

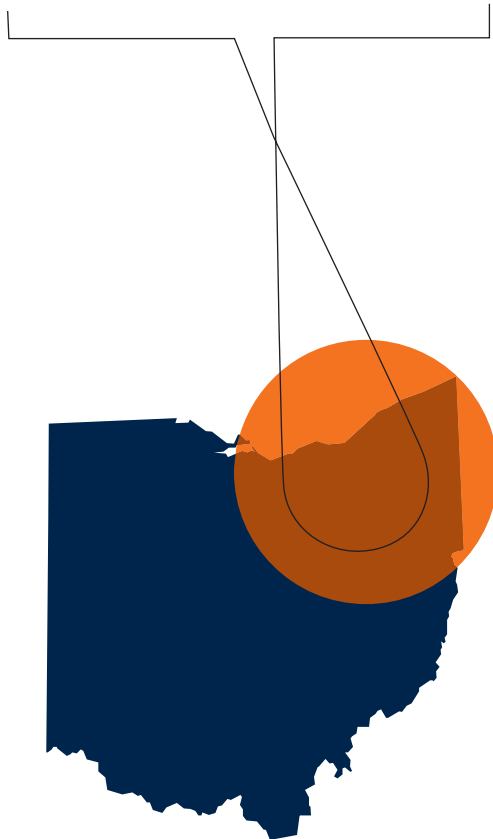
# The Greater Cleveland **Venture** **Capital** Report

The 2006 Annual Survey of  
Venture Investing Activity  
Across Northeast Ohio



# GREATER CLEVELAND

## The Nation's New Hotspot for Venture-Backed Innovation



### A REGION'S ECONOMIC SUCCESS IS DRIVEN BY THE SUPPLY OF CAPITAL:

human capital in the form of the education and skill levels of its citizens, intellectual capital in the form of research and innovation, and investment capital, in all of its forms. Where Capital in all of its forms is in plentiful supply, regions thrive. Where it's lacking, an area's economy is doomed to underperformance.

In this report, we endeavor for the first time to present an overview of the region's venture capital environment, an important driver and indicator of a region's level of innovation and entrepreneurship. Through the evidence marshaled here, we think you will see that a critical mass of talent and investment-grade ideas and innovations has emerged in Greater Cleveland and its surrounding region. In recent years, **Northeast Ohio has truly become a national hotspot for innovation and entrepreneurship.**

Still skeptical? Perhaps you'll consider these salient facts:

- Between 2004-2006, **97 companies** across this region received equity investments of **more than \$500 million** from venture capital firms or private equity groups.
- An unprecedented number of equity investment groups from outside the region—no fewer than **41 national firms**—have made **follow-on investments** in companies based in this region since 2004.
- Institutions in the region annually conduct more than **\$600 million in research**, and more than **550 clinical trials** for new therapies.

→ *The Economist Magazine* recently ranked Cleveland as the "**#1 Livable City in America**," based on such factors as cost of living, housing, quality of suburban schools and commute times.

Our region is once again a thriving area for entrepreneurship due to the collective, collaborative, and coordinated efforts of many. A key driver of this change has been the State of Ohio. We can't emphasize enough how crucial the state's support has been to our region's entire effort to nurture and develop high-growth companies. **Over the last five years, the Cleveland area has received over \$300 million from the State of Ohio's Third Frontier program.** This funding represents important support for translational research and commercialization, business accelerators, as well as start-up companies, and also provides leverage for the private capital markets in catalyzing deal flow.

The region's funding and entrepreneurial-support community have in recent years developed a continuum of support through the entire spectrum of company growth—from the seed stage to the exit event.

The good news is that all of this activity has created a pipeline of venture-quality companies in various stages of development. The corresponding challenge, however, is with so many promising companies in the region, a funding gap has developed.


**Over the next five years, we expect that the region will need to generate and attract over \$1.2 billion in venture capital to meet the market's needs.**

The evidence strongly suggests that venture-backed companies enjoy an edge in the marketplace simply as a result of the greater discipline built into the organization from the beginning. The National Venture Capital Association has documented the fact that venture-backed companies, on average, have about twice the economic impact as their counterparts. They contribute disproportionately to revenues, exporting activity, technical innovation, research and development, jobs and wealth.

By any measure, the level of venture investments in a region is a meaningful barometer of its success and its future prospects. We are thrilled about our recent successes, but even more excited about what is on the horizon over the next few years. We hope you'll take a closer look at why this region is increasingly a great destination for serious investors.



Dorothy Baunach,  
President and  
Chief Executive Officer,  
NorTech



James D. Ireland III  
Managing Director,  
Early Stage Partners, LP  
Chair, NorTech Venture Capital  
Advisory Task Force



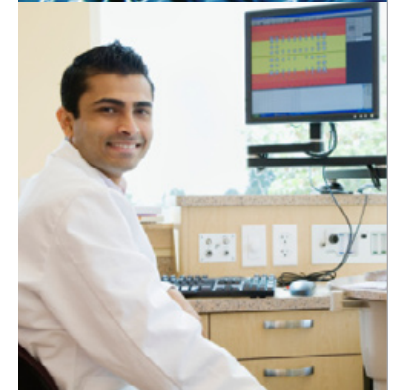
Baiju R. Shah  
President,  
BioEnterprise



Ray Leach  
Chief Executive Officer,  
JumpStart Inc.

