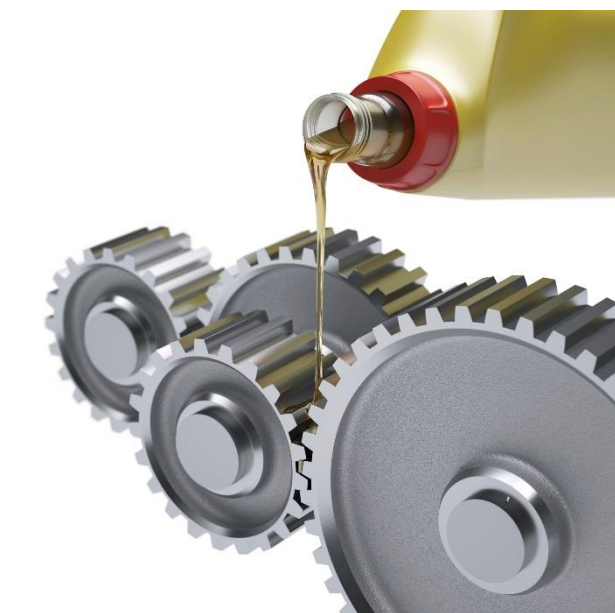
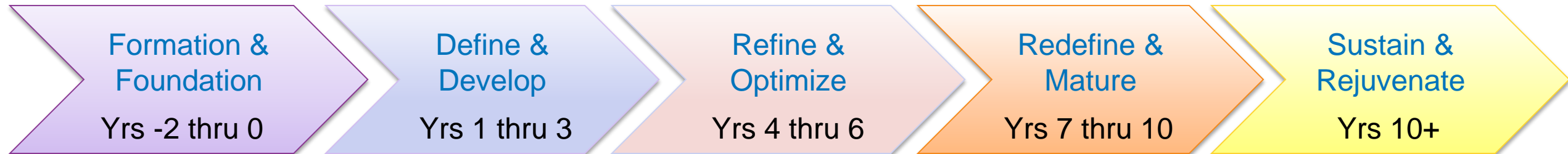


Recruiting and Retaining July 2017

Peter L Keeling
Iowa State University



Different Stages



ERC STAGES & YEARS CONCEPT	Stage 1. ERC Years -2 thru 0 Formation and Foundation	Stage 2. ERC Years 1 thru 3 Define and Develop	Stage 3. ERC Years 4 thru 6 Refine and Optimize	Stage 4. ERC Years 7 thru 10 Redefine and Mature	Stage 5. ERC Years 10+ Graduate to Sustainable Center
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Members

Joined

Exited

2009 2010 2011 2012 2013 2014 2015 2016 2017

Larger
^
Medium
^
Smaller

Some Retained from Inception - 25 Exited - Mostly a changing business emphasis (Average Longevity ~4yrs)

