



**SAFER**

**MADE**

# HARMFUL CHEMICALS ARE IN MANY PRODUCTS



## Beauty and Cosmetics

## Cleaning

## Apparel

## Building Materials

## Outdoor Equipment

Emulsifier; plasticizer	Phthalates
Cross-linking agent; modifier; preservative	Formaldehyde
Surfactant	Alkylphenol ethoxylates
Colorant; dye; pigment	Aromatic amine, azo dyes, coal tars, lead, and heavy metal salts
Preservative	Triclosan, aldehydes, formaldehyde, silver nanoparticles
Solvent	VOCs, including formaldehyde, n-hexane, NMP, toluene, DCM

Emulsifier; plasticizer	Phthalates
Surfactant	Alkylphenol ethoxylates
Preservative	Triclosan, aldehydes, formaldehyde, silver nanoparticles
Solvent	VOCs, including formaldehyde, n-hexane, NMP, toluene, methylene chloride
Anti-scaling agent	Hydrogen fluoride

Emulsifier; plasticizer	Phthalates
Surfactant	Alkylphenol ethoxylates
Colorant; dye; pigment	Aromatic amine, azo dyes, coal tars, lead, heavy metal salts
Stain, oil, and water repellent	Perfluorinated chemicals
Preservative	Triclosan, aldehydes, formaldehyde, silver nanoparticles
Fabric finish	Formaldehyde and isocyanate resins

Emulsifier; plasticizer	Phthalates
Stain, oil, and water repellent	Perfluorinated chemicals
Solvent	VOCs, including formaldehyde, n-hexane, NMP, toluene, methylene chloride
Flame retardant	Poly-halogenated aromatics or organophosphates
Reactant; monomer in polyurethane	Isocyanates
Colorant; preservative	Metals, including chromium (VI), copper, arsenic

Emulsifier; plasticizer	Phthalates
Colorant; dye; pigment	Aromatic amine, azo dyes, coal tars, lead, heavy metal salts
Stain, oil, and water repellent	Perfluorinated chemicals
Durable plastic; coating	PVC
Strength; density	Heavy metals, lead
Sealing	bisphenol A

# DEMAND FOR SAFER PRODUCTS



Awareness about chemical exposure is part of a long-term trend of changing social norms around safety. People are concerned that their family's health is at risk. This translates into a multi-billion dollar demand for safer products.





Retailers have a front row seat to see what people want.

They are banning ingredients, mandating disclosure, and launching safety-focused product lines.

Without a strong safer product pipeline, many of these retailer initiatives may fail.

## RETAILERS

2006



**Bans 6 ingredients**

2011



**Introduces the Eco-Scale**

2013



**Bans 10 ingredients**

2013



**Launches Sustainable Product Standard**

2014



**Launches Made to Matter**

2015



**Launches public ingredient disclosure for formulated products and labeling of private brand products in accordance with the EPA Safer Choice product labeling program**

# MANUFACTURERS



Manufacturers are reformulating existing products, launching new brand extensions, or making safety a key product attribute.



Johnson & Johnson



# Mission

We invest in companies and technologies that create safer alternatives for people and the environment.

# WHY SAFER MADE?

<b>Innovation</b> <b>vs.</b>	<b>Financing</b> <b>vs.</b>	<b>Venture</b> <b>vs.</b>
Regulation	Lab Space / Research	Holding / Evergreen
Awareness	Accelerators / Prizes	Other
<p>We need to support the innovation and development of safer products and technologies to avoid regrettable substitutions.</p> <ul style="list-style-type: none"> <li>Regulation is slow, unpredictable, and focused on what not to use.</li> <li>Awareness campaigns have had tremendous success. However without a solid pipeline of safer products, awareness campaigns alone often result in regrettable substitutions and incremental change.</li> </ul>	<p>Financing the companies that develop safer products and technologies is the most effective way to support innovation.</p> <ul style="list-style-type: none"> <li>Financing is missing and has the biggest impact.</li> <li>Financing allows for the highest flexibility in deploying capital across geographies, technologies, and time.</li> <li>Financing mobilizes both return seeking and philanthropic capital.</li> <li>Lab space and fundamental research is expensive.</li> </ul>	<p>The venture fund structure is most adequate structure to finance safer product innovation.</p> <ul style="list-style-type: none"> <li>Investing in safer product innovation is a venture opportunity.</li> <li>The venture structure is a tested and established way to finance the commercialization of innovation.</li> <li>Return focused investors are uncomfortable with the complexity of open ended structures.</li> <li>Mission focused investors are comfortable with venture.</li> </ul>

