

# **The Chemical Angel Network**

January 16, 2018

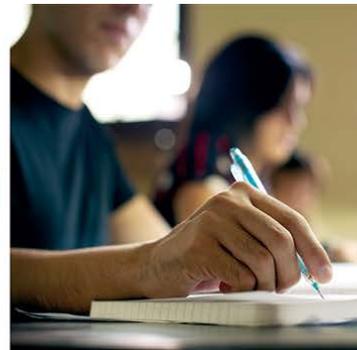
**A GC3 Startup Network Webinar**



# What is the GC3?

- A cross-sector, full value chain business membership organization
- A convener of collaborations to advance green chemistry innovation & practice
- An advocate for government policy & funding that advances green chemistry R&D and innovation

**Mission:** To make green chemistry standard practice – **Mainstream** – in industry, for innovation, public health, and environmental protection



# More than 120 Members Across Sectors and the Value Chain





# GC3 Green & Bio-Based Chemistry Startup Network

*Creating an innovation ecosystem for green and  
bio-based chemistry technologies*

## Goals

- Support green and bio-based chemistry start-ups
- Introduce large strategics to new chemical technologies, partnership and investment opportunities

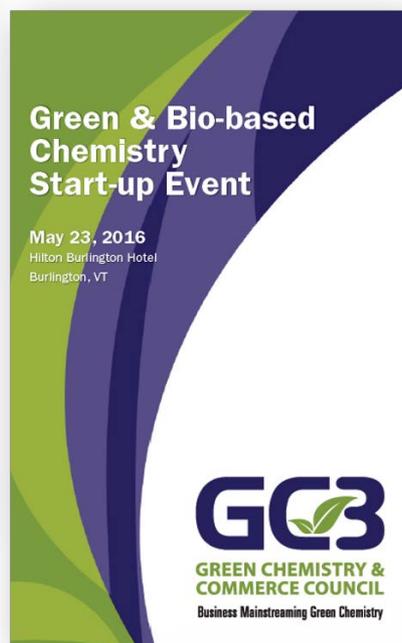


# Members of the GC3 Startup Network Include:



# GC3 Startup Network Technology Showcases

Workshop on Leveraging Partnerships  
to Accelerate Green & Bio-Based  
Chemistry Innovation



February 1, 2017

Hosted by

**LEVI STRAUSS & CO.**

<http://greenchemistryandcommerce.org/startup-network/>





**Calling all innovators developing  
green chemicals, materials, products  
or manufacturing technologies!**

**10 startups** will be selected to present  
their technology to large companies

**Apply by February 16, 2018**

Funding for travel costs is available.

<https://greenchemistryandcommerce.org/startup-network/tech-showcase-2018>

**3<sup>rd</sup> Annual Green & Bio-Based Chemistry  
Technology Showcase & Networking Event**

May 8, 2018

Eastman Chemical Company, Kingsport, TN



# Technology Needs for the 2018 GC3 Technology Showcase

Adhesives	Fabric Finishes	Monomers/Polymers	Recyclable Latex
Coating Technologies	Flame Retardants	Plasticizers	Recycling Technologies
Corrosion Inhibitors	Fungicides	Polyurethanes	Solvents

Raw materials for formulated consumer products (including personal care and household products)

The following GC3 members contributed to the list of technology needs:

Apple	Johnson & Johnson	Procter & Gamble Company
BASF Corporation	Kingfisher plc	Patagonia
Beiersdorf AG	L'Oréal USA	Sherwin Williams
Best Buy Company, Inc.	Levi Strauss & Co.	Steelcase
Eastman Chemical Company	New Balance	Target





# GC3 INNOVATORS ROUNDTABLE

May 8-10, 2018 • Kingsport, TN  
Hosted by  
**EASTMAN**



**13<sup>th</sup> Annual  
GC3 Innovators Roundtable**  
May 8-10, 2018

**3<sup>rd</sup> Annual Green & Bio-Based  
Chemistry Technology  
Showcase & Networking Event**  
May 8, 2018

*Registration is now open.*



# Ground Rules

- Due to the number of participants in the webinar, all lines will be muted
- If you have a question or comment, please type it in the “Questions” box located in the control panel
- Questions will be answered at the end of the presentation

