Panel 4: Accelerating Economic and Local Impacts

Jackie Kerby Moore
Sandia National Laboratories, DOE
2017 Federal Facility Workshop
Advancing America’s Economy:
Building Infrastructure Partnerships at National Security Laboratories

Sandia National Laboratories
Jackie Kerby Moore, Manager, Technology & Economic Development
Technology-Based Economic Development
“Creating and expanding high-growth companies and jobs in NM”

- Sandia Science & Technology Park
  - 42 companies & organizations, employing 2,008 people
  - $380.4M of investment
  - $83K average annual salary, $4.4B wages and salaries generated

- New Mexico Small Business Assistance
  - $53.3M technical assistance provided to 2,648 NM small businesses
  - 5,734 jobs created and retained
  - All 33 NM counties supported

- Small Business Vouchers
  - Sandia received 17 vouchers totaling $3.5M

- Entrepreneurial Separation to Transfer Technology
  - 157 Sandia entrepreneurs have left the Labs
  - 108 companies started up or expanded

- Center for Collaboration and Commercialization
  - Downtown Node opened in October 2017
  - Entrepreneur Exploration has hosted 40 events with 1,937 participants
Local Innovation Ecosystem

“Partnering for economic development”
Sandia Science & Technology Park (SS&TP)
“Leveraging physical proximity to Sandia”

- Founded in 1998
  - One of the first research parks at a national lab
  - Benchmarked by other labs & universities

- Master-Planned Technology Community
  - 300+ acres; 220 acres are governed by master development plan

- Partnership Tool for Sandia
  - Joint research & development
  - Technology commercialization
  - Business development
  - Subcontracting & supplier relations
  - Local economic development

- Strategic space option for Sandia; Sandia populates 6 buildings in Park
SS&TP Public-Private Partnership
“Catalyzing a technology community”

- Created vision
- Provides executive-level champion
- Provides executive director and program staff
- Manages marketing and business development

- Shared vision
- Funds infrastructure
- The nonprofit entity which oversees development of the Park
- Manages grants and infrastructure

**Original Partners**

**Land Owners**
- Sell and lease land
- May build and own buildings

**Other Key Partners**
- Provided planning funds
- Provides telecommunications infrastructure
- Provides infrastructure
- Provides economic impact analyses
- Provides leadership and support

Park MOU Signatories
**SS&TP Metrics & Economic Impact**

*Generating results*

<table>
<thead>
<tr>
<th>METRICS *</th>
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<tbody>
<tr>
<td>Number of Companies and Organizations</td>
<td>42</td>
</tr>
<tr>
<td>Number of Employees</td>
<td>2,008</td>
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<tr>
<td>Number of Buildings</td>
<td>25</td>
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**Public and Private Investment in the Park since 1998**

<table>
<thead>
<tr>
<th></th>
<th>Public</th>
<th>Private</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>$89.0M</td>
<td>$291.4M</td>
<td>$380.4M</td>
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* Through CY16

<table>
<thead>
<tr>
<th>ECONOMIC IMPACT **</th>
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<tbody>
<tr>
<td>Cumulative Impact on taxable consumption (goods and services)</td>
<td>$2.6 Billion</td>
</tr>
<tr>
<td>Cumulative impact on gross receipts tax revenue to the City of Albuquerque</td>
<td>$15.2 Million</td>
</tr>
<tr>
<td>Cumulative impact on gross receipts tax revenue to the State of New Mexico</td>
<td>$103.1 Million</td>
</tr>
<tr>
<td>Cumulative Increase in wage and salary disbursements attributable to Park activities</td>
<td>$4.4 Billion</td>
</tr>
<tr>
<td>Average salary for each full-time job in the Park</td>
<td>$83K</td>
</tr>
<tr>
<td>Average salary for each full-time Job in Albuquerque</td>
<td>$44K</td>
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** Through CY15
New Mexico Small Business Assistance (NMSBA)

"Assisting New Mexico’s small businesses"

- Governed by NM Statute: *Laboratory Partnership with Small Business Tax Credit Act*

- $20K for rural companies, $10K for urban companies per calendar year

- Public-Private Partnership between State of New Mexico, Sandia National Laboratories, Los Alamos National Laboratory, NM Small Businesses

- Labs contract with UNM, NMSU, NM Tech, and NM MEP

- Serves all 33 counties in NM
NMSBA Metrics & Economic Impact

“Generating results”

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<tbody>
<tr>
<td>Number of Small Businesses Served</td>
<td>2,648</td>
<td>365</td>
<td>2,096</td>
<td>198</td>
</tr>
<tr>
<td>Number of Counties Supported (out of 33)</td>
<td>33</td>
<td>29</td>
<td>33</td>
<td>19</td>
</tr>
<tr>
<td>Value of Assistance Provided</td>
<td>$53.3M</td>
<td>$4.8M</td>
<td>$34.0M</td>
<td>$2.4M</td>
</tr>
</tbody>
</table>

In 2016, 75 PIs across 59 departments at Sandia assisted NM small businesses.

