Ply Gem
Ideas in Action
Fostering an Innovative Culture
Paving the way forward

• Strong national reach with local focus in order to meet regional market demands
• Leading the industry with $1.7 billion in pro-forma sales in 2013**
• Traded on the NYSE under PGEM since 2013
• 8,700 associates across the U.S. & Canada
• Products manufactured in 29 manufacturing plants throughout North America

Experienced leadership, innovative thinking and a history of strategic acquisitions are helping us pave the way forward.

**LTM 6/28 2014 Proforma Simonton acquisition
A Complete Exterior Solution

Leading manufacturer with more than 70 years of expertise in building quality home products that turn a house into a home.

We leverage our portfolio of leading brands across a breadth of categories creating a unique position in the marketplace.

We deliver exceptional products for the exterior of any home and are committed to bringing customers and consumers the convenience and satisfaction of the Designed Exterior.
The New Normal
Business Model Innovation

- Reinventing to Align with Consumer Taste
  Examples:
  - Home Depot - Toilette Paper
  - Best Buy - Tide Detergent
  - Staples - Shaving Cream and Deodorant

- Using Patents to Build Markets vs A Barriers to Competitors
  Example:
  - Tesla - Opening Patents

- Leverage Resources Into New Markets
  Example:
  - Fujitsu - Growing Lettuce vs Computers

Innovation is About Adapting. Adapting Brings Success.
Ply Gem Innovation Case Study: Sustainable, Competitive Innovation

- Foundation Labs
- R&D Evolution

- Ply Gem Innovation
  - Awareness Engagement
- Foundation Labs
  - Create Opportunities
- R&D Evolution
  - Collaboration
Innovation Journey
Platform | Process | Behavior

Corporate Innovation Bonus

2011
- pgCafe Forum
- Open Ideation for Employees
- Strategic University Relationships
- Hi Po Innovator’s DNA

2012

2013
- Grand Challenge Foundation Labs
- ALP Commercial Market

2014
- Robotic Challenge
- Build Forward
- Solar Decathlon
- Purdue Net Zero
- Roofing Product Launch

2015
- Customer/End User Developed Products
- Industry Insight

2016+
- New Materials
- New Business Models
- New Market Segments
- New $30M Business

Ply Gem
Degrees of Innovation

Transformational
- Industry changing Product/Service/Business Model
- Industry shift in cost structure, value perception
- Next Generation Technology
- Cross BU, External Collaboration
- High degree of learning and experimentation

Significant
- New customer Value Prop
- Industry Leading Product/Service
- Cross BU, External Collaboration
- High degree of learning and experimentation

Incremental
- New/Improved Products to Existing customers
- Core Products/Services to new customers
- New Customers with core Products
- Driven by Gate Process, within BU’s governance
- Low risk, uses core capabilities
- No dramatic change to Business Performance

Hold the Base
- Efficient, effective mgmt of current market/operations
- Cost Improvement Focus
- Low risk, uses core capabilities
- Required to meet operating objectives

Risk

Profitability

Today’s Business Needs
- BU Focus

Tomorrow’s Business Needs
- Foundation Labs Focus
## Overview

<table>
<thead>
<tr>
<th>Business Units</th>
<th>Foundation Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective</strong></td>
<td>Operational Excellence, Cost Improvement, Formulation, Product Enhancements, Strategic Supplier Relationships</td>
</tr>
<tr>
<td><strong>Culture</strong></td>
<td>Safety &amp; Environmental, risk adverse, Methodical, clear rules and processes</td>
</tr>
<tr>
<td><strong>Horizon</strong></td>
<td>Quarterly, out 1-2 years</td>
</tr>
<tr>
<td><strong>Processes</strong></td>
<td>CAR, System efficiency</td>
</tr>
<tr>
<td><strong>Governance</strong></td>
<td>Hierarchical, BU Customer Driven</td>
</tr>
<tr>
<td><strong>Skills</strong></td>
<td>Functional expertise based on Current knowledge</td>
</tr>
<tr>
<td><strong>Resources</strong></td>
<td>Annual budget</td>
</tr>
<tr>
<td><strong>Metrics</strong></td>
<td>On-time, Quality, Margins, EBITDA</td>
</tr>
</tbody>
</table>
# Transformational Innovation Structure

## Identify & Qualify Opportunity

<table>
<thead>
<tr>
<th>Org</th>
<th>Board of Managers, tightly linked to BU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processes</td>
<td>Constant development of capabilities, scanning, open sourcing, Identify, combine, select opportunities</td>
</tr>
<tr>
<td>Resources Skills</td>
<td>Corporate Level, Insightful, Inductive, Strategic</td>
</tr>
<tr>
<td>Purpose</td>
<td>Create Pipeline of Opportunities, License / Invest / Buy, Diverse Market Intelligence, Sources: University, research partners, Vendors, start-ups, government labs, Industry consortiums</td>
</tr>
</tbody>
</table>

## Incubate

| Dedicated project team, in corporate or in BU, with board oversight |
| Focused on experimenting in technical, market, business models, Mentorship Form BoM |
| Dedicated budget per project, Leverage internal/external resources, New business creation skills |
| Prototype idea through technical, market, operational vetting |

## Accelerate / Launch

| BU if aligned, Corp otherwise |
| Demonstrate market acceptance, And operational profitability |
| Dedicated budget and team, Members as necessary |
| Commercialization, Proof of predictability and market acceptance |
Transformational Innovation

Process

Identify & Qualify Opportunity

- Description
- Attractiveness
- Capability
- Partners
- Approach

TRL 0-9
1-3: Basic Research
4-5: Applied R&D
6-8: First Apps
9: Mass Production

Business Component Map

Accelerate / Launch

Business Opportunity

Capabilities

Opportunity

High

Low

Priority

High

Low

Priority

Cost

High

Low

SWOT

Porter’s 5 Forces

- Political
- Suppliers
- Technology
- Substitutes
- Economic Climate
- Social
- Buyers
- Global

Rivalry Among Existing Firms

Potential Entrants
# Foundation Labs

## Structure and Mandate

<table>
<thead>
<tr>
<th>Topic</th>
<th>Chairman of the Board</th>
<th>Board of Managers</th>
<th>Technology Office/Lab Teams</th>
<th>Accelerate / Launch Team</th>
<th>Business Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure strategic alignment</td>
<td>Provides resources</td>
<td>Determines final opportunity structure</td>
<td>Qtrly status reviews</td>
<td>Go/No Go project decisions</td>
<td>Financing options</td>
</tr>
<tr>
<td>External Relationships</td>
<td>New Materials, Products</td>
<td>Technical Feasibility</td>
<td>Support Launch efforts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focused Field Launch</td>
<td>Validate market/customer acceptance</td>
<td>Immediate customer feedback</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full Commercialization</td>
<td>Product at $10M Revenue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>