# Today's Speaker

Mark Vreeke



Co-Founder  
Chemical Angel Network

# Chemical Angel Network



*Chemists Investing in Chemical Companies*

*News and Updates from the Chemical Angel Network (CaN)*

**GC3 Startup Network**

**January 16**

**12:00 – 1:00 EST**



# Chemical Angel Network (CaN) Outline

- **Introduction**
- Members
- Entrepreneurs
- Process
- 5 Year update



# What is the Chemical Angel Network?

## ■ Mission

- Stimulate the growth of the *Chemical Economy* by providing financial capital and experienced mentorship to seed and early stage chemical companies. (3Ms)

## ■ Goals

- Recruit an *active investor* base by presenting quality investments opportunities to qualified investors
- Become the smart capital choice for early stage chemical and chemically-related *enterprises*
- Provide a *framework* and process for the collection, evaluation, *syndication* and monitoring of deal flow



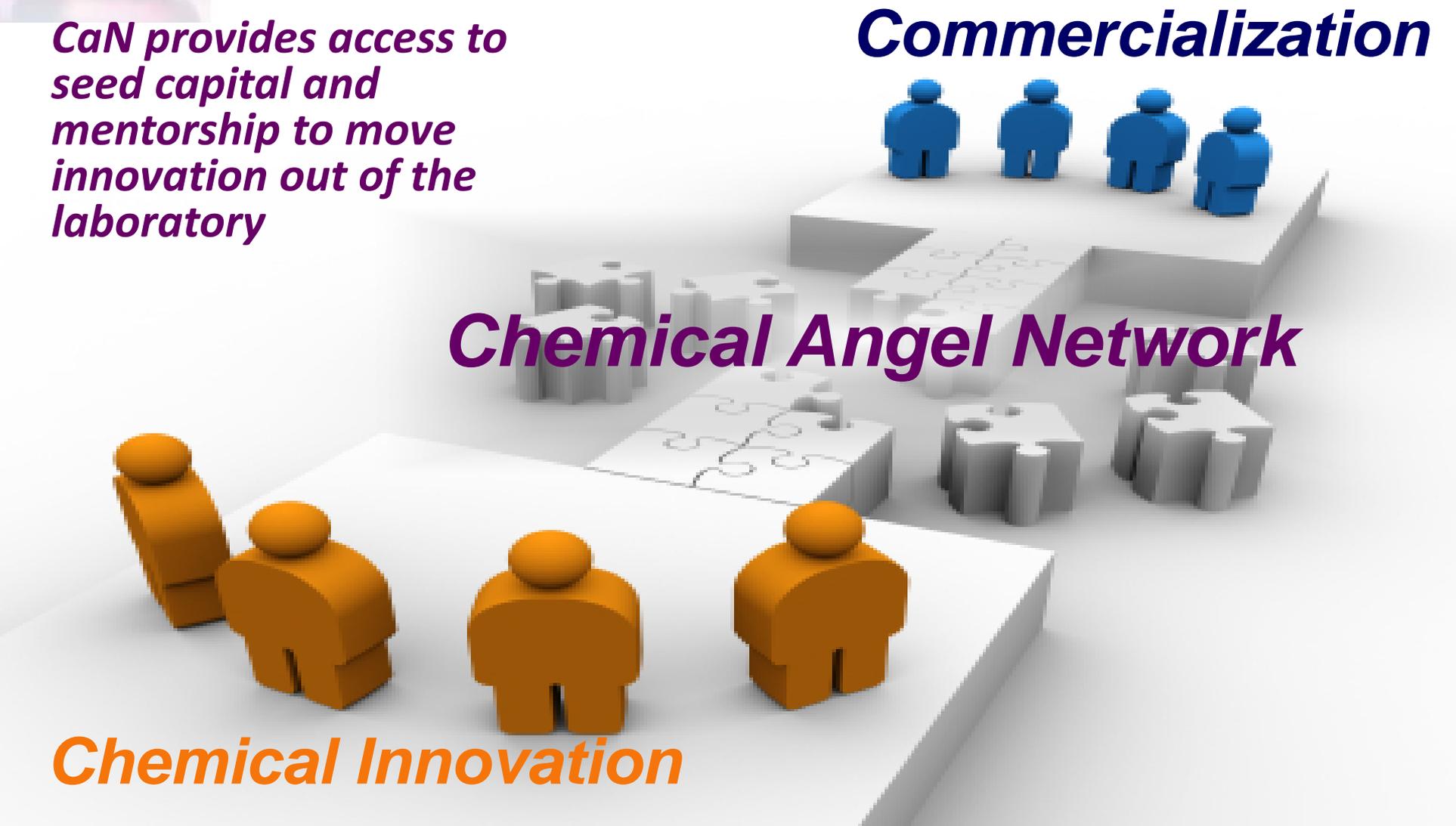
# Why was the Chemical Angel Network formed: Fills a GAP

