BEST PRACTICES DISCUSSION

BERLIN, MAY 20 2014
Topics

• LACI overview & status
• Best practices
  – Private/public structure
  – Three basic services
  – Building a regional ecosystem
  – Making the ecosystem more efficient
  – A physical hub
• Business model
LA Cleantech Incubator

Background

- Launched in October 2011
- City-conceived public/private partnership
- Independent non-profit
- Located in downtown Los Angeles with regional satellites
- Six step, six week vetting process
- Resident, non-resident programs, and international Landing Pad programs
Economic Impact of New Companies

- Start-up companies less than five years old created 44M new jobs over the last three decades. The White House 2011
- They accounted for all net new jobs created in the United State during that time. The White House 2011
- Kauffman Foundation found new companies generate an average of 3M new jobs in their first year, while older companies lose 1M in the same period. The Kauffman Foundation 2011
Incubation a Proven Model

- **Effective:** EDA found that incubators create 20X more jobs than community infrastructure  
  Grant Thornton/EDA 2009

- **Efficient:** EDA found cost of new job $180 vs. $3,000/job for local construction investments  
  Grant Thornton/EDA 2009

- **Public ROI:** $1 in public funding in incubation operations yields $30 in tax revenue  
  NBIA

- **Success Rate:** 87% of incubated companies still in business after 5 years  
  NBIA

- **Retention:** 84% stay in the same area  
  NBIA
31 months of progress

- 30 companies, $32M invested, 1 exit
- Beat financial plan every quarter
- Attracting increased engagement from the private sector
- Industry-leading business building programs
- Began implementation of hub/spoke regional strategy
- Helped raise $42M funding from 12 sources for LKIC
- Held our first international cleantech innovation conference
- Connecting Los Angeles to the global innovation marketplace
31 months of company traction

<table>
<thead>
<tr>
<th>Companies Served</th>
<th>Aggregate Patents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio Companies</td>
<td>- Filed</td>
</tr>
<tr>
<td>Landing Pad</td>
<td>- Issued</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td>- Licensed from 3rd Party</td>
</tr>
<tr>
<td></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td></td>
<td><strong>42</strong></td>
</tr>
<tr>
<td></td>
<td><strong>57</strong></td>
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<table>
<thead>
<tr>
<th>Active Companies</th>
<th>Aggregate Company Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Campus</td>
<td>- 2013 (reported)</td>
</tr>
<tr>
<td>Off-Campus</td>
<td>- 2014 (projected)</td>
</tr>
<tr>
<td>LACI Monthly Revenue</td>
<td><strong>$9,108,000</strong></td>
</tr>
<tr>
<td></td>
<td><strong>$27,559,000</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technology Stage of Develop</th>
<th>Agg Mentorship / Coaching Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bench</td>
<td><strong>3,137</strong></td>
</tr>
<tr>
<td>Prototype</td>
<td></td>
</tr>
<tr>
<td>In-Market</td>
<td></td>
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</tbody>
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<table>
<thead>
<tr>
<th>Average Time Incubated</th>
<th>Count</th>
<th>Total Investment</th>
<th>Avg Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduates</td>
<td>21</td>
<td><strong>$23,872,000</strong></td>
<td><strong>$1,256,421</strong></td>
</tr>
<tr>
<td>Dropouts</td>
<td>4</td>
<td><strong>$8,025,000</strong></td>
<td><strong>$2,006,250</strong></td>
</tr>
<tr>
<td>Active Companies</td>
<td>4</td>
<td><strong>$300,000</strong></td>
<td><strong>$75,000</strong></td>
</tr>
</tbody>
</table>

| Total:                           | **27** | **$32,197,000**  | **$1,192,481**  |
31 months of economic impact

<table>
<thead>
<tr>
<th>Jobs</th>
<th>Companies</th>
<th>LACI</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Jobs Created</td>
<td>119</td>
<td>12</td>
<td>131</td>
</tr>
<tr>
<td>Indirect Jobs Created</td>
<td>214</td>
<td>22</td>
<td>236</td>
</tr>
<tr>
<td><strong>Total Jobs:</strong></td>
<td><strong>333</strong></td>
<td><strong>34</strong></td>
<td><strong>367</strong></td>
</tr>
</tbody>
</table>

