Corning and University Technology Collaborations

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Agenda

• Corning?
  Don’t they make CORNINGWARE® & Corelle® houseware?

• External Technology Collaborations
  Where does it fit within Corning?

• Corning University Relations
  How does Corning select and manage universities?
Corning Incorporated

Founded:
1851

Headquarters:
Corning, New York

Employees:
~29,000 worldwide

2012 Sales:
$8.0B

Fortune 500 Rank (2012):
328

• Corning is the world leader in specialty glass and ceramics.

• We create and make keystone components that enable high-technology systems for consumer electronics, mobile emissions control, telecommunications, and life sciences.

• We succeed through sustained investment in R&D, more than 160 years of materials science and process engineering knowledge, and a distinctive collaborative culture.
Corning is primarily a high-tech B2B company

Former Corning primary consumer brand.

Current Corning primary consumer brand.
## Corning Market Segments and Additional Operations

<table>
<thead>
<tr>
<th>Display Technology</th>
<th>Telecom</th>
<th>Environmental Technologies</th>
<th>Life Sciences</th>
<th>Specialty Materials</th>
<th>Other Products and Services</th>
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<tbody>
<tr>
<td>LCD Glass Substrates</td>
<td>Optical Fiber and Cable</td>
<td>Emissions Control Products</td>
<td>Cell Culture and Bioprocess</td>
<td>Corning® Gorilla® Glass</td>
<td>Emerging Display Technology</td>
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<td>Glass Substrates for OLED and high-performance LCD platforms</td>
<td>Hardware and Equipment</td>
<td>Light-duty gasoline vehicles</td>
<td>Assay and High-Throughput Screening</td>
<td>Display Optics and Components</td>
<td>Drug Discovery Technology</td>
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<td>Fiber optic connectivity products</td>
<td>Light-duty and heavy-duty on-road diesel vehicles</td>
<td>Genomics and Proteomics</td>
<td>Optical Materials</td>
<td>New Business Development</td>
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<td>Heavy-duty non-road diesel vehicles</td>
<td>General Laboratory Products</td>
<td>Semiconductor materials</td>
<td>Equity JV Companies</td>
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<td>Stationary</td>
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<td>Aerospace and Defense</td>
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<td>Ophthalmic</td>
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All business segments are supported by a core research function called Science and Technology.

External technology collaborations manage government & university relations & collaborations within the research function.
Managing University Relations at Corning

- Decentralized approach
- Every business & division manages its own relationships
- Research function provides:
  - Relationship management
  - Contract administration & ROI measurement
  - Strategic direction
Types of transactions and collaborations

- **Sponsored Research**
  - Corning defines a problem and provides Confidential Information, the parties agree on a SOW, budget, and deliverables; both parties contribute knowledge to achieve objectives

- **Testing or Analysis**
  - May be free – analyze one or a few samples of Corning material and provide results (MTA)
  - May be fee for service – Corning pays for the time, labor and materials used by university to test or analyze (Service agreement)

- **Sponsor a Student**
  - Typically Ph.D. candidates

- **Donation** of money, services or equipment to university
  - Gifts

- **Consortium Membership**
  - Membership agreements

* NDA's are required for disclosure of confidential information to all government agencies and universities
Benefits & Objectives to Working with Universities

University Collaboration Objectives
- To complement or supplement Corning’s competencies to meet the need of a basic or early stage research project
- Solving a technology problem
- Characterization and measurements
- Investigation of alternative approaches to confirm or refute Corning’s current approach
- Market intelligence gathering through participation in consortiums (typically in the pre-competitive stages of technology development)
- Validation or refinement of modeling through experiments

Benefits to working with Universities

Innovate Faster
- Improve the speed of innovation

Improve ROI
- Improve ROI
- Decrease Expenses
- Minimize capital expenditures

Talent
- Identify new talent

IP
- Development of or access to new intellectual property
Establish a Core University Strategy

Core = A select group of universities whose competencies align well with Corning’s needs.

- Corning researchers still have the ability to work with any University

- Improved relationship management with the Core Universities should:
  - Enable improved IP terms, responsiveness, and ROI
  - Decrease uncertainty and ensure acceptable risk
Typical Agreement Process (varies by collaborator)

1. PI completes collaboration form
2. ETC drafts agreement
3. Corning IP/ Legal reviews draft
4. Collaborator reviews draft
5. Corning and collaborator negotiate final agreement
6. Agreement is signed by both parties
7. Collaborative research begins
Selecting the Core Universities

Core Universities Selection Criteria

- Competency
  - Competencies match with Corning needs

- History
  - Track record of success with Corning

- ROI
  - Potential to improve ROI

- Intangibles
  - Easy to work with
  - Other

A core group with interests and objectives that are better aligned with Corning
Engagement Plan for Core Universities

**Build & Maintain Relationships**
- Use account management approach
- Multiple levels of engagement:
  - Executive to Executive
  - External Collaboration Lead to Sponsored Research/Technology Transfer
  - University PI to Corning PI

**Tools to Enable Rapid Engagement**
- Umbrella Research Agreement & Master NDA allow:
  - Rapid engagement
  - Goal: Enable collaborations to begin in ~3 weeks

**Awareness of Opportunities**
- Educate Technology community on:
  - Benefits of working with Core
  - Competencies of Core
- Educate core universities on Technology Community research needs
University of Rochester Engagements

Total of Value of ~$272K and 14 agreements since 2008
Thank-you

Q & A