*CaN provides access to seed capital and mentorship to move innovation out of the laboratory*

**Commercialization**

**Chemical Angel Network**

**Chemical Innovation**







# Sector Focus

## Early Stage Companies with a Significant Chemistry Component

### ■ Materials

- Chemicals (e.g. polymers, biomaterials, green chemicals, coatings, plastics, dyes, etc)
- Nanomaterials (e.g. silicon, polymer, metal oxide-, etc.
- Membranes, battery technologies, packaging materials, etc.

### ■ Measurement

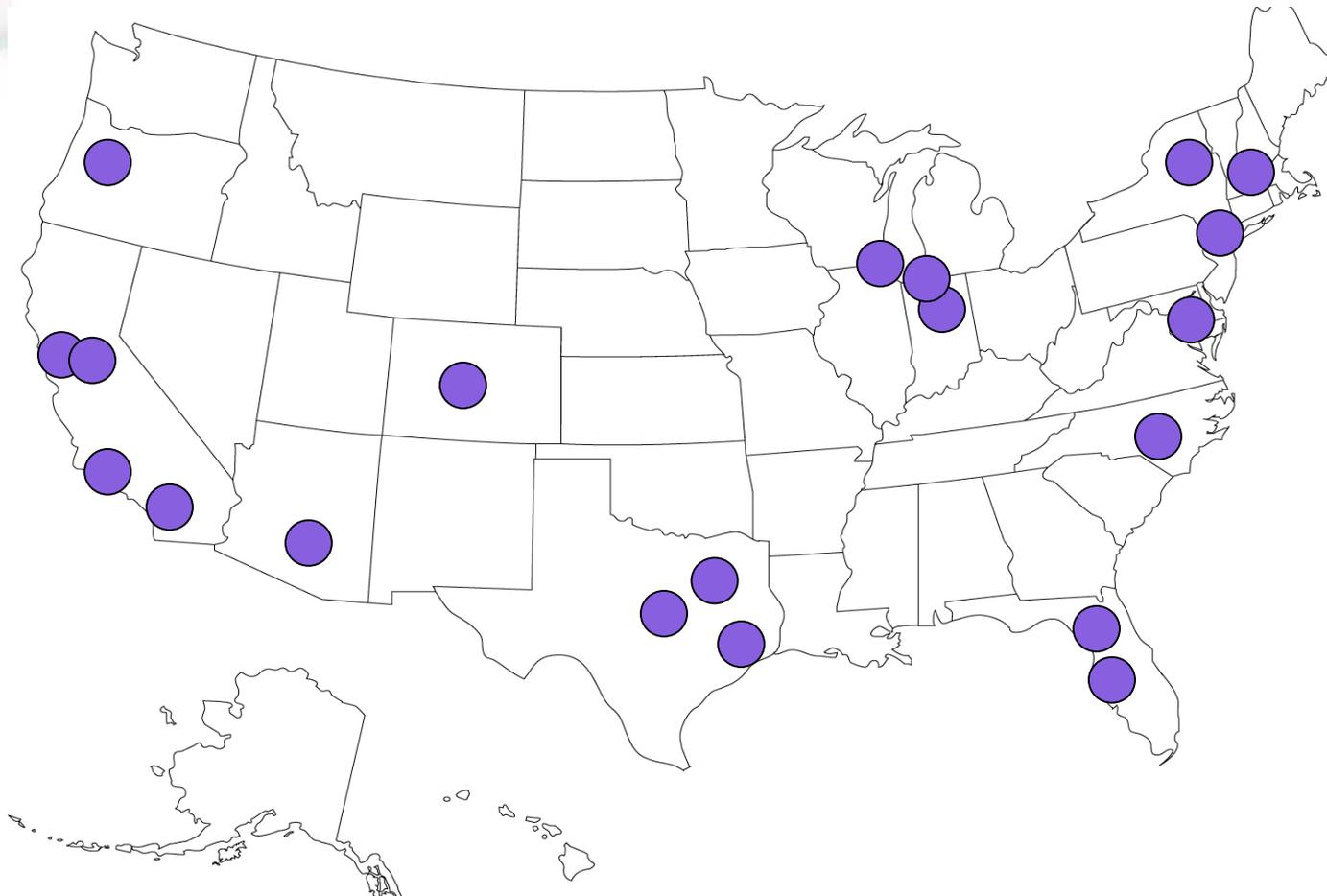
- Chemical Instruments and Tests
- Chemical Sensors (e.g. drugs, explosives, alcohol, toxic chemicals)
- Diagnostic Tests (e.g. biomarkers. instruments, etc)