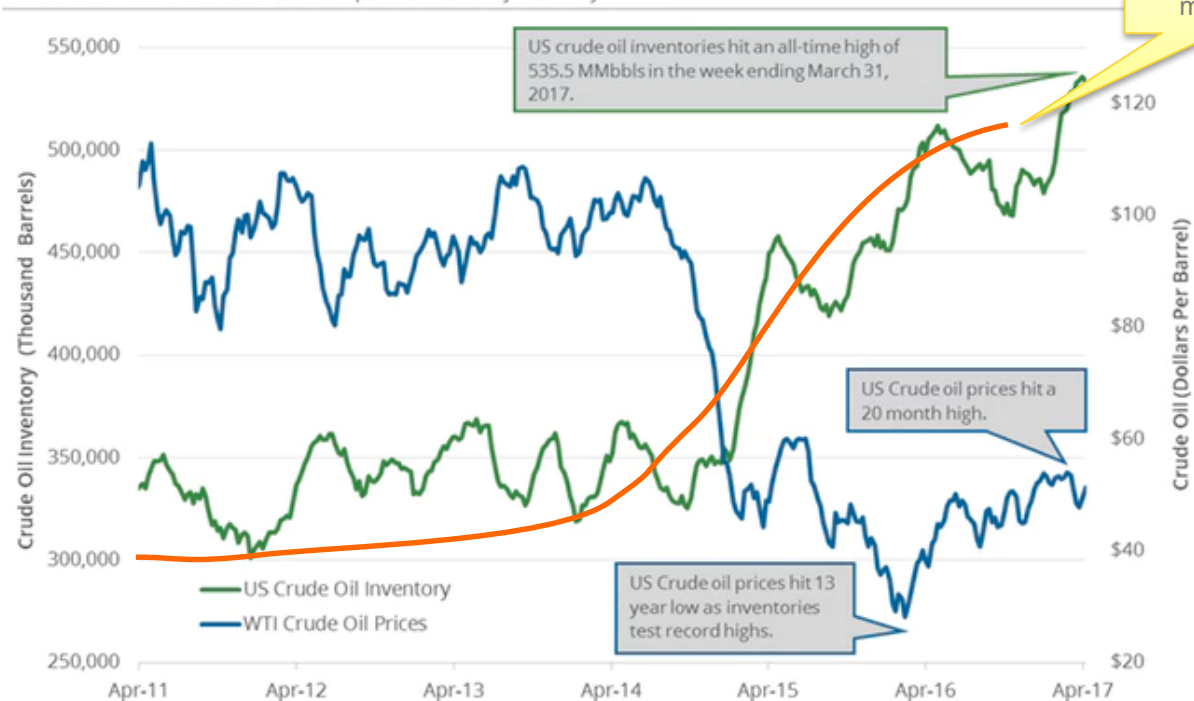


Mega Trends

LUX: Amid low oil prices, investors have shifted focus in 2016 to commercializing biobased products that offer improved performance, not just “greener” replacements for petro-based compounds.

Impact of US Crude Oil Inventories on Crude Oil Prices

US crude oil inventories and crude oil prices are usually inversely related



Source: EIA, NYMEX

Market Realist



Timeline

Biofuels

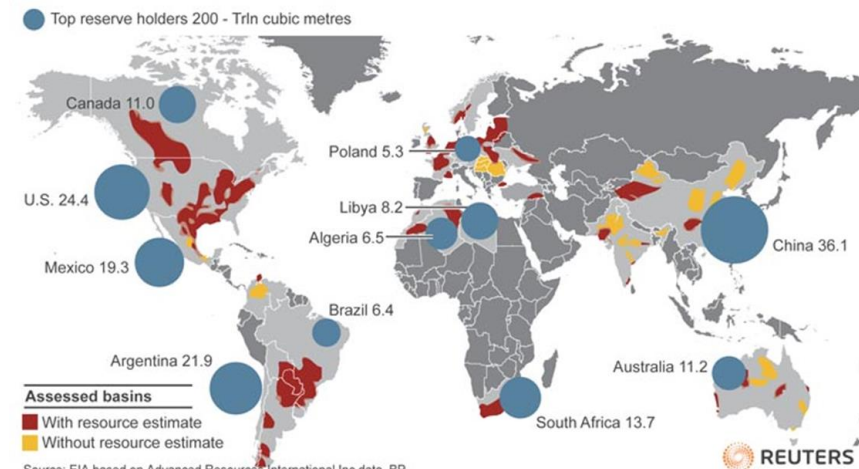
Biofuels
Bioproducts

Biofuels
Bioproducts
Specialty
Cosmetics

Biofuels
Bioproducts
Specialty
Cosmetics
Materials
Composites

Biofuels
Bioproducts
Specialty
Cosmetics
Materials
Composites
Nutraceuticals
Food

Global shale gas basins, top reserve holders



Source: EIA based on Advanced Resources International Inc data, BP
Reuters graphic/Catherine Trevethan

