Development of a Health-Tech Industry Cluster at Arrowhead Park

New Mexico Legislative Interim Committee on Economic and Rural Development
August 3, 2016
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Arrowhead Center

NM STATE

Arrowhead Center

Our Mission:
- ➢ *To Promote Economic Development in New Mexico Through Entrepreneurship, Innovation, and Workforce Development*

Our Market:
- ➢ *Students, Researchers, Entrepreneurs, Start-ups, and Businesses Across the State and Region*

FY 2016 Impact
- ➢ *65 Private Enterprises Receiving Business & Technical Assistance*
- ➢ *28 Companies Registered / Producing Revenue Based on NMSU Technologies*
- ➢ *100+ Active Student / Recent Alumni Startup Ventures*
- ➢ *30 Students Employed Assisting Client Enterprises*

Business Creation and Growth

Education and Training

Partnering with Industry and Community

Intellectual Property Commercialization

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Arrowhead Park

Vision:

➢ *To Be the Premier Regional Community for Science and Technology*

Current Park Metrics

➢ *175 Acres, 140 Undeveloped*
➢ *12 Employers – 9 Private, 3 Public*
➢ *295 Current Employees – 56% Health-Tech Industry*
➢ *$67.8 Million Invested – 54% Health-Tech Industry*

NMSU Campus

WELLS ST

BURRELL COLLEGE OF OSTEOPATHIC MEDICINE

LOCUST ST

ARROWHEAD PLACE

EARLY COLLEGE HIGH SCHOOL

EBID

Arrowhead Park

INTERSTATE 10

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Cluster Development Model

Industry Cluster Definition:

➢ *… groups of companies and organizations that congregate in a region around a particular field…*

➢ *…when a prominent university or a powerhouse company draws other, smaller organizations to its region, supporting entrepreneurs as they develop their own breakthroughs…*

Successful Clusters

➢ *Components of Successful Cluster*
  ➢ *We Have All the Critical Elements Here* ✓

➢ *Examples*
  ➢ *Silicon Valley - Electronics*
  ➢ *Boston – Life Sciences / Digital Health*
  ➢ *San Diego – Life Sciences*
  ➢ *Boulder – Software / IT*

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Health-Tech Economic Prospects

What is the Health-Tech "Pie" and How Big is it?

- ➢ *Life Sciences market in U.S. estimated at $480 B in 2013*
  - ➢ *$550 B forecast for 2019 (7% / yr growth)*
  - ➢ *Pharma, medical devices, medical supplies, biotechnology*
- ➢ *"Digital Health" estimated to be a $32 billion market 2016*
- ➢ *Investment in Life Science Ventures at $14.4 billion in 2014*
- ➢ *Investment in "Digital Health" for 2014 at $1.5 billion*
- ➢ *2014 industry-wide average annual wage reached $94,543*
  - ➢ *New Mexico "Life Science" average wage $68,395 (8300 employees)*

(Deloitte-Touche, NMBIO)

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Arrowhead Park Cluster History

A Growing Foundation…..

- ➢ *NMSU has 43 Life Science-related programs, > $40 M Research*
- ➢ *Initial tech startup – Genetic Testing Lab 2001*
    - ➢ *13 Startup / Stage 1 companies currently at Arrowhead Center*
- ➢ *Arrowhead Park Medical Academy Opened 2014*
- ➢ *Burrell College of Osteopathic Medicine Opens August 8*
- ➢ *General Genetics Corp. failed in 2015*
    - ➢ *Five new companies formed from its investors / employees*
- ➢ *170 Health-Tech Cluster Jobs; $36.5 Million Capital Investment*
- ➢ *Average Park "Health-Tech" wage estimated at $69,000*
    - ➢ *$11.7 million direct economic impact*

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EDA Cluster Development Grant

2015 Regional Innovation Strategies Award - $488,000

- ➢ *Research Park Grant for Expansion of Health-Tech Cluster*
- ➢ *One of Only 12 Nationally*
- ➢ *Focus on Park Infrastructure and Programmatic Evolution*
  - ➢ *Creation of master development plan for Arrowhead Park*
  - ➢ *FHWA Authorization for I-10 Interchange into Arrowhead Park*
  - ➢ *Stakeholder engagement on academics, research, technology*
    - ➢ *Roundtables , collaborations, social events*
    - ➢ *15 month growth from 13 stakeholders to 48*

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Keys to Cluster Innovation / Growth

Relationships / Organic Collaborations

- ➢ *Burrell College of Osteopathic Medicine / Silicon Mesa*
- ➢ *TenFour Analytics, Burrell Institute for Research*
- ➢ *Private Forensic DNA Lab Collaboration*
- ➢ *InetMedRx2 / Rural Telemedicine Initiative*
- ➢ *Virgin Galactic, DACC Creative Media Technology*