#### **NORTECH VENTURE CAPITAL ADVISORY TASK FORCE**

Dorothy Baunach, NorTech  
Robert Baxter, BioEnterprise  
Tim Biro, Reservoir Ventures  
Melford Carter, Ohio-Midwest Fund  
Chris Coburn, The Cleveland Clinic Foundation  
Mark Coticchia, Case Western Reserve University  
Lorelei Davis, Frantz Medical Ventures  
Steve Girouard, Oakwood Medical  
Michael Goldberg, Bridge Fund  
Lynn-Ann Gries, JumpStart  
William Grimberg, Consumer Innovation Partners  
Zev Gurion, New Global Ventures  
Steve Haynes, Glengary Ventures  
Jack Harley, MAGNET  
Jamie Ireland, Early Stage Partners  
Ray Leach, JumpStart  
Chris Mather, NorTech  
Kevin McGinty, The Peppertree Fund  
Joe Michael, The Peppertree Fund  
Trevor Jones, BIOMEC  
Bill Mulligan, Primus Venture Partners  
Don Murfin, Development Capital  
David Morgenthaler, Morgenthaler Partners  
Jonathan Murray, Early Stage Partners  
Clay Rankin, North Coast Angels  
Scott Roulston, Fairport Asset Management  
Gordon Schorr, Akron ArchAngels  
Baiju Shah, BioEnterprise  
Chris Sklarin, Chrysalis Ventures  
Mike Stubler, Draper Triangle Ventures  
Ted Theofrastus, Beta Partners  
Bill Trainor, Mutual Capital Partners  
Eric Von Hendrix, MWV Pinnacle Management Company  
Brad Whitehead, The Cleveland Foundation  
Wayne Zeman, MAGNET



# The Venture Economy

In the last century, businesspeople, government officials and citizens understood that a region's economic health is best supported through investments in its physical infrastructure—such things as roads, bridges, water systems and ports.

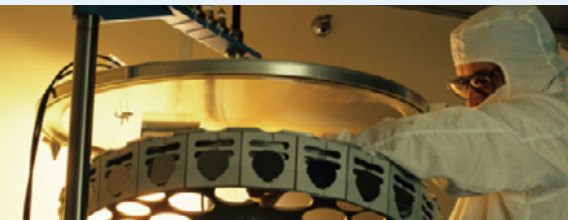
**In the new century's knowledge economy, a region's capacity for creating wealth will increasingly be a function of the strength of its innovation infrastructure:** talent, research universities, technology transfer offices, business accelerators, and regional seed and venture capital investors.

When this collaborative network is established and operating at full capacity, a virtuous, self-perpetuating cycle of entrepreneurship is

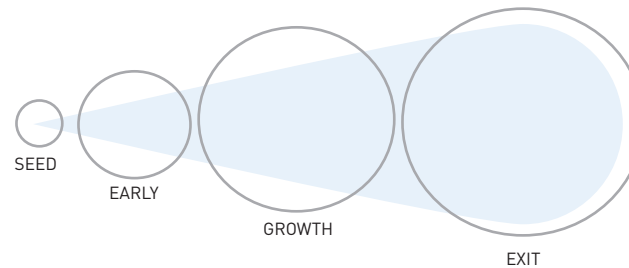
created in a region. New ideas and innovations attract premium talent and investment capital to form start-up companies. A pipeline of fast-growing, venture capital-financed companies is developed.

These high-growth companies account already for nearly 10% of all American jobs, and contribute approximately one in seven new jobs to the American economy. These jobs are well-paying positions with benefits at all levels of the employment ladder, and are high-knowledge and service positions that are at less risk of being transported overseas in the near term. Some of these companies are destined to become the large companies of the future, while others will become the breeding ground for the next generation of emerging companies.

Regions with thriving entrepreneurial cultures have an appreciation for the necessity of continuous innovation and creation, and a collective appetite for the business risks. Importantly, despite the high risks of any single venture, dynamic entrepreneurial regions are economically robust as the portfolio of emerging companies provides a solid and growing economic base for the community.



# The Venture Capital Continuum



**Venture economies require a robust and comprehensive capital continuum to fuel the development of innovations into companies.** The life of high-growth ventures can be broken into four stages of investments along the venture capital continuum: seed, early-stage investments, growth equity and exits.

The first two stages of the continuum tend to be provided by regional capital sources:

→ Seed investments and funding is typically \$250,000-\$1 million and provided by friends & families of the entrepreneur, nonprofit venture development groups, and grant funding sources. The company is focused typically on building or testing its offering and assessing early customer interest in that offering.

→ Early-stage investments are typically \$1-5 million and is usually provided by regional venture capital firms or angel investors. At this stage, the company is focused on producing a commercial offering, validating it with initial customer sales and developing a broader industry advisor network

Companies that continue to prosper will typically find the next two stages of capital from national capital providers as well as strategic industry partners:

→ Growths financing span a range from as low as \$5 million to more than \$50 million for companies. The funds are provided by a range of equity sources, regional and national, as well as strategic investors and mezzanine/debt capital sources. Companies at this stage are focused on accelerating market adoption of their offerings and scaling infrastructure to support their continued growth.

→ Exits are the final stage of investment in venture opportunities, and typically involve some element of return of capital to the original venture backers and management teams. At this stage, strategic acquirers typically take on enterprises and provide the resources necessary for widely distributing the offering.