# INVESTMENT FOCUS AND CRITERIA

*Materials  
and  
Chemistries*

*Information  
and  
Manufacturing*

*Brands  
and  
Products*

Significant improvement in safety  
Adoption driven by demand for safer products

High impact on performance  
Low volumes  
Light Capex

Light Capex

Proprietary safer technology  
Safety is a key attribute  
Revenue / traction

3-7 years to exit or significant value inflection, base case return of 5-10X, strong team, right structure, adequate stage funding  
Early-stage, equity or equity-like securities

## HIGH-OPPORTUNITY AREAS IN MATERIALS



These are well-known, hard to solve, problems where function and performance come at a toxicity cost and a safer solution would confer significant competitive advantage.

Safer Need Addressed	Relevant Market	Market size ( \$ Million)
<ul style="list-style-type: none"> <li>Formaldehyde-free, non-iron textiles</li> <li>Non-fluorinated water and oil-resistant compounds for textiles</li> </ul>	Textile Finishing	19,600**
<ul style="list-style-type: none"> <li>Safe and effective preservatives</li> </ul>	Preservatives	3,300*
<ul style="list-style-type: none"> <li>Safe and selective herbicides, insecticides, and fungicides</li> </ul>	Pesticides	47,400*
<ul style="list-style-type: none"> <li>Safe food contact packaging</li> </ul>	Styrene	6,300
<ul style="list-style-type: none"> <li>Testing / formulation / design hardware and software tools</li> </ul>	Testing, Information Tools	NA.
<ul style="list-style-type: none"> <li>Safe dyes and colorants</li> </ul>	Dyes	10,600*
<ul style="list-style-type: none"> <li>Safe adhesives and epoxy composites</li> </ul>	Adhesives	12,200*
<ul style="list-style-type: none"> <li>Dry cleaning without harmful chemicals</li> </ul>	Dry Cleaning	9,300*
<ul style="list-style-type: none"> <li>Lubricants without VOCs, PFCs, or aromatic hydrocarbons</li> </ul>	Lubricants	24,000*
<ul style="list-style-type: none"> <li>Isocyanate-free foams</li> <li>Flame- and heat-resistant plastics without flame retardants, antimony, or phthalates</li> </ul>	Urethane Foams	10,800*

\* Source: IBIS World Manufacturing Sector Reports (US Revenue 2014)

\*\* Source: IBIS World Manufacturing Sector Reports (Global Revenue 2014)



## Unique Investment Focus

We aim to become the go-to institution for financing early-stage safer product innovation.



## Work with Leading Companies

- Understand industry's product safety needs
- Find investment opportunities, scout
- Pilot
- Co-invest



## Help Start-Up Companies

- Advice on start-up issues, fundraising, partnerships
- Share our network
- Help find people for their teams