Significant Place – Creation & Recognition

- ➢ *A Significant "Cross-Roads" for Education, Technology, and Innovation*
- ➢ *Programs centered on the physical, cultural, and social identities that define the cluster and support its ongoing evolution*

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Health-Tech Workforce Development

- *Full Spectrum of Workforce Education*
  - *Arrowhead Park Medical Academy*
  - *DACC Nursing / Healthcare Technician Programs*
  - *NMSU Nursing, Kinesiology, Biology, Engineering, Pre-Med Programs*
  - *Burrell College of Osteopathic Medicine*
- *Internships, Student Work Opportunities*
- *Arrowhead Center*
  - *Entrepreneurship Training / Business Incubation*
  - *Technology Development Resources*

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Cluster Resources

➢ *A Growing List of Resources and Startup Financing*

    ➢ *Arrowhead Technology Incubator*
    ➢ *Small Business Administration FAST Program – SBIR/STTR*
    ➢ *StudioG Student Business Incubator*
    ➢ *Local / Regional / National Mentors*
    ➢ *Arrowhead Innovation Fund*
    ➢ *"Launch" Technology Commercialization*
    ➢ *Aggie Shark Tank*
    ➢ *Creative Media / Virtual Reality / Big Data Expertise & Resources*
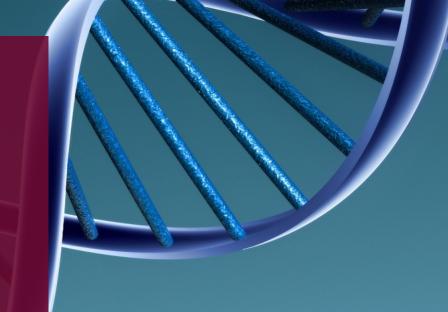   ➢ *Educational Games Lab*

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Critical Mass

➢ *Recent Roundtable Event – Cluster's 3rd*
  ➢ *40 Attendees…..Strong Regional Representation*
  ➢ *Cluster Implementation Report – Tripp Umbach*
➢ *Regional Life Sciences Industry Development Task Force*
➢ *International Engagement and Cooperation*
➢ *Cluster Growth Effects*
  ➢ *Five New Resident Companies in Last Year*
  ➢ *Increase in Invention Disclosures*
  ➢ *Collaboration Activities Increasing*

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Cluster Startups / Technologies

A Partial Current Listing.........

- ➤ *VR-based Pain Management*
- ➤ *Oxygen Delivery Hydro-Filter*
- ➤ *Telemedicine for Rural NM Medicine/Mexico*
- ➤ *DNA Lab Management Software...International Sales*
- ➤ *Non-Invasive Concussion Detection Device*
- ➤ *Non-Invasive Glucose Detection*
- ➤ *Decision Support Software for Medicare/Medicaid Enrollment*
- ➤ *Implantable Electric Bone Growth Stimulator*
- ➤ *Mosquito Repellent Band (24 hr)*

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Next Steps - Programmatic

➢ *Intensify Regional Efforts to grow Health Tech Cluster*
  ➢ *Technical, Informational, Social Events*
  ➢ *Encourage and Facilitate Research Collaborations*
  ➢ *Promotion and Marketing as Center of Excellence for H-T*
➢ *Develop Unique Aspects of Cluster*
  ➢ *Rural and Border Needs – Healthcare Data, Diagnostics, Education*
  ➢ *Innovate Around Creative Campus Technologies*
    ➢ *Virtual / Augmented Reality, BioInformatics, Video & Game Development*
  ➢ *Spaceport / Aerospace / UAV Cluster Interactions*
➢ *Grow Seed / Gap Funding Sources and Connections*

Next Steps – Attraction / Infrastructure

➢ *Increase Recruitment of Life Science / Biotech Companies*
  ➢ *Partners: MVEDA, City of Las Cruces, NM EDD, NMBIO, regional groups*
➢ *Arrowhead Place to Open April 2018*
  ➢ *Home to Arrowhead Center*
  ➢ *Innovation & Collaboration Center for Cluster*
    ➢ *Developed through public / private partnership*
  ➢ *Office and Lab Spaces for Research, Startups (30,000 sf)*
➢ *Master Plan Implementation*
➢ *Future I-10 Interchange at Arrowhead Drive*

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Arrowhead Park Health-Tech Cluster

Thank you for the opportunity to update you today on our activities at Arrowhead Center and NMSU.

Questions?