As companies grow through these stages of development, they must attract strategic financial partners that can provide increasing amounts of capital and wider industry networks to support that growth, in the same manner that companies develop operating infrastructure and systems to position that the firm for sustainable success.



## SNAPSHOT OF SUCCESS

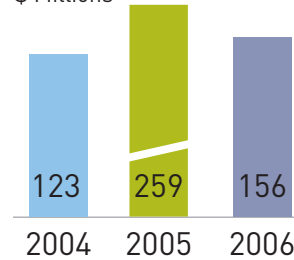
Numbers have a way of telling vivid stories. **Over \$500 Million has been invested in regional start-ups over the last three years.**

Even among those who work in Greater Cleveland's investment and innovation communities the statistics may be an eye-opener. Collectively, these numbers demonstrate an increasingly vibrant regional venture economy.

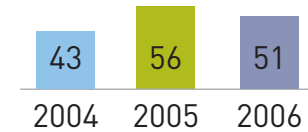
The data suggest the region is beginning to reach a critical mass of entrepreneurship and venture financing across multiple technology sectors, a new level from which even larger success will be achieved. After all, nothing breeds success like earlier success.

## Cleveland Area Venture Investments

\$ Millions



Companies Financed



Source: Dow Jones Venture Wire; Venture Source; BioEnterprise; JumpStart; ODOD

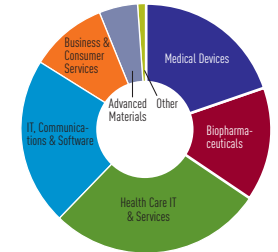
## Investments by Sector

COMPANIES BY SECTOR  
Number



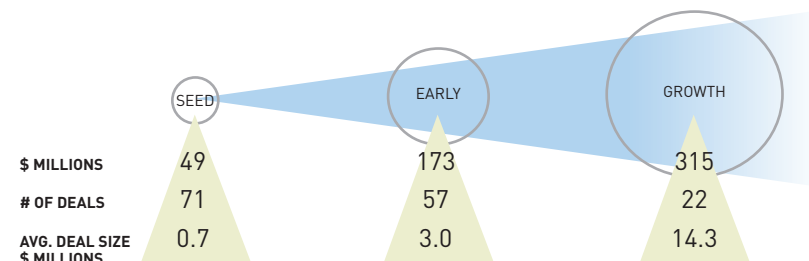
- Medical Devices 23
- Biopharmaceuticals 11
- Health Care IT & Services 11
- IT, Communications & Software 21
- Business & Consumer Services 14
- Advanced Materials 12
- Other 5

EQUITY INVESTMENTS BY SECTOR  
Percent of 2004-2006 \$



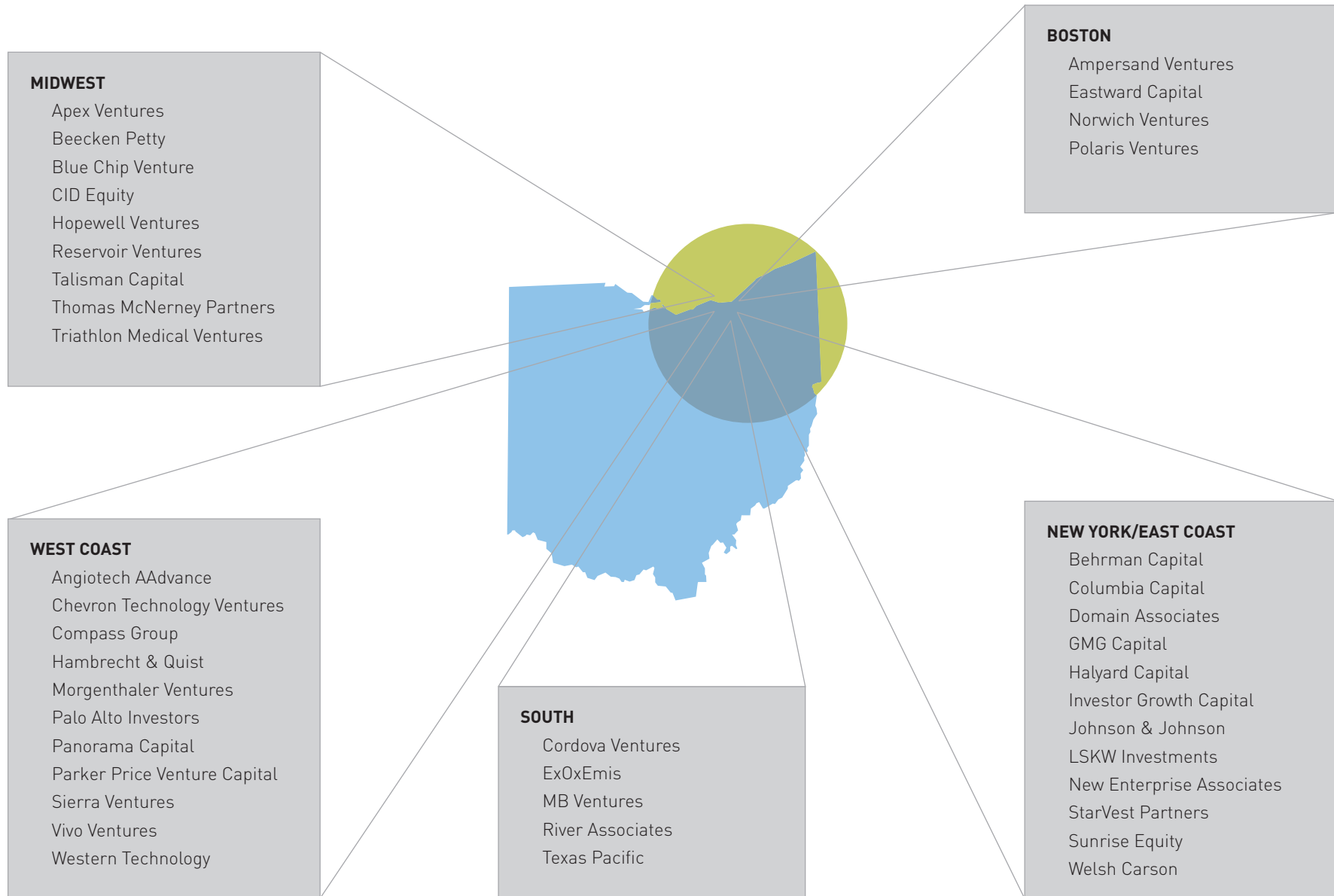
- Medical Devices 20%
- Biopharmaceuticals 15%
- Health Care IT & Services 28%
- IT, Communications & Software 22%
- Business & Consumer Services 10%
- Advanced Materials 5%
- Other 1%

