

TRIO Roundtable: **Intellectual Property Protection and Financing Alternatives for Your Company; the Intersection with the Emerging Technology Programs**

June 7, 2013

SDG&E Energy Innovation Center

Introductions from Host SDG&E

Speaker: **Nate Taylor**
Project Manager
Emerging Technologies, SDG&E

Safety Message

In Case of Emergency

Welcome and Introductory Comments

Speaker: Jeffrey Reed, PhD,
Director, Business Strategy & Development
Sempra Energy utilities

What is TRIO?

The Technology Research Incubation and Outreach (TRIO) is an initiative within the California Statewide Emerging Technologies Program.

TRIO is utilized by the CA Utilities to engage with Energy Efficiency and Demand Response product developers prior to commercialization

Direct funding for product development is not the goal

Why TRIO?

The US, and especially California, is known for its innovation

Utility companies have limited, to no, product development, and rely on the university venture and corporate innovators to provide energy efficiency and demand response solutions

Improving vendor knowledge of utilities' needs and perception of customer needs is a valuable development catalyst

Reducing our energy requirements is not only good for our environment, but it saves money!

TRIO Program

Programs provided in all four IOU service territories:

- Symposiums: General introduction and overview
- Roundtables: Detailed, step by step understanding on emerging technology adoption process

8 Symposium in last 3 years

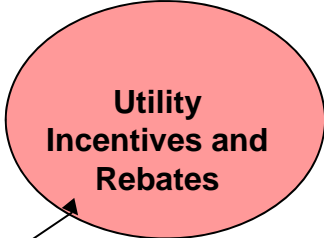
8 Roundtables in last 3 years

- Nearly 1400 attendees
- Consistent ranking of events: 4.2 to 4.5 on 5 scale
- Renewed by CPUC because of positive impact and outreach

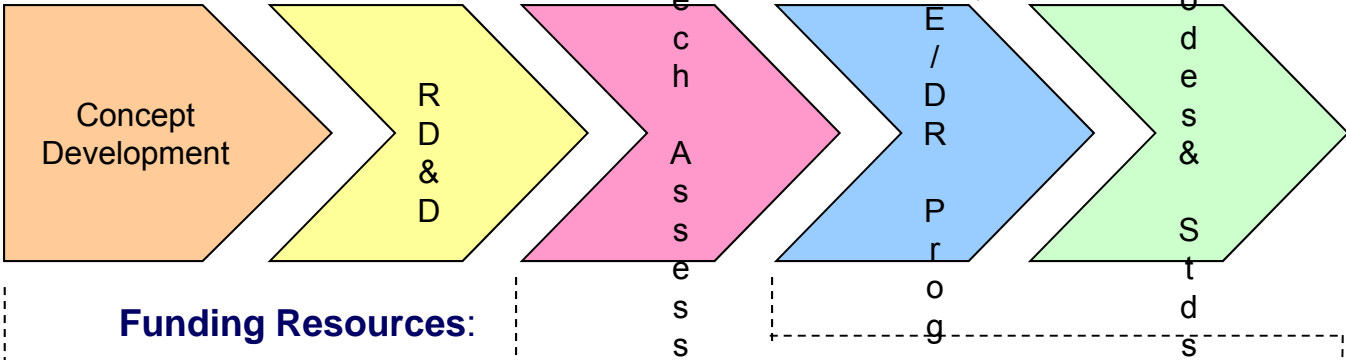
Technology Innovation Process



TRIO optimizes incoming innovative technologies to fill Portfolio gaps and empower entrepreneurs to come to the table with accurate expectations and knowledge of technical evaluation criteria.



Ideation



Funding Resources:

- Angel's, VC's
- Utilities
- CEC/DOE
- CARB/SCAQMD
- Manufacturers

Emerging Technology Programs assess new technologies and, if applicable, transfer to Energy Efficiency Programs for implementation.

- Entrepreneurs
- CleanTech Open
- VC's, Angels
- Academia
- Stakeholders



Thank You!

Thank you all for taking time from your busy schedules to attend this event!

Please feel free to ask questions and be sure to take advantage of this wonderful networking opportunity.