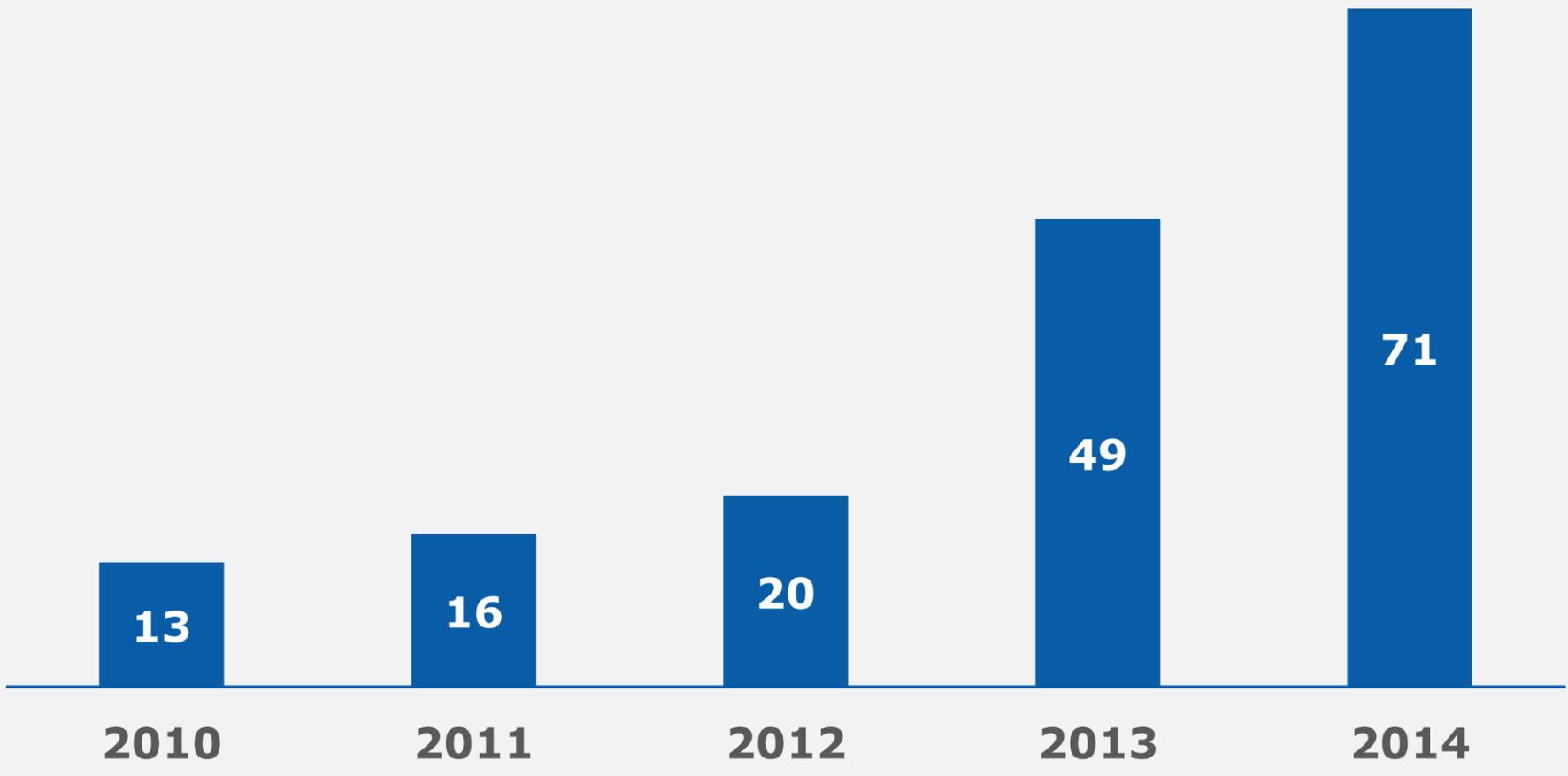
## Validation and Measurement

- Perform validation of safety benefits and new compounds
- Measure impact

# RECENT START-UPS DEVELOPING SAFER INNOVATION



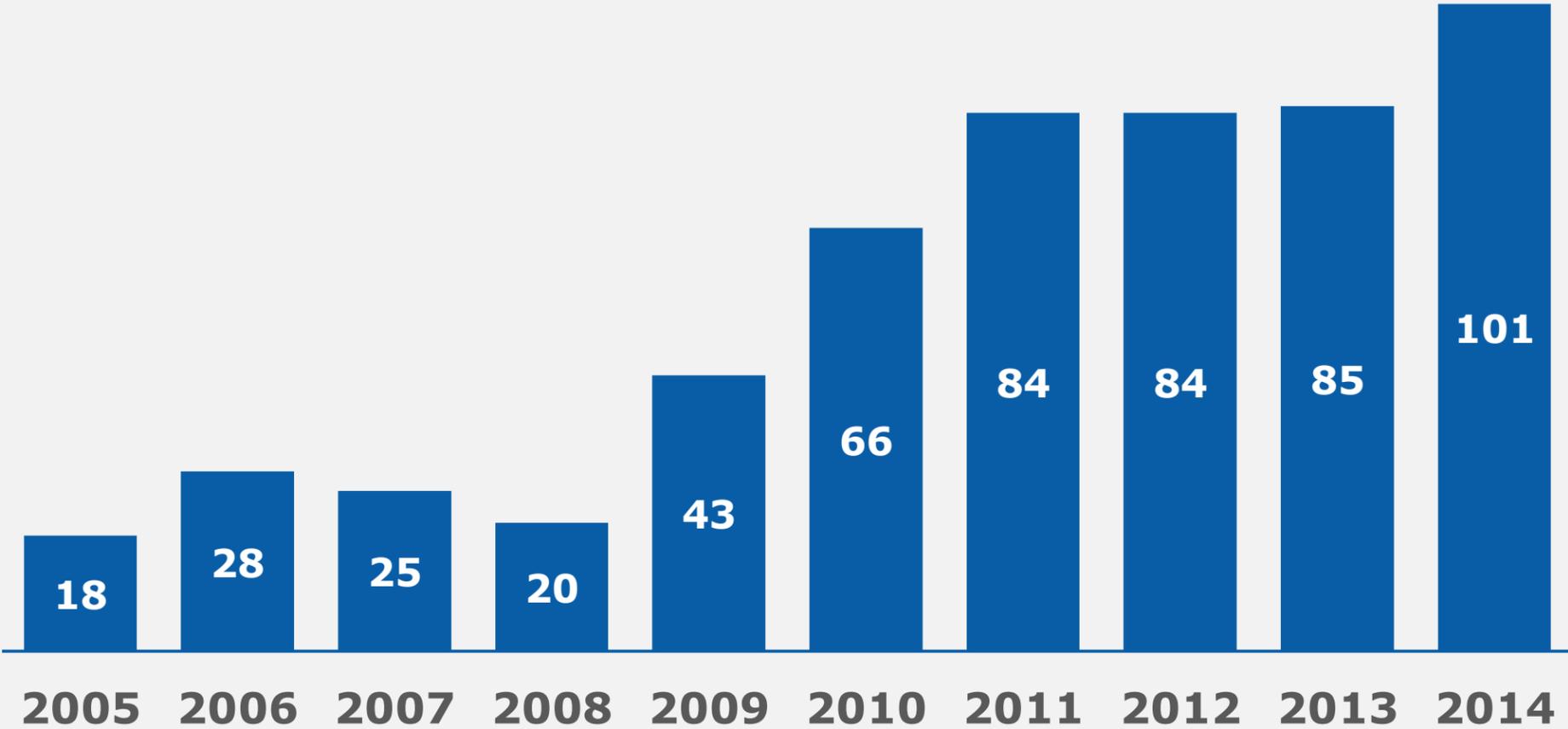
Of 2,705 companies developing sustainability-related businesses that received funding between 2010 and 2014, 169 (6%) develop safer