## Investments by Stage



# National Investment

EXTERNAL EQUITY INVESTORS IN CLEVELAND AREA COMPANIES, 2004-PRESENT



# STAGE → SEED // EARLY // GROWTH // EXIT

As a region, Northeast Ohio in the last few years has committed to the identification, development and acceleration of high-potential start-ups. The collective efforts are bearing fruit: **the region has averaged just over 20 opportunities that have attracted seed funding each year** from 2004 through 2006.

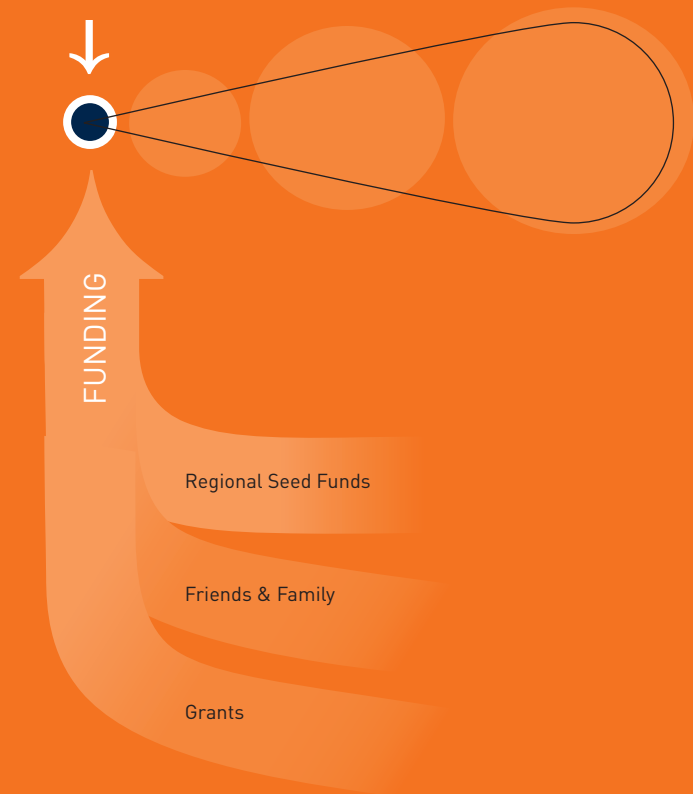
New ventures in this stage of development have a number of critical hurdles to negotiate. They must assemble their initial business case and craft a compelling business plan. Depending on their underlying product or service, they may need to build and test a prototype or demonstrate proof of concept in a lab. They will be required to protect their intellectual property. And of course they all must harvest expressions of real customer interest to present to any potential investors.

The region's world-class research institutions, technology offices, and venture development groups are working in concert to increase the pipeline of funded seed stage

opportunities. They have been aided greatly by the Third Frontier Program, through which the **State of Ohio has invested over \$300 million in Northeast Ohio's research institutions, capital funds, development groups, and companies** since 2002. The Third Frontier funds have been invested in centers of distinctive and translational commercialization in medicine such as neurostimulation, atrial fibrillation, regenerative medicine, and medical imaging, and in other technology areas such as fuel cells, sensors and controls, and advanced materials. In addition, the Third Frontier has catalyzed the development of a number of pre-seed and seed-stage funds and investment groups in the region through its grant programs.

These investments, along with the increasingly interconnected efforts in these areas of distinctive innovation, will produce an increasing stream of high-quality, seed-stage opportunities for years to come.

Build & test prototype  
Protect intellectual property  
Measure customer interest



## Selected Deals



### CARDIOINSIGHT

CardioInsight is commercializing a novel electrocardiographic imaging technology developed at Case Western by two doctoral students and their engineering professor. The technology non-invasively images electrical activity on the surface of the heart, pinpointing the nature and location of abnormalities. In 2006, the company closed a Series A funding round from Draper Triangle Ventures, JumpStart and Case Western, and is receiving additional support from BioEnterprise. The capital is being used to develop an advanced prototype of the device and conduct clinical trials.