Emerging Technology Program

Speaker: **Nate Taylor**
 Project Manager
 Emerging Technologies, SDG&E

Emerging Technology Program Mission

To support increased energy efficiency market demand and technology supply by contributing to development and deployment of new and under-utilized energy efficiency (EE) and demand response (DR) measures (that is, technologies, practices, and tools), and by facilitating their adoption as measures supporting California's aggressive energy and demand savings goals.

What is Emerging Technology?

A market-ready or near market-ready technology that needs validation, technical assistance, and/or increased visibility to succeed in the marketplace. ETs include hardware, software, design tools, strategies, and other services.

2013-14 Sub-Programs

Technology Development Support

- Provide resources to transform early-stage technologies / concepts into saleable products
- Develop forward-looking product specifications
- Provide outreach to early-stage entrepreneurs, investors, and analyst (TRIO)

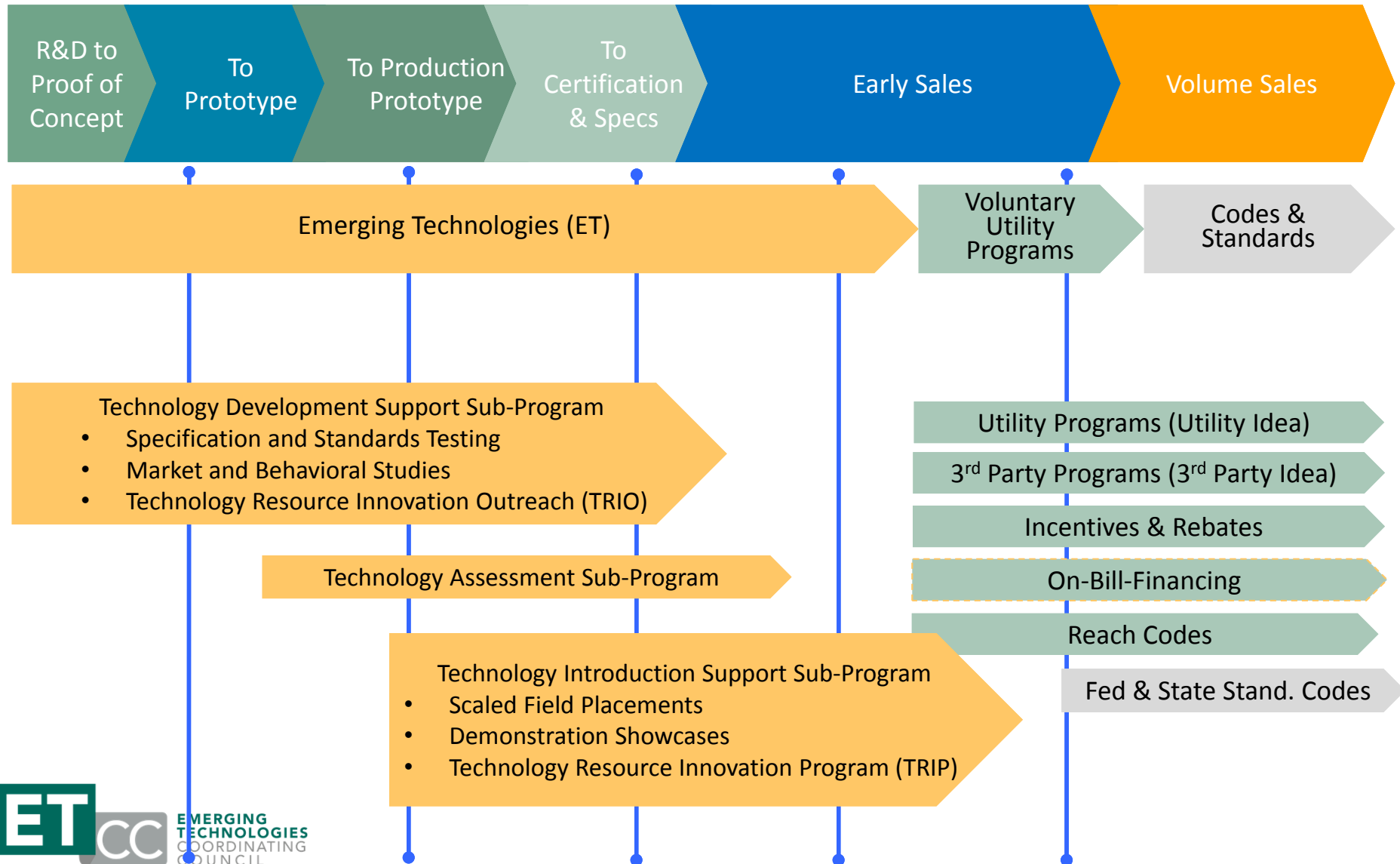
Technology Assessment

- Evaluate performance claims
- Generate energy savings and cost data required for regulatory approval of a new EE measures