NMSBA Economic Impact*

<table>
<thead>
<tr>
<th>Economic Impact</th>
<th>2000-2015</th>
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<tbody>
<tr>
<td>Small Business Jobs Created and Retained</td>
<td>5,734</td>
</tr>
<tr>
<td>Mean Salary</td>
<td>$38,975</td>
</tr>
<tr>
<td>Increase in Revenue</td>
<td>$272.3M</td>
</tr>
<tr>
<td>Decrease in Operating Costs</td>
<td>$142.4M</td>
</tr>
<tr>
<td>Investment in NM Goods and Services</td>
<td>$108.9M</td>
</tr>
<tr>
<td>New Funding/Financing Received</td>
<td>$110.7M</td>
</tr>
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*Surveys are performed six months to one year after project completion
Small Business Vouchers
“Helping clean energy companies”

- DOE/EERE Program providing technical assistance to small, for-profit businesses in the clean energy sector
- Modeled after NMSBA program
- Sandia is one of 5 co-leads for program, DOE provides funding
- $22M in funding provided by DOE in technical vouchers to the national labs for 3 rounds
- Sandia has received 17 vouchers valued at $3.5M

Vladimir Matias, iBeam Materials
Santa Fe, NM
**Entrepreneurial Separation to Transfer Technology**

“Launching and expanding start ups”

- Governed by Corporate Procedure: HR100.6.5 *Request an Entrepreneurial Separation to Transfer Technology*

- Founded in 1994
  - Largest of national labs
  - Benchmarked by AFRL, Army, Navy, and other DOE labs

- Participants may **start up** or help **expand** small tech businesses

- Participants terminate their Sandia employment, but are guaranteed their job back for up to two years

**Todd Christenson, 2003**

18,000 sf manufacturing facility employing 12 people
ESTT Metrics
“Generating results”

ESTT Separations by Calendar Year - 157

8 Currently Active on ESTT

<table>
<thead>
<tr>
<th>Sandians who left on ESTT</th>
<th>157</th>
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<tbody>
<tr>
<td>• To start up companies</td>
<td>70 (45%)</td>
</tr>
<tr>
<td>• To expand companies</td>
<td>87 (55%)</td>
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Companies impacted by ESTT

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<tbody>
<tr>
<td>• Start-ups</td>
<td>54</td>
</tr>
<tr>
<td>• Expansions</td>
<td>54</td>
</tr>
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</table>

Licenses for Sandia IP with ESTT

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<tbody>
<tr>
<td></td>
<td>44</td>
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</table>
Objectives

- Create a place that serves as a “public face” for Sandia, provides access to Sandia, and builds linkages with the external community.
- Provide programs and services to maximize interaction with partners – industrial, academic, and government – and facilitate successful technology commercialization.

Implementation

- Place
  - Multi-Node Approach
    - C3 Downtown Node (FY17)
    - C3 SS&TP Node (FY19)
- Programs and Services
  - Launched new Entrepreneur Exploration Program (FY15)
C3 Downtown Node (FY17)
- Sandia to lease 1,000 sf
- Co-location of UNM, AFRL, Sandia
- Opportunity to increase small business and local subcontracting
- Physical proximity to UNM and Downtown

C3 SS&TP Node (FY19)
- Sandia to lease 20,000 sf
- Public-private partnership to develop building
- Co-location of Sandia and partners
- Easy access to Sandia

Air Force Research Laboratory
Albuquerque BioScience Center
Sandia Science & Technology Park
Innovate ABQ (UNM/City Project)
Fat Pipe Incubator
WESST Incubator
C3 Downtown Office Hours
“Diving into downtown”

- PROCUREMENT
- LICENSING
- CRADAS/STRATEGIC PARTNERSHIP PROJECTS
- NEW MEXICO SMALL BUSINESS ASSISTANCE
- MEET THE PRINCIPAL INVESTIGATORS
- MEET THE EXECUTIVES
Entrepreneur Exploration