### ■ Manufacturing

- Chemical Processes
- Biomass and Biomaterial Processes
- Catalyst technologies



# CaN Investor Footprint Today





# What the Chemical Angel Network (CaN) *is not*

- CaN is not a fund
- CaN is not a broker
- CaN does not make investments
- CaN does not act as an investment agent in any manner
- CaN does not receive any share of returns from its members' investments
- CaN is not registered with the Securities and Exchange Commission

***CaN members collaborate on due diligence and mentoring but make individual investment decisions!***



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# Chemical Angel Network Member Benefits

- Opportunity to invest in chemical companies with potential for a high return on investment capital. Minimum investment 5k through the CaN pool
- Ability to make investment decisions with input from the network's members and shared due diligence
- Expertise of network members to help portfolio companies succeed
- Option to review private equity deals anonymously
- Free membership to the Angel Capital Association
- CaN membership is still free



# Angel Investing Statistics

- Excellent returns of 20-30% ROI (caveats!!!!)
- Returns are better when angels invest together
- Median check size is 25k (CaN is around 10k)
- The number of investments increase the odds of a positive portfolio return



# Profile of A Typical US Angel

■ Years investing	9
■ Number of investments	10
■ Total exits	2
■ Years as entrepreneur	14.5
■ Number of ventures founded	2.7
■ Age	57
■ Percent of wealth in angel investing	10%
■ Education	Masters



# Chemical Angel Network Membership Application

- Request to join through our website  
[www.ChemicalAngels.com](http://www.ChemicalAngels.com)
- Application key points
  - Must be an Accredited Investor as defined by Rule 501 of the SEC Regulations
  - Agree to abide by operating agreement



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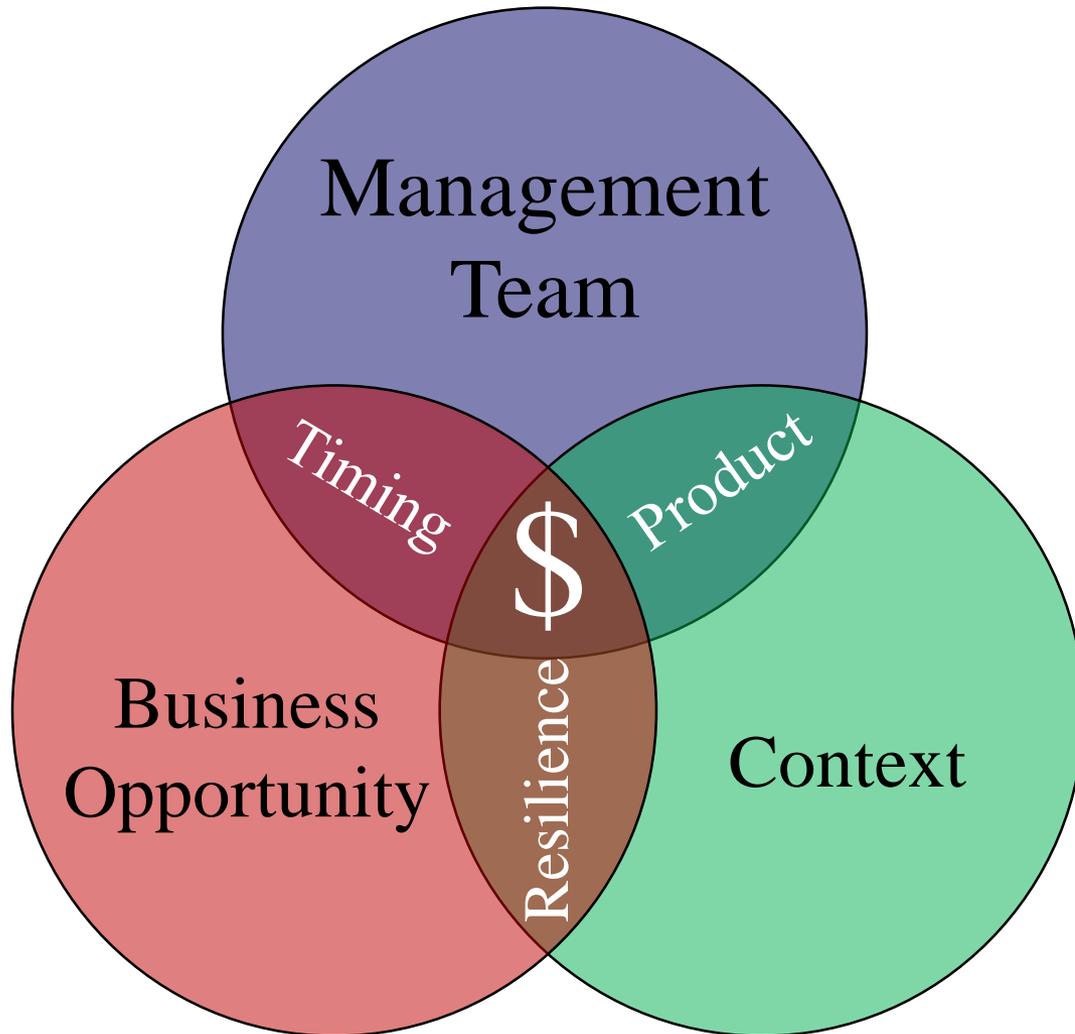