Technology Introduction Support

- Conduct scaled field placements to foster market traction
- Build demonstration showcases to create visibility / market awareness
- Conduct third-party solicitations using competitive bidding (TRIP solicitation)

ET Place in the Value Chain



Screening Criteria


- **It Saves Energy!**
- **Has a DSM Program Portfolio Fit**
- **Meets EE and DR Programs Requirements**
- **Commercially Available**
- **Market Barriers Addressed**
- **Current Market Readiness**
- **Need for IOU Involvement**
- **EM&V (achievable/defendable)**
- **Aligns with the California Long Term Strategic Plan**

Idea Proposal Form

Submit inquiries to:
www.ETCC-CA.com

Internal and external parties may submit ideas by completing required fields of idea proposal form.

Initiates idea review, selection, prioritization, and feedback.



ETCC Idea Proposal Form

This form is used to provide technical and market information essential for the ETCC Emerging Technologies Programs to screen innovative technologies and ideas that have energy savings, demand reduction potential, address market needs in the Demand Side Management Portfolio, and/or align with the California Energy Efficiency Strategic Plan.

| REQUESTOR INFORMATION: | STATUS: (ETCC Use Only) |
|------------------------|---|
| Date Submitted: [] | Project #: [] |
| Name: [] | ETP Contact: [] |
| Organization: [] | ETP Completion Date: [] |
| Phone: [] | Submitted to: IOU <input type="checkbox"/> Other <input type="checkbox"/> |
| E-mail: [] | Program Sponsor (if applicable): [] |

PROPOSAL ABSTRACT:

| |
|--|
| Project Type: <u>Select from List</u> |
| Market Segment: <u>Select from List</u> |
| Top 3 Market Barriers: <u>Select from List</u> |
| Expected Outcome: [] |

IDEA DESCRIPTION:

| |
|---|
| 1. Briefly describe technology and how it works. What current or past technology will it replace? [] |
| 2. Specify and explain technology application(s) <u>Select from List</u> [] |
| 3. Market status of technology? (e.g. product development stage) Where is it available? (e.g., US, Europe, China, etc.) Who is/are the manufacturer(s) and where are they located? [] |

Today's TRIO Workshop

- **Slightly different focus than past events**
- **Please submit your evaluation!**

Structuring Your Company

Speaker: **Amit Singh**
 Benchmark Law

Options and Considerations in Selecting a Company Structure



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Introduction – What Makes a Good Company Structure?

- Limits liability to the extent possible
- Meets current and long term needs of current/target owners
- Owns all IP and other assets
- Key persons are properly incentivized
- No impediments to execution on any planned exit strategy
- Minimizes/delays taxes

Types of Entities

- Sole Proprietorship
- General Partnership
- C Corporation
- S Corporation
- LLC

Limited Liability

- An individual is always liable for his/her own actions
- Use insurance to protect against that liability
- Sole Proprietorship
 - No liability protection
 - Self employment taxes
- General Partnership
 - No liability protection – liable for acts of others
 - Self employment taxes

C Corporation

- Most VC Backed Emerging Growth Companies and public companies are DE C corporations
- Business Issues
 - No Restrictions on Owners or number of owners
 - Different Classes of Stock Allowed (Liquidation Preference)
 - Example - \$1M investment by VC for 50% of company
 - No LP – on dissolution, VC only receives \$500K
 - With LP – VC receives \$1M before other shareholders share
 - No change required on IPO
 - Familiar to VCs, Angels & EEs

C Corporation (Continued)

- Tax Treatment
 - Entity Level Tax
 - Dividends taxable to SHs and non-deductible
 - Salaries deductible by company and taxable to EE
 - Losses not deductible by SHs
 - No self-employment tax to SHs (FICA on salary)
 - Tax-free reorganizations permitted (stock for stock)
 - Sale normally stock sale (no stepped up basis for acquiror in assets sale – inefficient)