“Encouraging entrepreneurs and intrapreneurs”

Objectives

- Invigorate Sandia’s entrepreneurial culture
- Inspire Sandia entrepreneurs
- Increase number of Sandia entrepreneurs leaving the Labs to form/join companies

Events

- National Labs Entrepreneurship Academy
- Workshops
- Roundtables
- Office Hours
- Socials

Results

- FY15: 9 events, 317 participants
- FY16: 17 events, 820 participants
- FY17: 20 events, 926 participants
# Entrepreneur Exploration

## FY17 Calendar

### OCTOBER 2016
- **10/6**
  - Rise of the Rest Luncheon with Steve Case
  - 12:30 PM – 2:00 PM
  - Bow and Arrow Brewing Company

### NOVEMBER 2016
- **11/15**
  - Lab Launch 2017 with Wasabi Ventures and Air Force Research Laboratory (AFRL)
  - 3:00 PM – 5:00 PM
  - National Museum of Nuclear Science and History

### DECEMBER 2016
- **12/6**
  - Leading the Way in Cybersecurity and Building a 7-figure Cybersecurity Company in New Mexico
  - 4:00 PM – 5:00 PM
  - Tractor Brewing
- **12/6**
  - Entrepreneur Exploration (EEx) Holiday Social
  - 5:00 PM – 6:00 PM
  - Tractor Brewing

### JANUARY 2017
- **1/26**
  - Sandia Technology Showcase with the New Mexico Angels
  - 11:30 AM – 1:30 PM
  - Yanni's Mediterranean Grill

### FEBRUARY 2017
- **2/21**
  - How to be a Great Founder
  - 3:00 PM – 5:00 PM
  - National Museum of Nuclear Science and History

### MARCH 2017
- **3/9 – 3/11**
  - National Labs Entrepreneurship Academy with University of California, Davis
  - Santa Fe Business Incubator

### APRIL 2017
- **4/7 – 4/8**
  - 2nd Annual Inventors and Entrepreneurs Workshop
  - Fidel Conference Center, NM TECH
- **4/18**
  - Innovate New Mexico Technology Showcase
  - Sandia Golf Club

### JUNE 2017
- **6/6**
  - Academic Alliance Alum Technology Transfer/Entrepreneur Seminar
  - 9:00 AM – 10:30 PM
- **6/21**
  - Sandia Licensing, Legal and Ethics Roundtable
  - 3:30 PM – 5:00 PM

### JULY 2017
- **7/18**
  - Sandia Pitch Competition Workshop #1
  - In Partnership with ABQid
  - 3:00 PM – 6:00 PM
  - IPOC Supplier Lobby
- **7/27**
  - TEDxABQ Workshop
  - 3:00 PM – 5:00 PM
  - 899/1811

### AUGUST 2017
- **8/3**
  - University of Illinois Academic Alliance Tech Transfer Workshop
  - 7:30 AM – 1:30 PM
  - CGSC/1154
  - Learn best practices for entrepreneur programs from Sandia’s Academic Alliance partner, University of Illinois.
- **8/15**
  - Sandia Pitch Competition Workshop #2
  - In Partnership with ABQid
  - 3:00 PM – 5:00 PM
  - IPOC Supplier Lobby
  - Workshop participants will practice their pitch in front of other PIs, as well as ABQid staff and individual mentors.
- **8/17**
  - Sandia ESTT Roundtable
  - 3:30 PM – 5:00 PM
  - National Museum of Nuclear Science & History
  - Sandians who are currently out on ESTT will share their first hand experiences taking the leap from Sandia to small business.

### SEPTEMBER 2017
- **9/8**
  - Economic Development Charrettes “Step-Change Conversations”
  - 8:00 AM – 10:00 AM
  - FatPipe ABQ
  - Join us as we partner with the NM Tech Council on a community feedback event focused on Advanced Manufacturing.
- **9/14**
  - DOE Lab Pitch Competition
  - 6:00 PM – 8:00 PM
  - GravitareABQ
  - Scientists and engineers from Sandia Labs will pitch their best and brightest innovations to a panel of esteemed judges and members of the entrepreneurial community for a chance to advance to DOE Pitch National Competition.
Questions

Jackie Kerby Moore
505-845-8107
jskerby@sandia.gov