product innovation. The 71 companies that received funding for safer product innovation in 2014 represent 9% of sustainability-related businesses that received funding that year.



# GREEN CHEMISTRY PATENTS



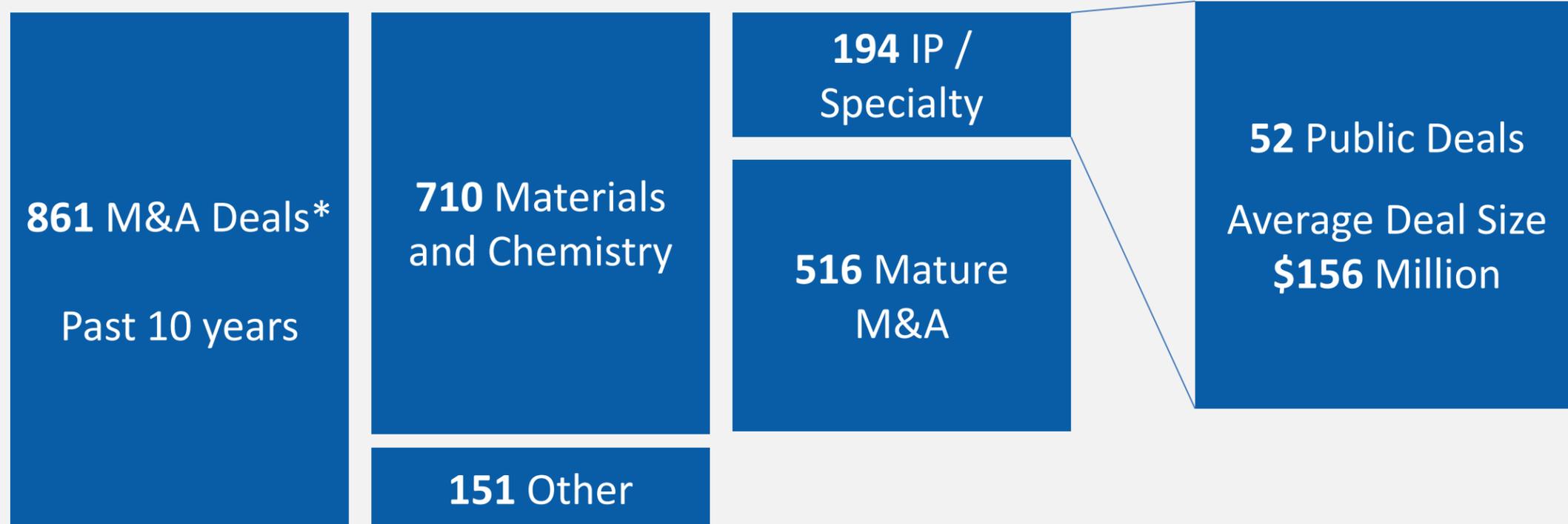
As a percentage of total chemistry patents awarded, green chemistry patents have increased from 0.9% in 2005 to 5% in 2014.



