Materials Sustainability Meets Performance: 2017 Lux Executive Summit Americas Interactive Session Discussion Summary

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Coverage Areas: Corporate Strategic Intelligence, Bio-based Materials and Chemicals, Advanced Materials

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During the 2017 Lux Executive Summit Americas, an interactive session was held as part of the Materials Sustainability Meets Performance track. This session was a group discussion focused on identifying the key challenges associated with developing new sustainable materials. Approximately 100 people participated in this session. To start the discussion, one key problem was highlighted: when should chemical and materials companies begin to invest in developing new sustainable products (NSPs); and one possible approach to solving this particular problem was highlighted: cross-company collaboration. This report summarizes and maps the resulting discussion.
Methodology

Identified Problems
- No urgency from customers, markets, and consumers
- Sustainable products do not often produce profitable growth
- Recycling infrastructure for new sustainable products (NSPs) not in place
- Too much uncertainty and confusion about sustainability

Possible Solutions
- Work closely with your customers
- Partner with other organizations
- Wait for the market to drive internal urgency

Summary
- Identified high level problems linked with their possible solutions

Special Thanks
Methodology

- Participants’ comments were captured on a flip chart by the session’s moderator.
- In this presentation, each captured comment is represented in the text in a blue box.
- The comments were placed into two-level affinity diagrams. The first level affinity group is shown in grey. The second level affinity group is the title of the slide.
- The second level affinity groups are also mapped together with the identified problems and potential solutions linked together.

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### No Urgency from Customers, Markets, and Consumers

<table>
<thead>
<tr>
<th>Customer Need Is Missing</th>
<th>Market Pull Is Missing</th>
<th>Mixed Signals from Millennial Consumers</th>
</tr>
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<tr>
<td>Hard to get a clear answer from customers about what they really want</td>
<td>Hard to know whether the market need is real or just hype</td>
<td>Many companies are betting on millennial customers to drive NSPs</td>
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<td>Many customers simply do not know what they want</td>
<td>Sustainability appears to be a solution looking for a problem</td>
<td>As younger consumers begin to worry about money, they will not demand sustainability</td>
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<td>Hard to know whether a voiced customer need for sustainability is real</td>
<td>Sustainability feels good, but ultimately is not really that important</td>
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First level affinity group

Second level affinity group

Participant comment
## No Urgency from Customers, Markets, and Consumers

### Customer Need Is Missing
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### Market Pull Is Missing
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### Mixed Signals from Millennial Consumers
- Many companies are betting on millennial customers to drive NSPs
- As younger consumers begin to worry about money, they will not demand sustainability
Sustainable Products Do Not Often Produce Profitable Growth

**NSPs Are Not Often Very Profitable**
- How a firm currently makes money today can limit internal interest in NSPs
- Hard to get through the valley of death and achieve sales large enough to be viable
- If your competition is already there, you might have lost the opportunity

**Other Factors More Important for Sales Growth**
- Sustainability is only one factor out of many
- Performance usually more important than sustainability
- Cost is usually more important than sustainability
- Sustainability is not usually a priority

**Sustainability Not Critical to Corporate Growth**
- Big firms have sustainability goals, but they are usually not strategically important
- Corporations theoretically support sustainability, but urgency is often missing
- Millennials interested in working on NSPs regardless of profitability
Recycling Infrastructure for NSPs Not In Place

Recycling Solutions Not Available

- Current recycling infrastructure does not support NSPs
- For packaging, recycling of new materials not available
- New life-cycle ecosystem needed, but difficult to create
Too Much Uncertainty and Confusion About Sustainability

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<tr>
<td>Unknowns include chemistry, collaboration, regulation, and consumer preferences</td>
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<tr>
<td>Internal confusion between what is meant by “customer” and “consumer”</td>
</tr>
<tr>
<td>There is not a clear, generally agreed definition of sustainability</td>
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</table>
Work Closely With Your Customers

**Educate Your Customers**
- Educate your customer on the benefits of your NSP
- Educate the consumer on the benefits of your NSP
- Get your customer to accept the higher price for your NSP by educating them

**Align with Your Customers**
- Develop a NSP only when your customers demand it
- Partner with your customer when developing a NSP
- Responding to new customer requirements can create urgency (e.g. Walmart)

**Develop New Applications**
- Start with high-end niche applications
- Change product specifications to drive customer acceptance
## Partner With Other Organizations

<table>
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<tr>
<th>Gain Governmental Backing</th>
<th>Collaborate with Peers</th>
<th>Develop a New Corporate Ecosystem</th>
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<tr>
<td>Regulation can create urgency</td>
<td>Work together to develop industry standards</td>
<td>Develop new end-of-life infrastructure to enable recycling of NSP</td>
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<tr>
<td>Government encouragement can seed corporate cooperation</td>
<td>Work together in industry consortia</td>
<td>Make the waste handling / recycling business attractive</td>
</tr>
<tr>
<td></td>
<td>Use open innovation tools</td>
<td>Create jobs for local communities and help society</td>
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<td>Look for minimum viable synergies when searching for development partners</td>
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<td>Create an easy process to enter into contracts with partners</td>
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Wait for the Market to Drive Internal Urgency

Wait for Market Pull

“Sometime” in the future developing NSPs will become “something”

Be a fast follower rather than a technology leader

Market pull determines commercial timing
Identified High Level Concerns and Their Possible Solutions

**CONCERNS**
- No Urgency from Customers, Markets, and Consumers
- Sustainable Products Do Not Often Produce Profitable Growth
- Recycling Infrastructure for NSPs Not In Place
- Too Much Uncertainty and Confusion About Sustainability

**SOLUTIONS**
- Work Closely With Your Customers
- Partner With Other Organizations
- Wait for the Market to Drive Internal Urgency
To prime the discussion, Lux enlisted four conversation starters for this interactive session. These industry experts were instrumental in guiding the discussion. Lux thanks them for their time, engagement, and knowledge. Our conversation starters were:

- Patricia Ansems Bancroft, Research Fellow, The Dow Chemical Company
- Mark Dobrovolny, Director, Strategic Innovation & Technology Alliances, Colgate-Palmolive
- Rob Kress, Commercial Lead, Bio-Industrials, Cargill
- Ed Richards, VP, Corporate Business Development, The Lubrizol Corporation