S Corporation

- Business Issues
 - 100 SH limit
 - Generally shareholders must be individuals (certain exceptions) – No VCs
 - Only 1 class of stock (can have voting differences, but no liquidation preference)
- Tax Treatment
 - No entity level federal tax (CA greater of \$800 and 1.5% of income)
 - Gains/losses flow to shareholders based on ownership %s
 - Salaries deductible by company
 - SHs only pay FICA on reasonable salary, not distributions
 - Tax free reorganizations permitted
 - Taxable sales can be efficient

Limited Liability Company

- Business Issues
 - No restrictions on owners or number of owners
 - Multiple classes of equity permitted w/ few restrictions on allocations of income/losses
 - VCs generally won't invest – UBTI for non-profit LPs
- Tax Treatment
 - If less than 2 members, disregarded entity
 - No entity level federal tax (CA \$800 plus add'l fee if more than \$250K income)
 - Gains/losses (limitations apply) flow through to members based on allocations
 - No tax on distributions
 - Self-employment taxes on income allocated to active members (c.f. S Corp, FICA only on salary)
 - Tax free reorganizations not permitted

Where to Form Company?

- DE or State of Residence?
- DE most advanced/clear (extensively litigated)
- DE Secretary of State is responsive
- DE Court of Chancery is sophisticated
- VCs prefer (understand and very protective of directors)
- Will likely be subject to CA taxes
- CA OK if no VCs or IPO

Potential Hybrid Structure

- Start as S Corp or LLC and convert to C Corp upon VC Financing
 - Pass through losses at initial stages
 - Convert to C Corp when VC invests

Entity Name

- Name Availability
- TM Search

Securing Proprietary Information and Intellectual Property

- Intellectual Property – copyrights, patents, trademarks, trade secrets
 - IP created before formation/joining company
 - IP created in work for company
- Without agreement, IP may not be owned by company
 - E.g., Copyrights created by contractors not owned by company
- Investors want clear agreements on IP ownership

Founder Stock - Corporations

- Issue Early
 - Low valuation
 - Tax on spread b/t price paid and FMV at issuance (or vesting if subject to vesting)
- Vesting – incentivize to stay/perform – stock earned over a period of time; if leave before full vesting, company has repurchase right at cost for unvested shares
 - Acceleration of Vesting
 - Change of Control
 - Termination w/o Cause
 - Constructive Termination
- 83(b) Election
 - Pay tax on spread b/t price paid and FMV at issuance
 - If election not filed, taxed on spread between exercise price and FMV as shares vests (Phantom income problem)
 - Must File w/in 30 days of grant

Stock Restrictions

- Consider
 - Right of First Refusal on Transfers
 - Maintain control over owners
 - Drag-Along Rights
 - Prevent minority from holding up company sale with appraisal rights

Securities Law Considerations

- Every offer/sale of a security must either be registered or exempt from registration under the Securities Act of 1933 and State Blue Sky laws
- If violate securities laws, investors may have rescission rights and founders may be personally liable
- CA 25102(f)
 - 35 purchasers
 - Preexisting relationship & experienced
 - Private offering
 - 25102(f) notice filed with CA Dept. of Corp.

Securities Law Considerations (Continued)

- Rule 506 Regulation D of Securities Act of 1933
 - Unlimited Accredited Investors
 - Includes individuals w/ \$1M net worth (excluding home equity) or \$200K (\$300K if married) in net income in two most recent years and expect to continue
 - No general solicitation
- JOBS Act
 - General solicitations if all purchasers accredited investors
 - Crowdfunding - \$1M to unaccredited investors w/ investment limitations

Networking Break

Financing Your Company or New Technology

Moderator:

