



# OPEN INNOVATION COMMUNICATION:

## Bringing Innovation to the Surface™



PPG Industries

# S&T Innovation Strategy

- **PPG Strategic Direction:**  
**Driving Innovation & New Technologies**
  - ▶ **Our Strategies section from PPG's blueprint**
- **PPG Innovation Model:**  
**Identifying SBU-aligned Growth Ideas**  
**Moving Successful Projects into the Pipeline**
  - ▶ **R&D conducts test drills and follows work to commercialization**
- **Open Innovation – Part of Innovation Strategy**



# Open Innovation Definition

- *“Open innovation is a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology.”*

*Chesbrough, H.W. (2003)*



- ✓ Innovation = Invention + Commercialization
- ✓ Open Innovation Embraces External Technologies



# Types of **Open** Innovation

## ● New Product Development

### ▶ Front End Innovation (Pre-Stage Gate)

- Government Funding
- University Studies: Exploratory
- Research Proposals: External

### ▶ Stage Gate

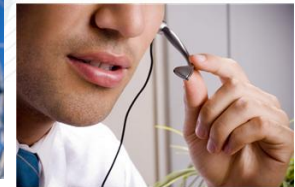
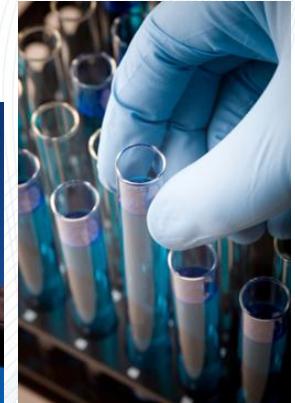
- Partnerships/JDA
- Suppliers/Distribution/Co-Branding
- Licensing in/out