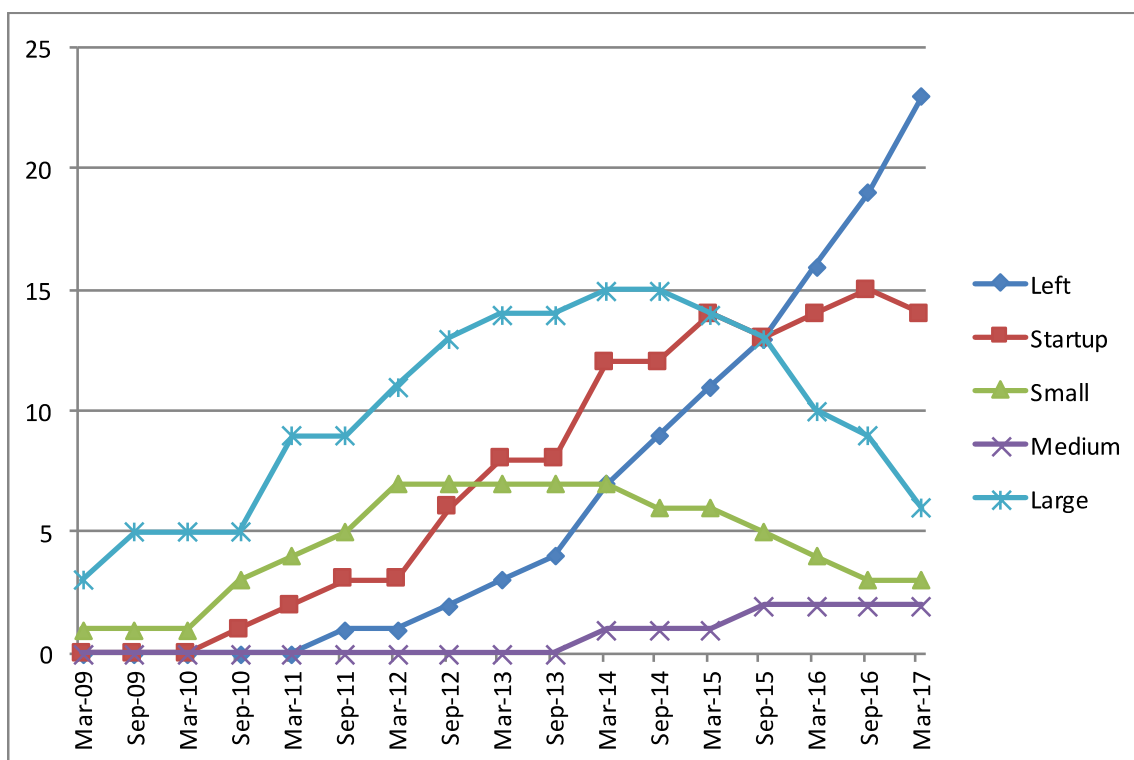
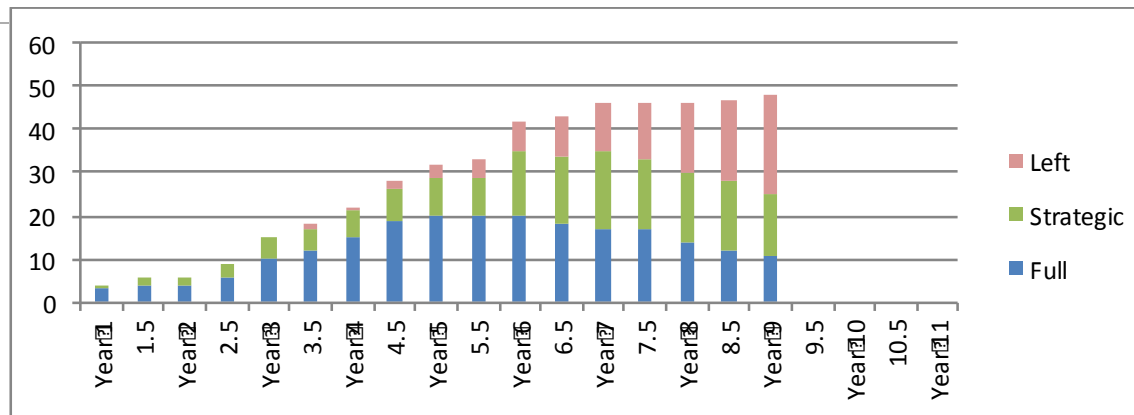
REUTERS



One Year Away from Zero Members

- Members stayed between 1 year and 8 years
- Recruit, Reward, Retain.
- Stagger start/renewal date when sign agreement.
- Tiered membership offers valuable flexibility.