Mike Elconin, TCA, Past President

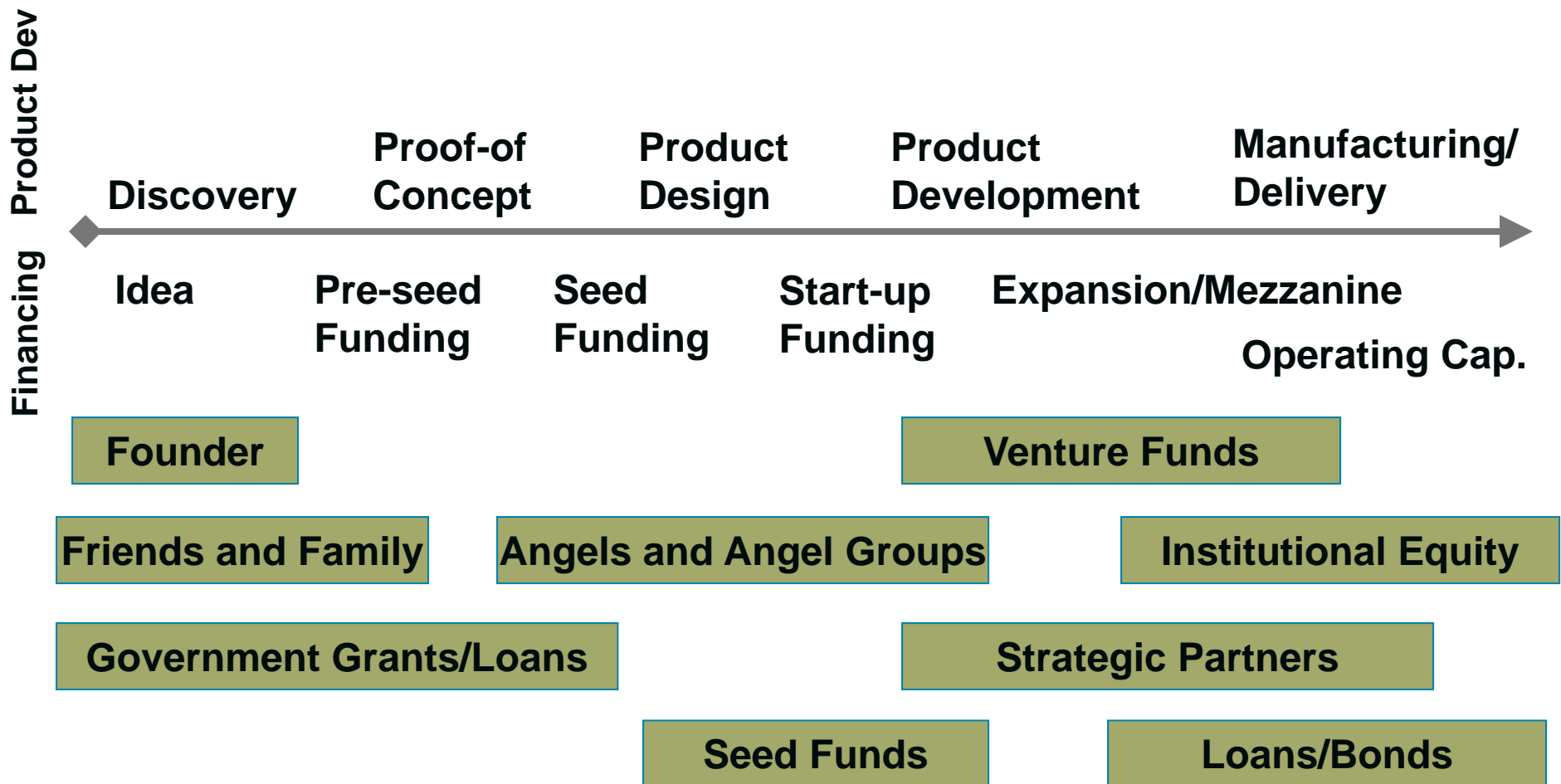
Speakers:

Kate Zeng, ETP Manager, SDG&E

Greg Horowitt, Managing Director, T2 Venture Capital

Josh Lampl, Angel Investor and Advisor

Financing Life Cycle: The Capital Food Chain



Forms of Financing and Investment

Common Stock: Typically founders, team, advisors

Preferred Stock:

- Angels (accredited investors)
- Institutional investors: Venture capital and private equity
- Issued in Series as further funding needed and warranted

Convertible Debt:

- Converts into subsequent preferred round often at a discount
- Can be secured
- Equity round sets the company valuation (often have caps on conversion price)

Straight Debt: No conversion

Banks:

- Line of credit
- Asset Financing (equipment and receivables)
- Often ask for warrants