## ● Cost to Serve

- ▶ Plant Support
- ▶ Product Support
- ▶ Color Matching

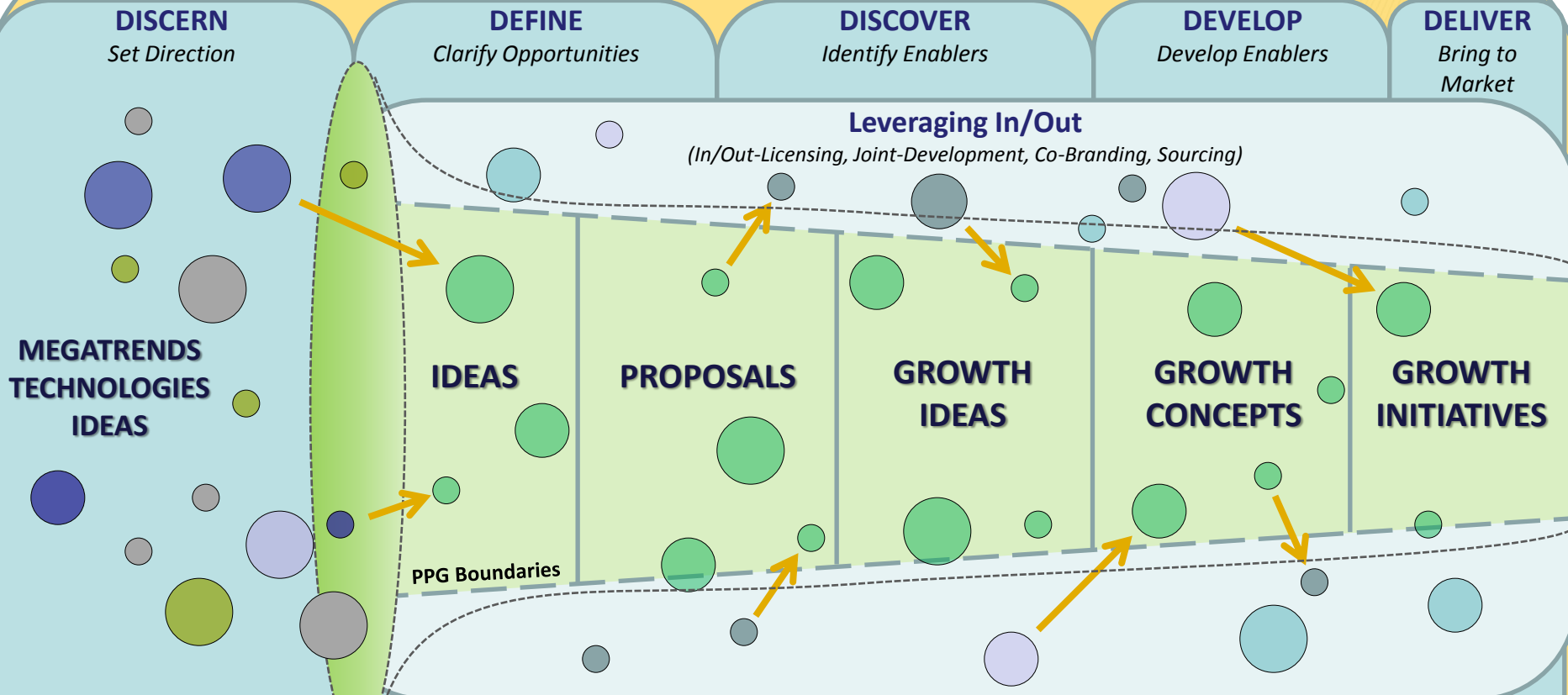
## ● License Out

## ● Acquisitions



# Open Innovation Framework

(5D Model)



- Innovation Objectives:**
- Increase new product sales
  - Enhance margins
  - Improve speed/efficiency
  - Supplement R&D spend



# OI Success Stories

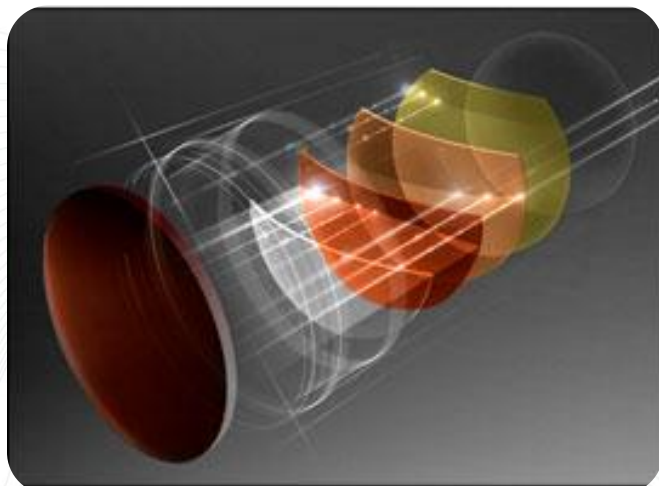


# Optical Products

## Transitions® Vantage™

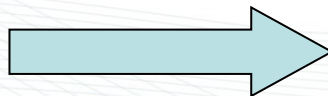
### Adaptive Lenses

#### Problem



#### Unmet NEED

- *Develop new monomers requiring specific synthetic expertise*
- *Aggressive project milestones*
- *Limited internal resources*
- *Establish supply chain*



External  
Scouting &  
Networking

#### Solution



**Transitions®**  
ADAPTIVE LENSES

#### Positive IMPACT

- *Partner identified and vetted*
- *Time to commercialization accelerated*
- *Transformational product launch*



# Specialty Materials

## Fragrance Delivery

### Problem

#### **Unmet NEED**

- *New porous material for fragrance delivery*
- *Specific physical properties required*



**PPG enabling**

### Solution



**TESLIN<sup>®</sup>**  
Enabling Substrate Technology from PPG

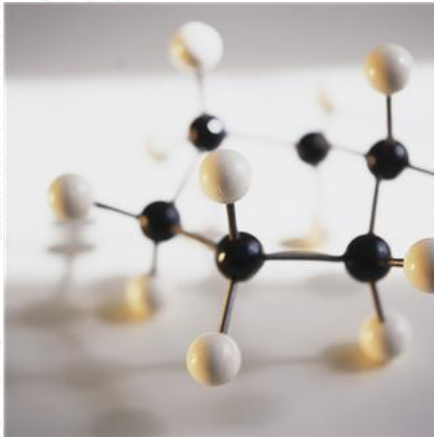
#### **Positive IMPACT**

- *Substrate developed in 3 months*
- *Surpassed Expectations*
- *Patent applications*
- *Significant new business*