*1.8 indirect jobs per every job created (CEC multiplier)
**does not include members

<table>
<thead>
<tr>
<th>Economic Impact</th>
<th>Avg Salary</th>
<th>Annual Value</th>
<th>5 Year Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct (cleantech) Jobs</td>
<td>$46,000</td>
<td>$6,026,000</td>
<td>$30,130,000</td>
</tr>
<tr>
<td>Indirect (general) Jobs</td>
<td>$44,000</td>
<td>$10,375,200</td>
<td>$51,876,000</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td><strong>$16,401,200</strong></td>
<td><strong>$82,006,000</strong></td>
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</table>

**Average salary of a cleantech job: Brookings and Battelle, 2011
***Average salary in the U.S.: Social Security, National Average Wage Index, 2012
Best Commercialization Practices
LA
CI
BORN FROM THE CITY,
RUN BY ENTREPRENEURS
Basic Themes

- Enable focus
- Deep dives on important areas
- Foundational knowledge transfer
- Access to investors
- Access to customers
- Keep building ecosystem
LA Cleantech Incubator

Plug and Play Space

- No TI’s, all furniture, utilities, office services, parking included
- Office, assembly and warehouse space
- Conference and meeting rooms
- Collaboration opportunities
- 30-day lease
- Temporary facility
LA Cleantech Incubator

Executive Coaching

• Commitment to coach and mentor our companies
  – Weekly progress meetings
  – Quarterly business reviews

• Foundational knowledge transfer
  – Teach the common hard knocks
  – Over 60 expert advisors and mentors

• In depth Boot Camps in critical areas
  – Investment
  – Intellectual Property
  – Product Design

• Ongoing “C-Level” Seminars
  – Venture Financing
  – County Purchasing 101
  – B to B Sales Management
  – Social Networking as a B to B Tool
  – Presentation Skills 101
The Team

General Managers

EIRs

Technical Analysts

Operations

Marketing
LA Cleantech Incubator

Leveraging our Network

• Access to Investors
  – Strong network of angels, impact, VC, private equity, strategics
  – A great deal of emphasis on preparation and finding the right match

• Corporate Relationships
  – Joint tech development
  – Demonstration/test
  – Access to channel
  – Access to customers
  – Access to investment

• Management Teams

• Government (city, county, state, federal)

• Academic Institutions
Build Regional Ecosystem

Bringing the region together: sharing best practices, reducing costs, increasing effectiveness
Hub & Spoke Regional Strategy
THE LEADERSHIP COUNCIL

Convening the region’s cleantech stakeholders
Leadership Council Members
Physical Concentration
THE CLEANTECH CORRIDOR
Los Angeles’ Cleantech Innovation Cluster
THE LA KRETZ INNOVATION CAMPUS

60,000 Sq. ft. – Labs, Prototyping, Learning, Incubator
THE CLEANTECH MANUFACTURING CENTER
REPLACE YESTERDAY’S INDUSTRY

Working class jobs for Boyle Heights, East LA, South Central
Link Innovation to Customers
The Early Adopter Program

A technology acceleration program for start-ups

• Program aimed at cleantech startups only
• Would allow participating city agencies to “test” innovative clean technologies while mitigating risk
• Each participating Early Adopter Company (EAC) would have to be certified by LACI as to:
  – They are an early stage cleantech company
  – Company passes current LACI Portfolio Company vetting criteria
• Once certified, each EAC could apply for a demonstration project (limited scope and budget) with participating agencies
• DWP and SoCalGas will be first movers
Technology WishList

Linking innovation to market makers

- Formal alignment of two organizations’ technology paths
- **Partner**: You tell us the technological problems you’re most focused on and define the condition boundaries.
- **LACI**: We actively search, screen, present and incubate technologies/companies that are strategically important to you.