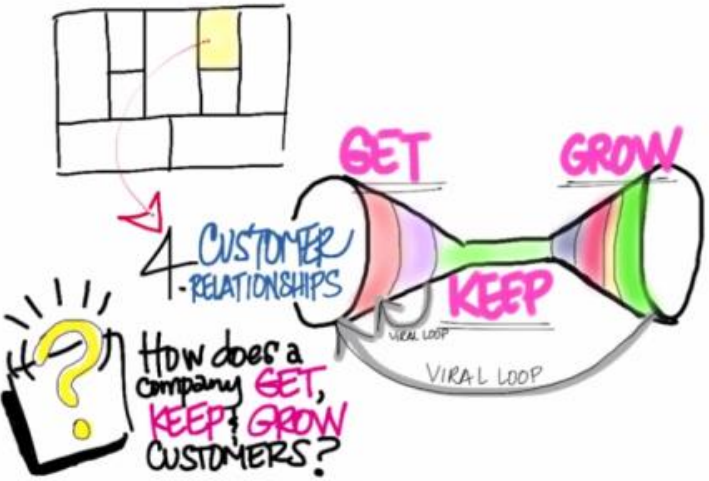
	Strategic No IP Options	Full Includes options to negotiate IP Rights	Sponsoring * To be negotiated on a case-by-case basis
Large	\$25,000	\$50,000	*
Medium	\$12,500	\$25,000	*
Small	\$2,500	\$5,000	*
Startup	\$500	\$1,000	*



Attract & Retain

ERC's need an active IAB with sufficient diversity to add value to the center.

- Find
- Hire
- Train
- Engage
- Retain



Find - Core Needs

Understand why companies are members. They are not all the same.

- Clear Understanding of Industry Membership Benefits & Costs, and your Membership Agreements
- Solid Knowledge of your ERC's Science & Technology
- Classy Brochure with your ERC Story
- Convincing PowerPoint Presentation with Great Slides



- Consistent Credibility with your ERC Management Team and University Admin
- Build Links to the Broad Industry of your ERC
- Dialogue & Good Relations with your Industry Member Folk
- Patience, Perseverance, Persuasion, Passion & Vision

Track - Membership Database

Build a database of company names, connections, contact info and notes.

- Spreadsheet is a good start.
- Need to track member changes and evolving contact lists.
- Next level is a database. Best if database and invoices are integrated.
- ILO's that exit leave a challenge behind.



Hire, Recruit

Recruit key decision makers. Industry folk move jobs. Track with LinkedIn.

- Emails, connections, business meetings lectures, brochures.
- Imperative to reach the “right person” as senior as you can get. Build many connections.
- Follow-up with conference call and campus visit.
- Invite select guests to Annual Meeting (Fee & CDA).



Your LinkedIn Network

1,822 Connections link you to 12,033,416+ professionals

17,225 New people in your Network since April 26

Add Connections

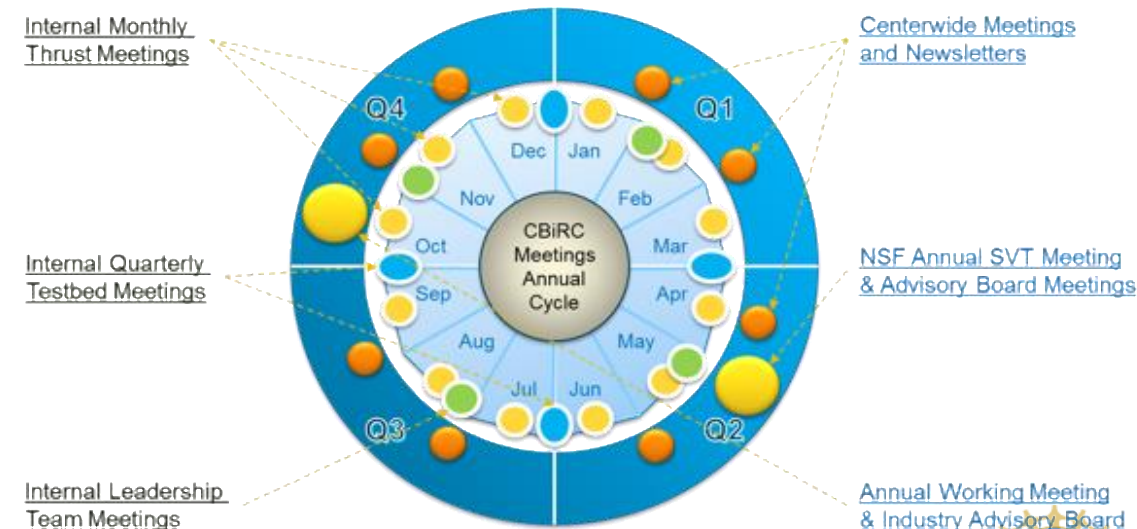
- Cold calls do not work.
- CDA is sometimes a problem.
- Use your IAB and Faculty.
- Business Summits

7th Annual
BIO-BASED & SUSTAINABLE PRODUCTS
SUMMIT

January 13-14, 2016 | San Diego Marriott La Jolla | San Diego, CA

Train

- Explain, describe and summarize.
- Often get new people to member meetings.
- Legal side and patents and internet access and strategy and SWOT.
- Build a good rapport with your IAB.