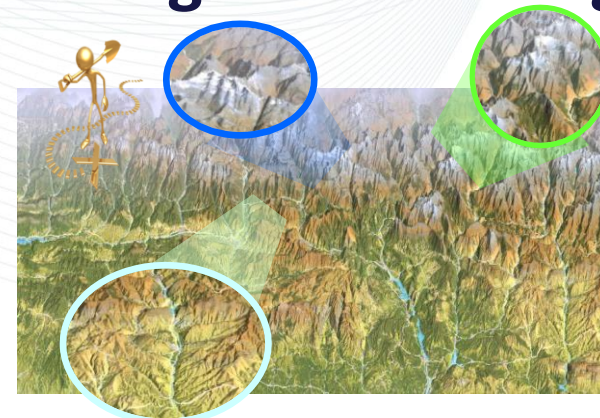
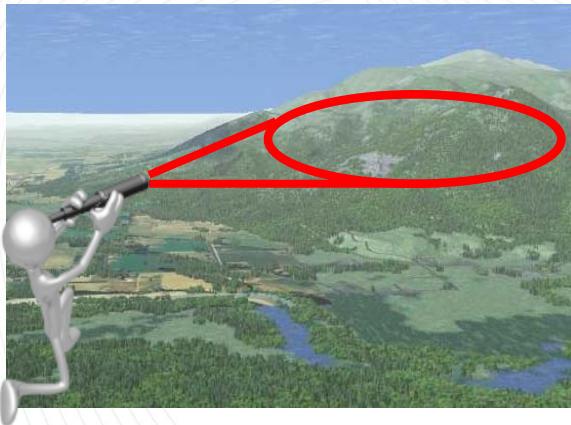
# Technology Scouting



# What is Technology Scouting?

A systematic approach to  
**SEARCHING EXTERNALLY**  
to find solutions for a specific  
**UNMET TECHNOLOGY-BASED NEED**

Technology Scouting can involve both  
Technology Landscaping and Targeted Scouting.



# What are the Differences?

## ● Landscaping



### ▶ Helpful when...

- General product goals known & articulated
- Learning options & issues important to project team
- High level insights are adequate
- Part of long term effort

### ▶ Will not typically provide...

- Specific, validated solutions & partners
- Comparison of specific solutions against details criteria

## ● Targeted Scouting



### ▶ Helpful when...

- Specific performance criteria are known & articulated
- Small set of validated solutions & partners are needed
- Detailed insight is important
- Short term project drivers

### ▶ Will not typically provide...

- High-level information about various viable approaches
- Market & other driving forces that should be considered

**Not “Either/Or” – Typically Both Used**

# Technology Scouting Process Overview

*Core Values: Specific – Systematic - Comprehensive*

Prequalify

Understand  
the Problem

Identify  
Solution  
Spaces

Select Target  
Spaces

Focus on  
Targets

Deliver  
Solutions

SBU  
Technology  
Need

Best  
Solutions  
–  
Relevant  
to SBU  
Need

Right &  
Ready  
Checklist

Technology  
Needs  
Assessment

Mind Map

Interim  
Review

Solution  
Profiles

Final Report

*Core Skills: Interviewing – Organizing – Researching*

# What is the Value?



**Needs Definition**



**Cross-Sector Review**



**Access to Many New Data Sources**



**Business & Technical Intelligence**



**Insights from Experts**



**Targeted Solution Spaces**

*Understand Specific Needs & X-Sector View*



# Open Innovation Metrics



# Acknowledgements



OI service provider & collaborator to PPG