### Contained Energy

### CONTAINED ENERGY

Contained Energy is a Cleveland-based company building a direct carbon fuel cell based on technology from Lawrence Livermore National Laboratory in California. Initial applications are being developed for the mobile-power and distributed-power generation markets. The company will develop products with support from the Wright Fuel Cell Group, a public-private partnership funded by the State of Ohio. JumpStart and a group of angel investors provided the seed funding for the company.



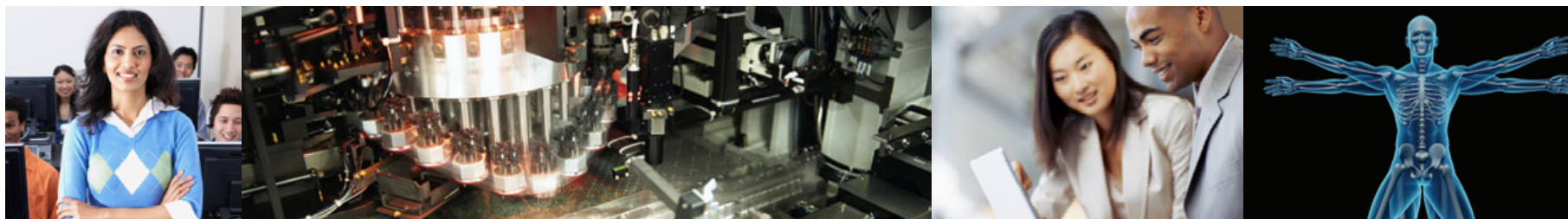
### GREAT LAKES PHARMACEUTICALS

Great Lakes Pharmaceuticals is focused on the development of antimicrobial systems and devices to guard against catheter-mediated infections. The company recruited an experienced biotech CEO from San Diego to lead the effort. The company received seed funding from Case Technology Ventures and JumpStart, as well as support from Ricerca and BioEnterprise. Product testing is being conducted in collaboration with the Case Western, MD Anderson Cancer Center in Houston, and Ricerca, a Cleveland-area contract research company.



### OVATION POLYMERS

Ovation Polymers, based in Medina, is in the business of leading-edge, nano-engineered polymer compounding innovation. The company's specially-designed and proprietary processes enable the creation of high-performance engineered materials for electronics, aerospace, and industrial applications, as well as consumer and health products. The company was launched with financial backing by Early Stage Partners. The firm now has eight product platforms, eight patents and 22 active programs spread out among 15 clients.



The growth in seed-stage investments has naturally resulted in a similar growth in early-stage investment opportunities. **In 2006, Northeast Ohio had 25 companies that received early-stage venture support, similar to the two previous years which had 21 and 25, respectively.**

At this stage of business development, venture-quality companies are typically focused on expanding their management teams and clinical or industry partnerships, producing a market-ready product, and demonstrating initial market adoption that validates the company's offering.

Two crucial ingredients that are needed to support a large number of emerging companies are investors dedicated to early-stage opportunities and professional business accelerators skilled at supporting these opportunities. In the last few years, the region is witnessing the emergence of these ingredients.

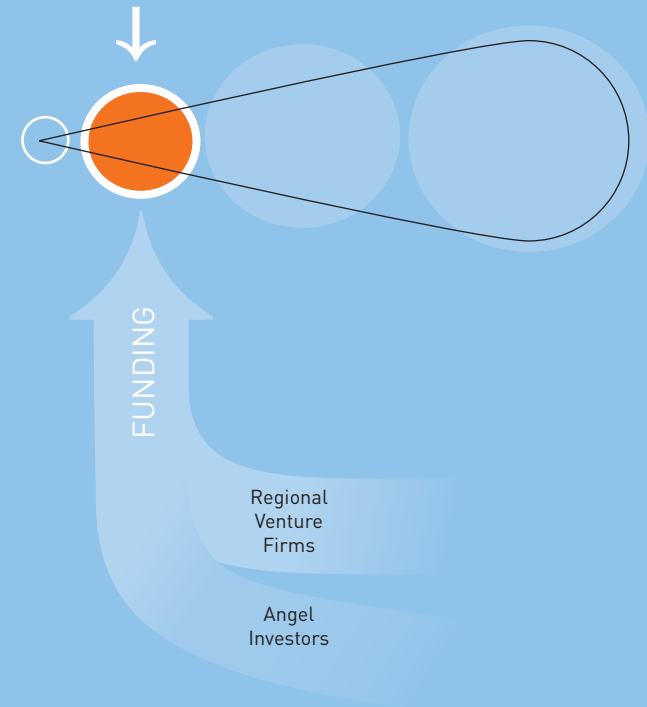
Seasoned regional investors have begun concentrating on supporting

promising early-stage technology ventures. They have done so through professional investment funds as well as professional angel investment groups. For many young companies, these investors provide a crucial bridge between early financing supplied by friends and family members and the national venture capital market. In addition to providing capital, these investors are a prime source of contacts and guidance to emerging companies.

The region also benefits from a professional and comprehensive business accelerator network that spans industries and geography. These intermediaries, supported by progressive philanthropy, institutions, and corporations, and the State of Ohio, have worked in a concerted fashion to nurture these firms into viable enterprises, by introducing mentoring management, connecting these firms to market resources and preparing them for and introducing them to national investment funds.