# Chemical Angel Network Entrepreneur Benefits

- Provides a platform to present business proposals to a network of accredited investors.
- Saves entrepreneurs time since the vetting process is virtual. Eliminates the need to find, locate, and coordinate multiple meetings with individual Angels.
- CaNs focus on syndication with other angel groups multiplies the reach of the entrepreneur.
- All applications are considered - no fees are charged to chemical entrepreneurs or businesses



# What Due Diligence Team does: Opportunity Ranking





# Typical Deals for CaN

- Compelling business model addressing a large or growing market using a scalable approach
- Company headquartered near an existing member's residence
- A match with an existing member's experience in the sector that the company is addressing
- Investments to \$100K and larger amounts syndicated with other networks or funds
- The round has existing investors already identified



# Entrepreneurs

- Submit your Business Proposals using the Entrepreneur link on our website

[www.ChemicalAngels.com](http://www.ChemicalAngels.com)

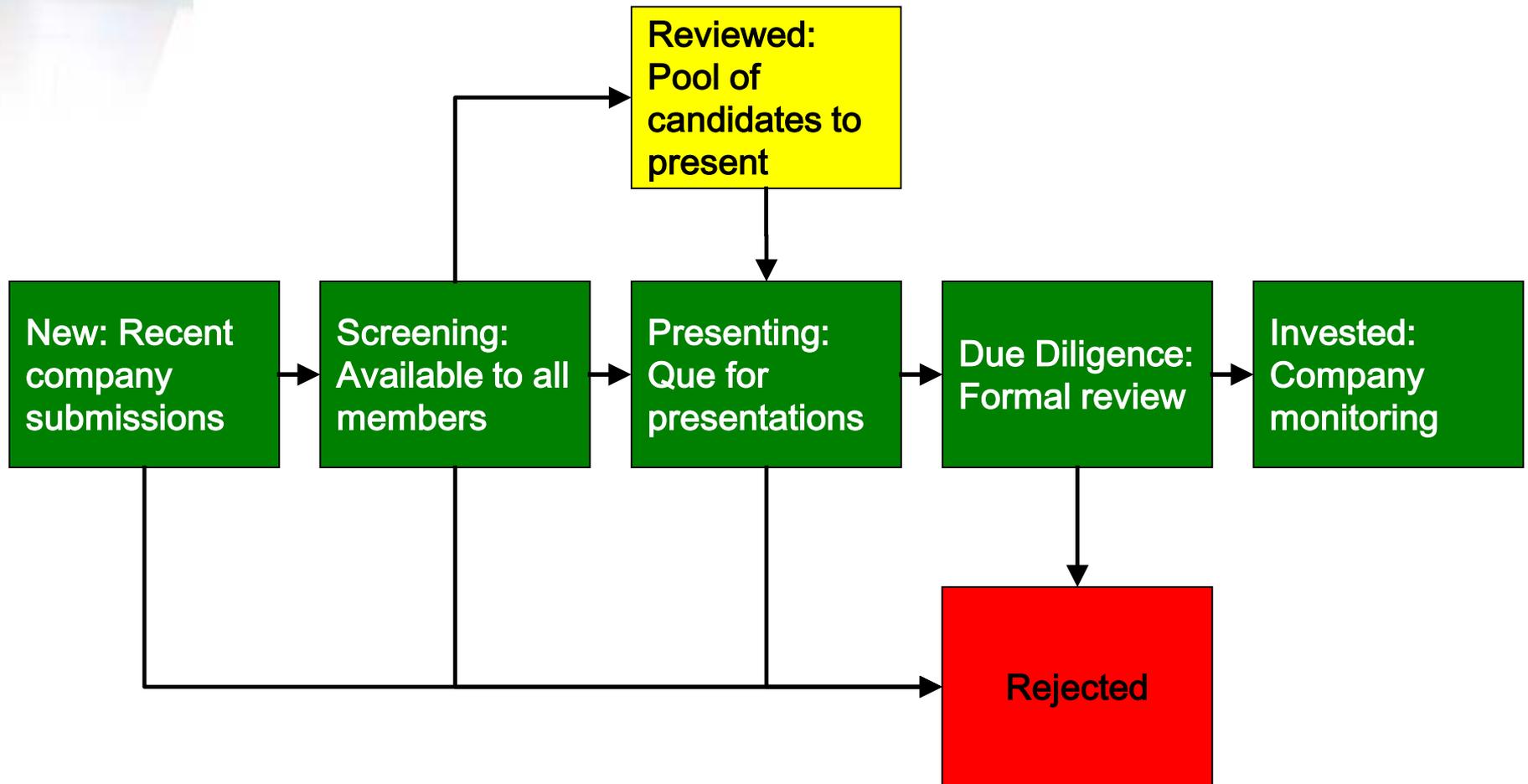


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# Investment Workflow





# Other Process Details

- GUST platform for vetting deals
- WebEx for virtual group communication
- Biannual Meetings at ACS National Meetings, Angel Capital Association and MRS National Meeting



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# Chemical Angel Network Fifth Year Update

- Members - over 40
- Deals Submitted - over 300
- Investments 17
- Sponsors 5
- Partners 10+
- LinkedIn Group .... Chemical Angel Network 1800+



# Sponsors and Partners

## Sponsors

- Dow
- Invista
- Xerox
- ecosVC
- TransAtlantic Science

## Partners

- ChemCeption
- ecosVC
- HYLTON-RODIC LAW PLLC