Grants, Corporates and Competitions

State and Federal Grants: Typically used for R&D Activities

- California Energy Commission (CEC)
 - ✓ Feasibility Grants (\$95,000)
 - ✓ PIER Program and EPIC
- SBIR Phase I & Phase II (plus 1a and 2a)
 - ✓ Communicate with program manager
 - ✓ Builds credibility of technology

Corporate Investment (SDG&E, Google, GE, Verticals)

- Equity, non-dilutive investment & NRE
- Technical and market assistance

Competitions

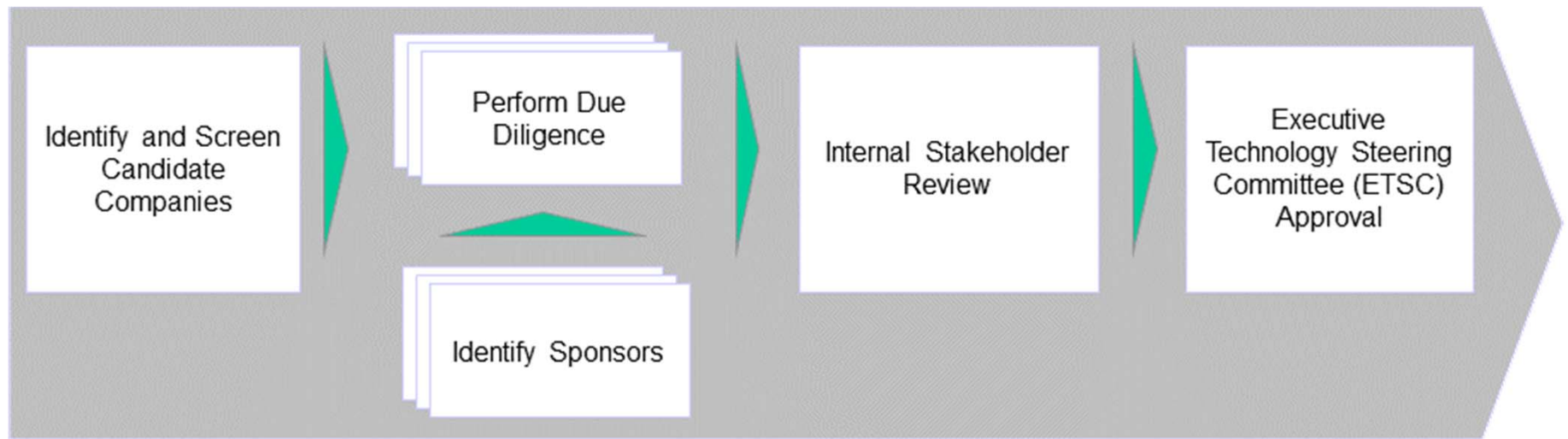
- Cleantech Open, San Diego Venture Roundtable, Corporate, NGO and University Sponsored, Fast Pitch (TCA, San Diego Venture Group)

Incubator Services: Connect (Deal Network), EvoNexus

SEu RDD/EI Program Overview

- EI program was established thru regulatory proceeding in 1999 and funded by ratepayers as a subset of SCG RD&D programs, representing an unique and creative approach among utilities in the nation
- SDG&E's RDD Program was established in 2009
- Recent 2012 GRC decision approved the program for 2012-2015 cycle. Annual budget is \$9.2 mm for SCG and \$4.8 mm for SDG&E. Net gains are shared 75/25 between ratepayer/shareholder.
- Purpose is to accelerate the development and market adoption of emerging innovative technologies that benefit utility customers and business operations
- Key to program: strategic partnerships with stakeholders
- EI main interest areas: EE/DR, Distributed Energy Resources (DER), utility operations & automation, renewable, clean transportation, smart grid, smart premises, environment, advanced energy storage, etc.
- Typically 1-3 deals per year, funding size \$250k to \$5 millions in total for each company, less than 5% equity ownership in a company
- Total investments since inception: 20 companies, ~\$41 million, 11 companies remain active in current portfolio (3 SDG&E, 8 SCG)

SEu EI Approval Process



- Venture industry & investment community network and database
- Conferences, industry events & trade shows
- Academia
- Referral by internal & external contacts
- Technology/company scan & research

- Validate “use cases” for customers and utility operations
- Technology & IP/Patents
- Business case
- Management team
- Market & competition
- Legal
- Financial analysis & company valuation

- Market Development
- Utility Planning
- Financial Accounting
- Tax
- Law
- Client Sponsor

- Final presentation & approval
- Post funding tracking, monitoring & reporting
- Closing or exit event management & execution

What Are Investable Companies?