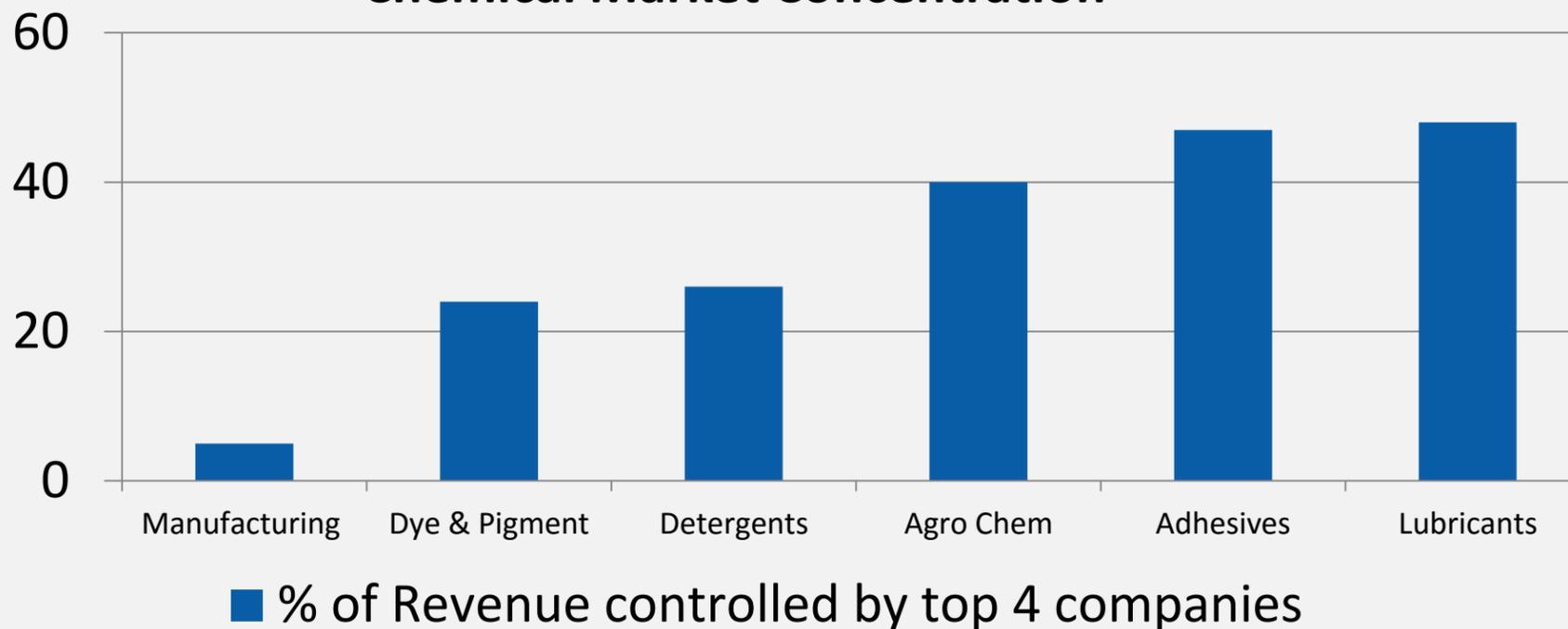
# ROBUST M&A ACTIVITY IN MATERIALS AND CHEMISTRY



Growth and adoption of new technology in the chemicals and materials markets are driven by M&A activity, creating a robust marketplace for the adoption of differentiated technology.



**Chemical Market Concentration\*\***



## TEAM



**Adrian  
Horotan**

- Experienced venture investor
- Successfully put together and financed early stage companies
- Set up and managed venture funds
- Passion for investments and environmental issues



**Marty  
Mulvihill**

- Deep knowledge of safety issues and industry needs
- Expertise in developing safer technologies and materials
- Broad network within industry and innovation community
- Passion for materials science and technology



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