Northeast Ohio now has a bevy of venture-backed, early-stage technology and service companies.

- Complete business plan
- Validate offering
- Prepare commercial prototype
- Plan for profit
- Recruit seasoned advisors



## Selected Deals



### **CSF THERAPEUTICS**

CSF Therapeutics, a spin-off from the Cleveland Clinic, is developing medical devices to restore cognitive function in patients affected by trauma and neurodegenerative disorders such as stroke and Alzheimer's disease. The company, a part of the BioEnterprise Initiative, is the Cleveland Clinic's 18th spin-off since 2002. The company received its venture round of funding from Boston-based Norwich Ventures.



### **AYALOGIC, INC.**

Ayalogic is an Akron-based business-communications software company. The company's product—Qmunicate—uses a VOIP Network to merge voice and text data and messaging into a single customer solution. The company has closed initial customers in multiple industry verticals, and in 2006, closed a venture-round of investment led by Draper Triangle Ventures, Early Stage Partners and JumpStart.



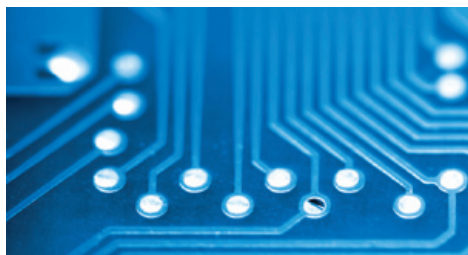
### **FIVE STAR TECHNOLOGIES**

Five Star Technologies is an advanced materials nanotechnology provider of high-performance powders and other solutions for the electronics industry. The company's unique technologies and processes can deliver custom dispersions with exceptional speed and quality. In 2006, it closed a \$7.1 million Series B round of funding from Early Stage Partners, Morgenthaler Ventures (Menlo Park), Cordova Ventures (Atlanta), Reservoir Venture Partners (Columbus) and Chevron Technology Ventures (California).



### **SYNAPSE BIOMEDICAL**

Synapse Biomedical, based in Oberlin, is developing minimally invasive neurostimulation devices to diagnose and treat patients with various forms of neurological impairments. The company was formed on technology from Case Western, University Hospitals of Cleveland, and MetroHealth, and is a partner in the Ohio Neuromodulation & Neurostimulation Partnership, a State-funded collaborative that is supporting several Cleveland-area neurostimulation start-ups. The company has been funded by two Palo Alto based venture funds, Vivo Ventures and Palo Alto Investments, as well as JumpStart and angels, and also receives support from BioEnterprise.



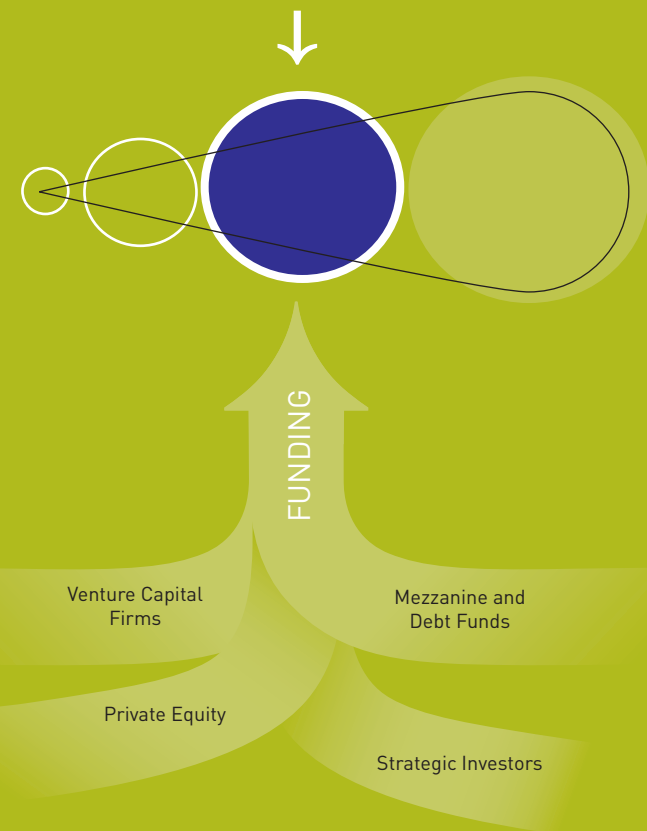
From a broad base of promising emerging companies with innovative products, services and new ideas, Northeast Ohio's business and civic leadership has, in recent years, given special attention to those companies which show promise of one day growing into much larger entities, the kind that do business around the world, attract the best talent and help anchor a region's economy and its reputation.

During this stage, companies are typically trying to accelerate and scale the adoption of their products or services. They are adding infrastructure and attracting broader professional management. All of which takes money, which is sometimes supplied by public capital markets, but in most cases through the investment of growth equity and strategic capital. In a truly vibrant region, much of this latter funding will come from outside investments from national venture capital firms and other private equity players.

Over the last three years, Northeast Ohio has seen a significant influx of growth capital from across the country. **Investment firms from the East Coast capital centers of New York and Boston to Silicon Valley on the West Coast and to all parts in between have made significant investments in Cleveland area firms.**

And the amounts they invest are significant, representing over 60% of the capital invested in the region over the last three years. With the growing pipeline of funded seed and early-stage ventures, the number of deals and the dollar amounts attracted to the region should continue to grow substantially over the next few years.