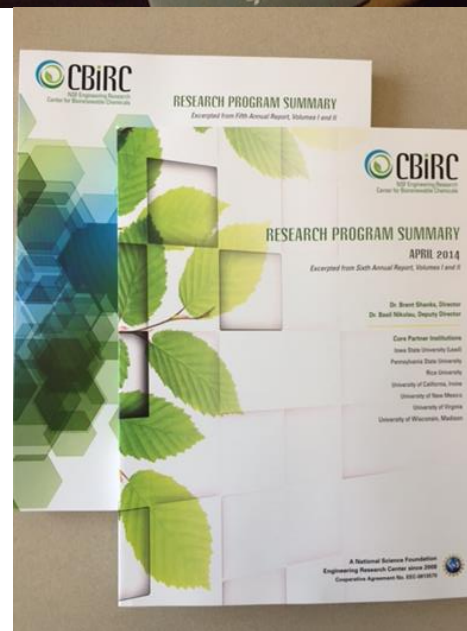


Engage

Respond effectively to emails, phone calls, meetings, discussions, comments.

- Annual meetings are very important.
- Newsletters and webinars are very effective.
- Impossible to provide all information about an ERC to the membership.

Listen, Evolve, Professional



Strengths provides an area to list everything done right either individually or as an organization. This section contains both organization and external strengths, such as client relationships.

S
STRENGTHS

Weaknesses are aspects of your business that detract from the value you offer or place you at a competitive disadvantage. You need to enhance these areas in order to compete with your best competitor.

W
OPPORTUNITIES

Opportunities are factors that represent reasons your business is likely to prosper. Such as being able to expand a franchise into a new city, while some may fall into your lap such as another country opening up its market to foreign business.

O
WEAKNESSES

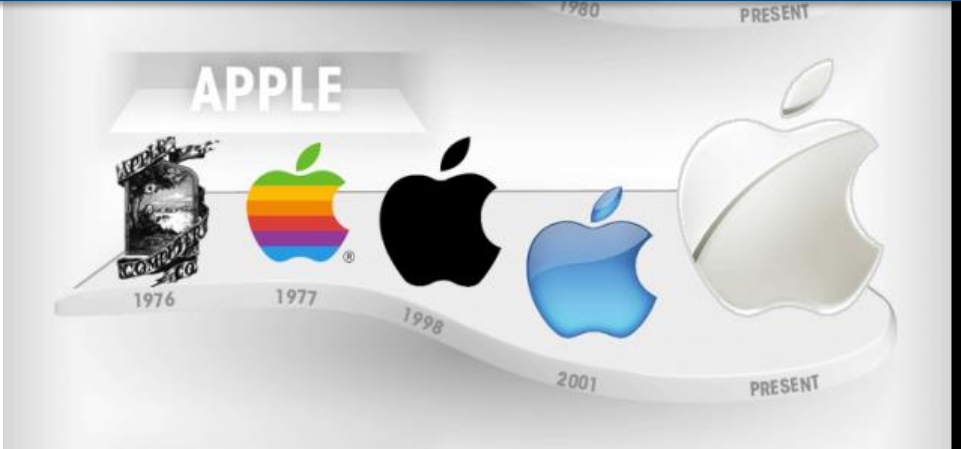
Threats include external factors beyond your control that could place your strategy, or the business itself, at risk. You have no control over these, but you may benefit by having contingency plans to address them if they should occur.

T
THREATS

Retain

Members that leave do not come back.

- Improve your program over time so that there is always a next level.
- Build multiple relationships with members.
- IAB Seed projects from membership fees.
- Sponsored research, internships, mentoring all build a deeper root in the ERC.
- Find creative ways to not lose members.