Define Problem ➔ Recruit Solution ➔ Incubate Company
Business Model
Business Model

Realities

• “Clients” (start-ups) can’t afford to pay for the support they need
• Incubation is not an attractive business as a result
• Benefits of successful incubation are shared by many stakeholders
  – Portfolio Companies
  – City/regional governments – jobs/economy/tax revenue
  – Energy infrastructure players
  – Federal/state governments – strategic mandate
  – Academic research organizations
  – Local populace
Business Model

LACI - Beginning

- 90% of operating funds from the City of Los Angeles
- $1M/three year operating budget commitment
- Unsuccessful in attracting private participation
- Not significant engagement by academic institutions
Business Model

LACI - Today

• Still not sustainable financially, but getting better
• 50% of operating funds from the City of Los Angeles
• City has increased its commitment
• Private partnerships have flourished
• Contract for services biggest growth area
Business Model

LACI - Tomorrow

- Scale operation with new campus (City subsidized)
- Scale and expand contract services business
  - Satellite
  - Corporate engagements
  - R&D facilities
- Increase private partnerships
  - Naming rights
  - Real estate revenue
- SAS
  - Platform
- Funding Platform
  - Transaction fees
Thank You

Fred Walti
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Fred H. Walti II
Executive Director

- Co-Founder LACI
- Internet/software entrepreneur, founder of three companies
- Idealab EIR and operating executive
- Global advertising executive
Neal Anderson

COO

• Co-Founder LACI

• Co-Founder and Managing Partner of the Propellant Group

• Automotive X Prize

• President and CEO of True Floors,

• Co-Founder creative agency Ideawork Studios
Ian Gardner
Chief Strategy & Investment Officer

- Investment banker, Oracle Capital specialized in financing solutions for cleantech companies
- The Boston Consulting Group
- Duke Energy
- As an entrepreneur, took two cleantech companies from inception to exit
- MBA UCLA Andersons School of Management
Erik Steeb

VP Programs

• ED of the Cleantech Open’s Western Division

• Exec Comm. of the First Look West DOE Challenge

• Co-Founder and managing director of Segue Consulting

• Intel Corporation

• BS, Electrical Engineering with highest honors, Georgia Tech

• MBA from UCLA’s Anderson School of Management.
Michael Swords
VP Partnerships

- ED, Strategic Research Initiatives and Global Partnerships at UCLA
- Board President for Cleantech Los Angeles
- Board member of the LA League of Conservation Voters Executive Advisory Committee for the UCLA Luskin Center for Innovation
Kevin Anderson

Executive in Residence

• Kevin brings over 40 years of concept to completion product development and enterprise formation experience. He has raised hundreds of millions in capital, created billions in economic value and thousands of jobs on a global scale.
• Kevin has been a c-level executive, advisor, mentor and coach to a wide range of industries including electronic banking, higher education, technology transfer, medical devices, nuclear materials, nanotechnology, management information systems, decision support systems, competitive local exchange, data mining, nuclear isotopes and solar power.
• His largest project was building a pan-Asia communications company, completing 20 acquisitions in 18 months and increasing enterprise value 500 fold in 24 months from $4,000,000 to $2,000,000,000.
• Most recently he has been a key advisor and executive director at Washington State University and Idaho State University.
Bob Musselman

Mentor/Advisor
President, Mobius Energy LLC

- Co-Founder, Thermata (sold to SolarReserve)
- Entrepreneur has led firms with operations as varied as
  - Nuclear decontamination
  - Factory automation equipment,
  - Object oriented software development,
  - Utility scale lubricating oil purification systems
  - Thin film PV manufacturing equipment.
- Partner in a venture developing specialized field service equipment for solar-thermal plants.
- A Naval Academy graduate and retired nuclear submarine officer
Mark Henderson

Mentor/Advisor
CEO, Xoterix

• 20+ years of market-driven, leading-edge technology and clean-tech product development and company management experience

• Managed and/or performed all functions in technology design, global marketing and manufacturing companies from startups to multi-billion dollar public companies

• Total revenues for products developed under my leadership exceed $500MM
Brandon Iglesias

Research Scholar

• 2013 Kauffman Foundation Global Scholar

• Graduate of the DOE:EERE National Geothermal Academy

• MS in finance and business administration from Tulane

• BS in Chemical Engineering at LSU. economics.
Charles Aldave
Senior Consultant

- Booz Allen Hamilton
- Captain in the United State Air
- BS in Mechanical Engineering from the University of South Carolina
- MBA from the UCLA Anderson School of Management.