- Build infrastructure
- Attract growth management
- Fill demand
- Secure strategic partners
- Sustain profitability



## Selected Deals



### TREK DIAGNOSTIC SYSTEMS

Trek Diagnostic Systems is a global manufacturer and distributor of automated systems in the clinical, pharmaceutical and veterinary lab markets. Its products are designed to provide cost-effective improvements in workflow efficiency, ergonomics and test-result performance. Ampersand Ventures of Boston and Hambrecht & Quist of San Francisco completed a growth-stage financing of the company and merged it with Magellan Biosciences, a clinical diagnostics company, another portfolio company.



### TURNING TECHNOLOGIES

Turning Technologies, a company supported by the Youngstown Incubator, develops interactive response systems utilizing the latest software and hardware tools available and transforms them into state-of-the-art applications for audience response. The company's flagship products, TurningPoint® Software and Responsive Innovations ResponseCard® (Keypads), integrate with Microsoft's PowerPoint® software, providing the most advanced combination of knowledge and technology currently available in the field of audience and student assessment. The company received a significant growth equity investment in 2006 from Talisman Capital of Columbus.



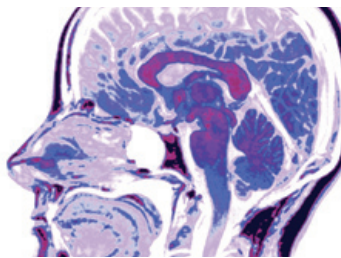
### SIMBIONIX

Simbionix is the leading developer of interactive medical simulators and simulation software to train physicians in a wide array of minimally invasive therapies. The medical device company originated in Israel, and established its headquarters in Cleveland in 2002, led by an investment from Early Stage Partners and with the support of the Cleveland Clinic, University Hospitals and BioEnterprise. Simbionix is one of nearly a dozen venture-funded Israeli health care companies that now have significant collaborations and presence in the Cleveland area. The company completed another financing round in 2006.



### WHOLE HEALTH

Whole Health is the leader in quality and service for the on-site health care industry. The Whole Health program enables employers to provide self-insured health care to employees ranging from primary and urgent care to preventative health and wellness programs while also reducing costs and increasing employee productivity. Founded in 1991, it now serves a number of high-profile clients—including Continental Airlines, Sprint/Nextel, Intel and Capital One—under long-term contracts and currently serves more than 200,000 individuals. The company recently completed a growth financing round.



**All economically healthy regions boast their share of signature companies that drive innovation and attract investors and premium managerial and operational talent.**

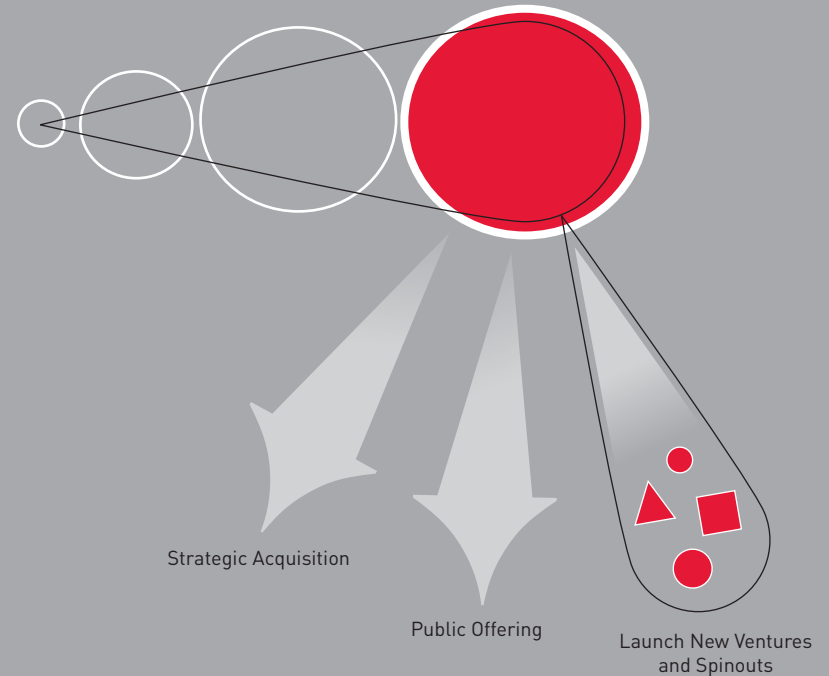
These companies capture healthy market share in their industry, and eventually capture the interest of larger companies intent on acquiring them. At a certain point in their organizational lifecycle, these smart, nimble companies also become the source of spin-off innovations, as some employees leave to begin their own companies, thereby refreshing the cycle of company formation.

The companies that reach this stage are thus magnets for talent and capital, drivers of job and wealth creation, and also, through the cycle, sources for new innovation. Northeast Ohio is blessed to have an increasing supply of these kinds of companies. From Office Max, which went from start-up to the number-two player in the office supply industry in a relatively short period, to Progressive Insurance (whose spin-off, Comparison Market,

is now itself becoming a major company) to Steris, a major player in the sterilization-supply business, the region in recent years can point to having been the incubator of a number of America's most innovative companies.