- Polaris Battery Labs, LLC
- Green Centre Canada
- NCET2 National Council of Entrepreneurial Tech Transfer
- ONAMI Oregon Nanoscience and Microtechnologies Institute
- TransAtlantic Science



# Investment Returns

- iMicroQ 😊
- Buffalo Bayou Brew 😊
- NOHMS 😊
- Pediatric Bio 😞
- Vapor Sense
- Qteros 😞
- EV Container 😞 😊
- SiNode
- Connora
- PanTher
- Abom 😊
- SioTex
- Autonomic Materials
- Advano
- Smart Human Dynamics 😊
- Near Miss
- Aperomics

## ■ Realized ROI **-7%**

- Equal investments
- Flat for operating companies

## ■ Unrealized ROI **+25%**

- Equal investment
- Flat for operating companies without a revaluation



# Next Steps for CaN

- Grow Active Membership Base
- Provide an investment vehicle for passive participation
- Increase participation with other organizations
- Internship opportunities

**CaN's success depends on your active participation**

**Thank You**



**Chemical Angel Network**  
*Chemists Investing in Chemical Companies*

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[www.ChemicalAngels.com](http://www.ChemicalAngels.com)

# Question & Answer

Please enter questions or comments in the “Questions” box located in the control panel.

# Upcoming Patent Webinar Series

A GC3 Startup Network Webinar

## Part 1: Developing Your Patent Portfolio

Wednesday, January 31, 2018 at 12:00 PM EST

## Part 2: Protecting Your Patents from Post-Grant Challenges

Tuesday, February 27, 2018 at 12:00 PM EST

## Part 3: Enforcing Your Patents

Wednesday, March 28, 2018 at 12:00 PM EDT

Please visit [www.greenchemistryandcommerce.org](http://www.greenchemistryandcommerce.org) to register.





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# Thank you for joining us!

For more information about the GC3:  
[www.greenchemistryandcommerce.org](http://www.greenchemistryandcommerce.org)