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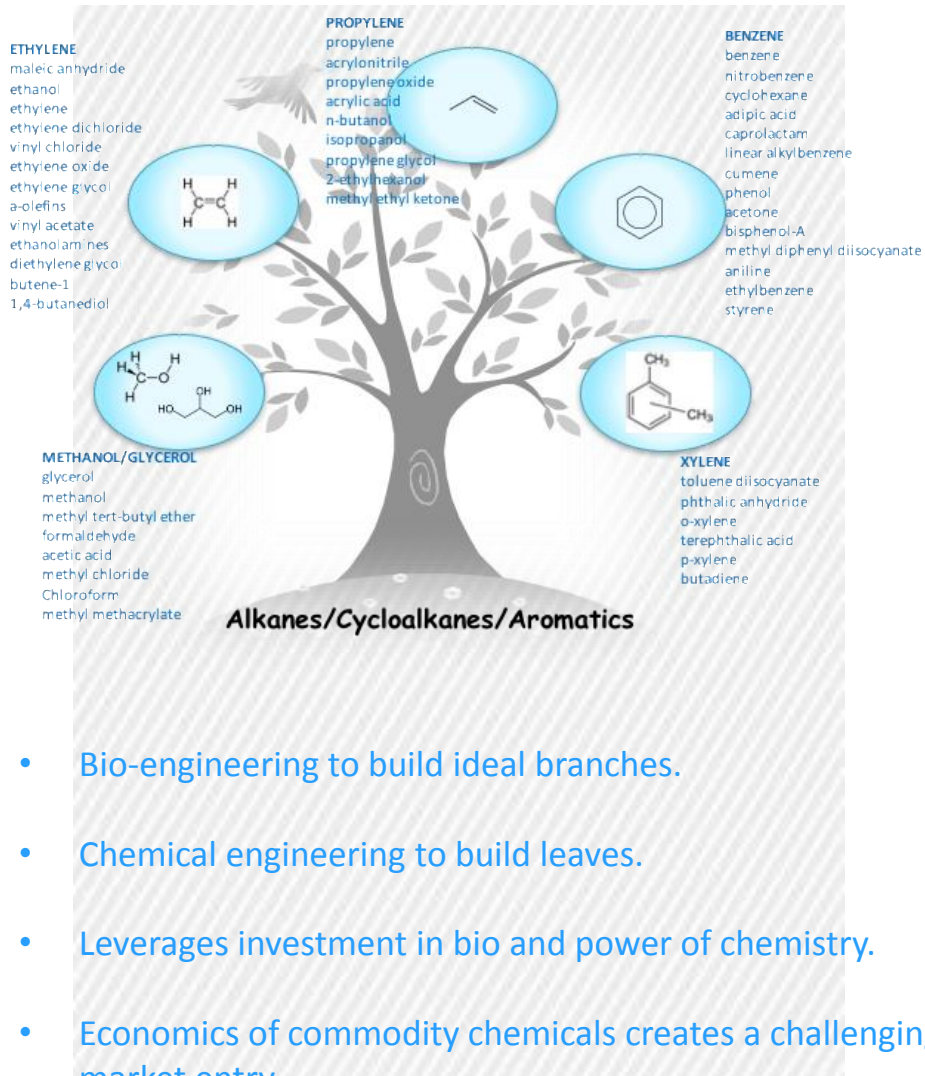


Thank you!!

