more effective business models* for Biorefinery technology development and deployment decisions