Strong customer value proposition/Market acceptance:

- Solves significant problem or unmet market need
- Competitive edge/Technical superiority
- Lowers cost/improves profitability/expands market
- Adequate market potential: TAM

Compelling business model design that offers sustainable competitive advantage and venture scalability

Solid management:

- Coachable and passionate entrepreneur and team

Realistic financial projections with a clear path to profitability

Realistic valuation

Clear, well-articulated exit strategy

Capital efficiency (ability to outsource capital hungry commodity services)

Bottom line: Opportunity for financial return, Risk/Reward Balance

Risk Analysis



Lines We Don't Want to Hear from You

- We have no competition.
- Our competition isn't nimble enough, or has a NIH problem.
- It's a \$100B market and we only need 1% of it.
- We're be worth \$100M in 5 years so at a \$10M pre so you'll make 10X.
- We've had no salary for 2 yrs but expect \$150K/yr after you invest.
- You're only putting in \$X, you can't expect half the seats on the board!

Methodologies for Valuation

For On-Going Companies:

- Book Value (liquidation)
- Transactional Value
- Market Value (comparisons)
- Income Value (discounted cash flow)

Weighted average of methods

For Start-Up Companies:

- Scorecard system: weighting of factors against market average
- Art more than a science
- Valuation set by achievement of milestones

Concept, proof of concept, working samples, pre-revenue, revenues, break even, profitable

Projected Return Valuation Method

| | |
|-----------------------|-------------------|
| Investment | \$1 million |
| Exit Year | 5th Year |
| Revenues (5th year) | \$20 million |
| Net Profit (5th year) | 10% = \$2 million |
| P/E (industry) | 15X |
| Company Value | \$30 million |
| Required ROI | 60% = 10X |
| Required Valuation | \$10 million |
| % of Company Required | 33% |
| Pre-money Valuation | \$2 million |

Seed valuation: \$1.5 to 3.0M

Series A valuation: \$3 to 6M

Networking Lunch

Intellectual Property and Emerging Technology

Moderator:

Susan Preston, CalCEF Clean Energy Angel Fund

Speakers:

Heather Mueller, The Mueller Law Office

John Phillips, Fish & Richardson

David Heisey, Sheppard Mullin

Intellectual Property

IP refers to a group of legal rights associated with patents, trademarks, copyrights and trade secrets

IP refers to creations of the mind: inventions, literary and artistic works, and symbols, names, images and designs used in commerce.

Trademarks ® TM SM

Trademark:

- A symbol, logo, word, sound, color, design, or other device that is used to identify a business or a product in commerce.
- It grants a business exclusive rights to a trademark for as long as it is actively using it.

® Registered trademark

™ Intent to use application filed for product and/or starting to use in commerce

SM Intent to use application filed for services and/or starting to use in commerce

Trademarks & Service Marks

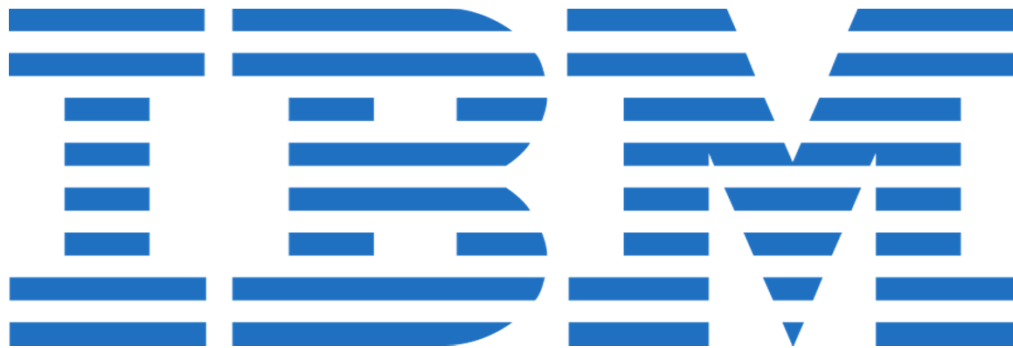


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TARGET



Copyright ©

- Protection for authors of original works...whether published or unpublished
- Covers original works of authors, composers, screenwriters, and computer programmers
- Owner has the sole right to print, reprint, sell & distribute, revise, record, & perform the work
- Lasts for the life of the holder + 70 years
- Works for hire-works published anonymously have copyrights of 95 years from date of publication