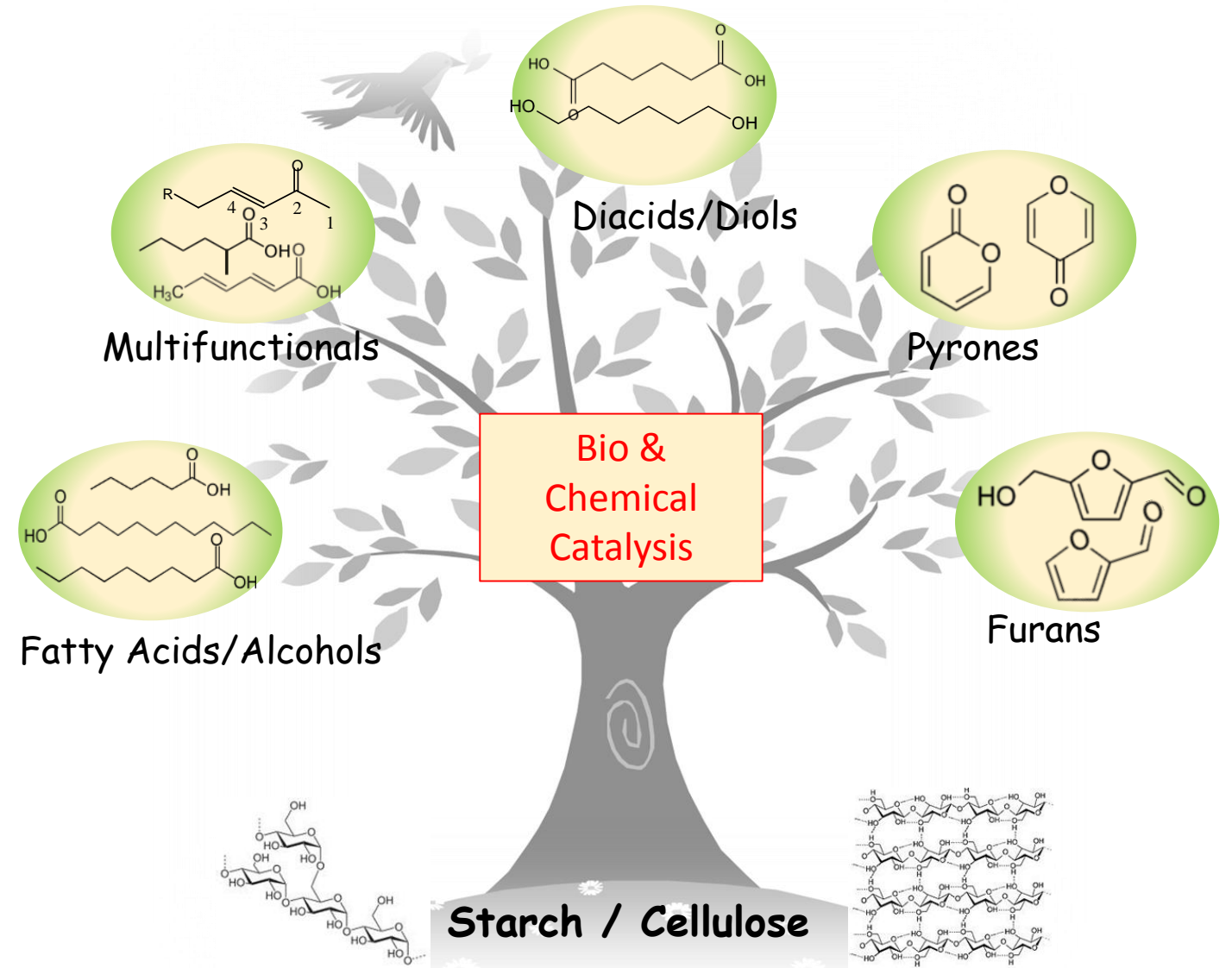
How will you innovate
for a better world?