Obtaining copyright protection

- Federal protection is available if the work is in a fixed and tangible form; contains a copyright notice and year, and the full name of the CR owner

Patents

Two primary types of patents:

Utility: Functional: machine, process, article of manufacture, composition or a new use for one of the above, USEFUL, NOVEL AND NON-OBVIOUS

Design: Non-functional

A design patent only protects the ornamental features of an invention while a utility patent protects the structure/function of the invention

Patent = Exclusive right to an invention

= Right to prevent others from practicing patented invention

≠ Right to practice

Ballpark estimate: 50 to 60% of filings become patents

Patent Protection

- **Most countries have their own patent prosecution process and office**
- **European Union has a joint office**
- **Typical US citizen filing would be:**
 - ✓ Initial filing of provisional or utility application in US
 - ✓ Within one year, utility application if first provisional, and PCT application for rest of world
 - ✓ Patent Cooperation Treaty: international patent law treaty (exceptions: Argentina, Taiwan and Iran)
- **Cost of filing vs. breadth of protection**
- **How to decide where to file**

Patent vs Trade Secret: What's Right for You?

| Category | 1 - Patent | 2 | < 3 > | 4 | 5 – Trade Secret |
|----------------------------------|--|--------------------------|---------------------------|------------------------------|--|
| Reverse Engineerable | Easily reverse engineerable | \$\$ | Requires time and capital | \$\$\$\$\$ | Impossible (not applicable to composition of matter claims) |
| Competitive Patenting Landscape | High likelihood of competition filing patent application | | | | No indication of competition even considering solution, or IP already disclosed in prior art |
| Desire to License | Difficult to quantify license scope without claims and concern for info security | License objective for IP | | Collateral license objective | License field easily defined and no concern for loss of trade secrets through licensee |
| Ability to Identify Infringement | Easily identified from product and strong litigation/protective position available | | | | Impossible (eg., several ways to make product and cannot discern if claims have been infringed from product) |
| Prior Art Value | Desire to create impediment to competition – could it be alternatively done through publication? | | | | Unnecessary and creating undo risk of disclosure of key inventive aspects |

America Invents Act

- Came into effect on September 16, 2011
- Central provisions went into effect on March 16, 2013
- Biggest change to the US Patent System since 1952
- Was “First to Invent” NOW “First to File” system
 - ✓ Publication-conditioned grace period
 - ✓ Controversy on who is advantaged
- Other changes:
 - ✓ Filing by other than inventor
 - ✓ Best mode
 - ✓ Prior use rights defense
 - ✓ Micro-entity

Freedom to Operate vs Patentability

FTO: What does this mean?

What is a legal FTO opinion? Cost?

What can one do short of an official FTO?

Patentability:

What does this mean?

How much prior art searching should one do to determine patentability?

What are the downsides of an extensive search?

What is the value of doing a search?

Licensing Technology

Important to own or have exclusively licensed needed technology: core and collateral

In licensing hidden issues:

- Sufficient coverage: geographic/field of use
- Right to sublicense
- Does the license require another license to practice?
- Are the royalties reasonable? Do you need anti-stacking language?
- Who pays the maintenance fees? Who defends infringement?

Out licensing hidden issues:

- Creditworthiness of licensee? Ability to meet minimums
- What are royalties based on? Auditable?

IP Resources

Methods of Searching Patent Database - www.uspto.gov

- Relevant Patents
- Key Words (<http://www.patft.uspto.gov>)
- Assignee Search - Inventor or Company (<http://assignments.uspto.gov/assignments/?db=pat>)
- Classification Searching (<http://www.uspto.gov/go/classification>)
- Cited Prior Art in Relevant Patents
- Genealogy/Family Trees
 - USPTO PAIR (Patent Application Information Retrieval) System (<http://portal.uspto.gov/external/portal/pair>)

Other databases:

- Google Prior Art Finder (<http://www.forbes.com/sites/timworstall/2012/08/17/googles-prior-art-finder-seriously-useful-tool/>)
- www.freepatentsonline.com