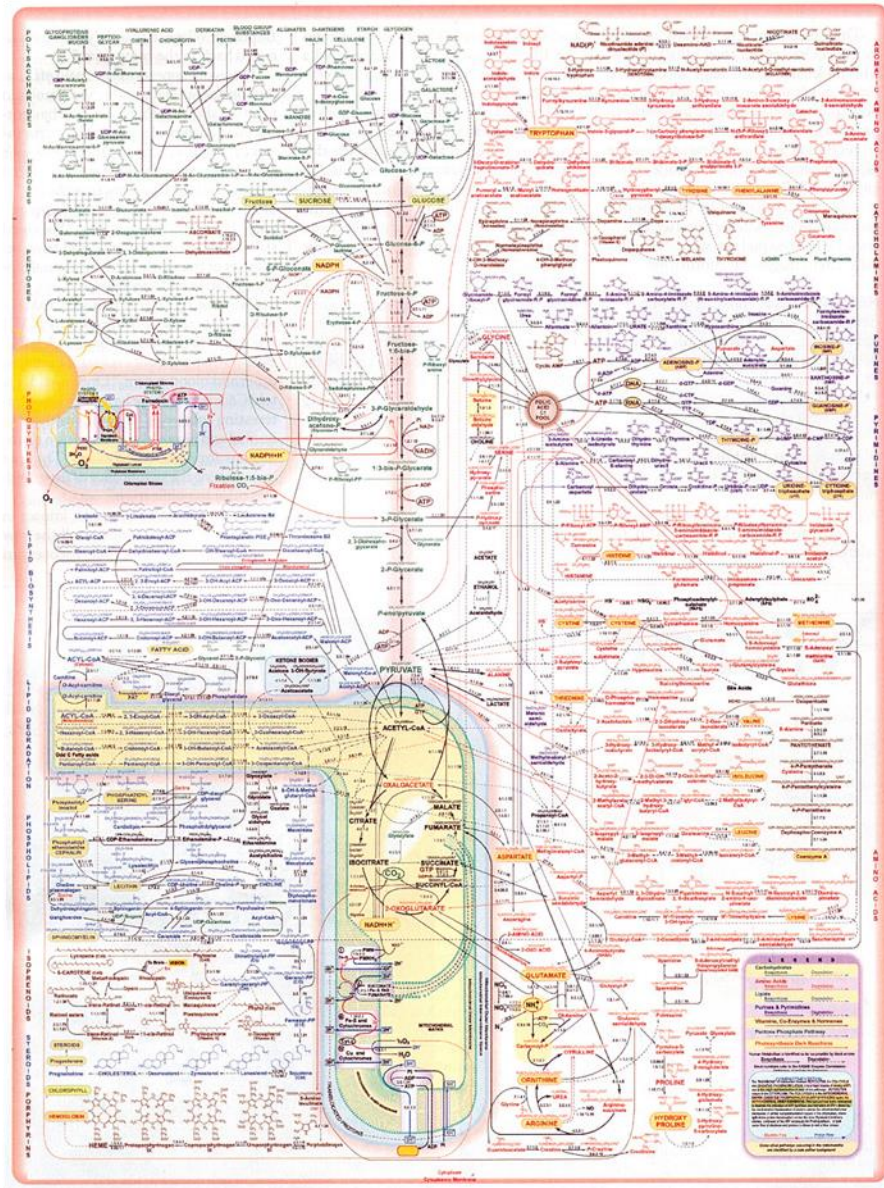
Build Intermediates to make Branches



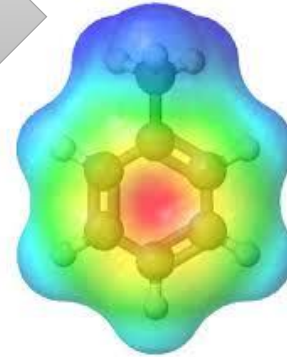
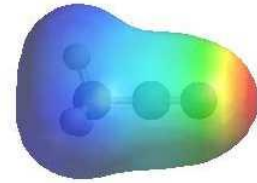
- Bio-engineering to build ideal branches.
- Chemical engineering to build leaves.
- Leverages investment in bio and power of chemistry.
- Economics of commodity chemicals creates a challenging market entry.



Computational Biocatalysis



Ideal
Intermediate
Molecules



Biocatalysis

Chemical Catalysis

Platform Array of Molecules



Polymers

Resins

Personal Care

Surfactants

Lubricants

Composites

Materials

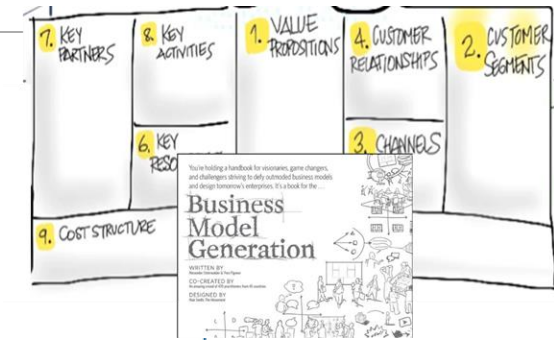
Ecosystem Accelerator



**BIOBASED
FOUNDRY**



**TECHNOLOGY - LED
ENTREPRENEURSHIP**



- Students gain real insight into project and startup concept planning.
- At least one startup from each Entrepreneurship Course.
- Startups need mentoring and require funding.
- CBiRC's startups have accessed over \$6m of funding since 2011.



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Strategy: Define and Refine

Goals	Define, Develop, Refine and Optimize
Strategy and Ideation	Define, Develop, Refine and Optimize CBiRC, Work Closely with Leadership Team
Innovation	Cultivate Innovative Culture, Entrepreneurship Course, Translational Research, Startup Companies, Innovation Partners, Angels and VCs
Education	Student Spotlights, Industry Internships, Distance Learning, Exchange, Student Mentoring, Recruitment
Member Recruitment	Industry Outreach, Summits, Conferences, LinkedIn, Connections, Site Visits
Member Retention	Newsletters, Networking, Poster Competition, Student Seminars, Technology Fair, Technology Transfer, Two-Way Confidentiality, Sponsored Research, Internships
Commercialization of IP	Integrate Industry Input, Invention Disclosures, NSF Translation Research Grants, Startup Companies
Intellectual Property	Invention Disclosure Process, Align with Offices of IPTT,