In addition, the region's historic technology companies such as Philips Medical and its polymer companies such as BF Goodrich are still driving new start-ups through their spinoffs and alumni. One study traced the lineage of nearly 80 medical device companies to the success of Picker and Technicare, predecessors to Philips Medical. And the region's many orthopedic companies trace their lineage to AcroMed, now a division of Johnson & Johnson.

In 2006, the Cleveland region witnessed a few very successful exits through acquisition. In addition, one of the region's promising bioscience companies completed a successful IPO on NASDAQ.



## Selected Deals



### FLASHLINE

Founded by Cleveland-based serial entrepreneur Charles Stack, Flashline focused on developing reusable Java software code. It allowed client IT operations to re-use, reduce and remix software assets. The company received significant venture funding from Adams Capital of Pittsburgh. The company was acquired by BEA Systems, a prominent Silicon Valley-based enterprise software company.



### FLIGHT OPTIONS

Flight Options is the world's second-largest provider of fractional ownership of medium to large private jets, with 200 aircraft and more than 2,000 owners. Founded in October 1998, the company quickly emerged as a leader in the fractional jet industry. Flight Options was the first company in the industry to offer fractional shares in previously owned aircraft, which translated into a cost savings of as much as 35%, thus opening private jet travel to a broader audience. The company had an estimated \$700 million in revenues in 2005. Raytheon recently acquired controlling interest in the company.



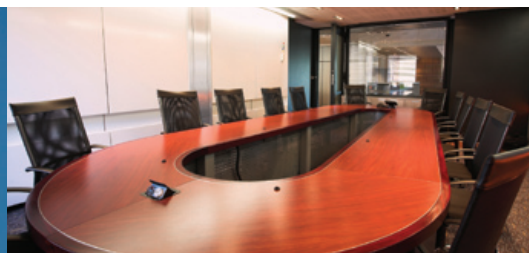
### TMW SYSTEMS

Founded by a Cleveland-area entrepreneur, Tom Weisz, TMW Systems has grown into one of the world's most trusted suppliers of dispatch and logistics enterprise software for the trucking industry. For years, it has been among the fastest-growing companies in the region, and it was selected by the U.S. Army as a prime logistics software supplier. In late 2005, the company was acquired by a pair of private equity groups, Wachovia Capital Partners of North Carolina and Peppertree Capital Fund of Cleveland.



### CLEVELAND BIOLABS

Cleveland Biolabs, started in 2003 as a spin-off of the Cleveland Clinic, successfully completed an initial public offering on NASDAQ in July 2006. The biotechnology company is developing drugs offering protection from radiation and cancer based on the work of Dr. Andrei Gudkov. Cleveland BioLabs has established a technological pipeline for the development of new pharmaceuticals and their rapid preclinical evaluation. The company, which had received venture investment from Sunrise Equity of New York, sold 1.7 million shares in its offering.





## The Regional Venture Landscape

Ohio, and especially the Cleveland area, has benefited from a blossoming of angel, seed and venture investors interested in financing new regional technology companies. **In addition to the many regional firms created over the last five year, the Cleveland area attracted offices from four national venture firms in 2005-06**—Oakwood Medical Investors (St. Louis), Chrysalis Ventures (Louisville), Draper Triangle Ventures (Pittsburgh) and Bridge Fund (Cleveland and Tel Aviv)—**and saw the activation of two new angel networks**—North Coast Angels and Akron ArchAngels. The State is now home to more than 45 capital sources for enterprising entrepreneurs.

The State of Ohio has aggressively supported these efforts through its Third Frontier programs to encourage angel investment, create new seed and early-stage funds, and attract national venture groups. The Ohio Capital Fund is a \$150 million

fund of funds that has made investments to help capitalize a number of regional and national funds. The Ohio Capital Fund is jointly managed by Peppertree Capital and Fort Washington Partners. In addition, Ohio's Public Employees Retirement System launched the Ohio- Midwest Fund. That Fund, managed by Credit Suisse First Boston, has invested \$51 million in eight groups focused on early-stage investments in Ohio-based companies.

Active, well-capitalized regional venture firms have been a vital element in developing the region's high-tech entrepreneurial economy. These state monies and leading regional institutional investors have stimulated the growth of these firms in recent years. The region's diverse spectrum of venture firms permits entrepreneurs to find strategic capital partners for their businesses. In addition, these firms are critical to attracting national venture investors into regional technology

companies, as they fulfill the important roles of local validation as well as local investment syndicate management for the opportunities.

Angel investors and networks have also played a crucial role in developing good ideas into viable companies. Northeast Ohio is increasingly rich in these supportive networks, yet another piece of the comprehensive capital continuum. The North Coast Angel Fund and the Akron ArchAngels Network, both supported by experienced entrepreneurs, were organized this year. And The Ohio Tech Angels provides a state-wide network of investors.

Not surprisingly, **the growth in venture and angel investors in this region is directly correlated to the growth in high-quality technology investment opportunities emerging in Northeast Ohio.**

# OHIO VENTURE, ANGEL, AND SEED FUNDS

## VENTURE CAPITAL FUNDS

Adena Ventures  
Athenian Venture Partners  
BIOMEC  
Blue Chip Venture Company  
Bridge Investment Fund  
Charter Life Sciences  
Chrysalis Ventures  
CID Capital  
Consumer Innovation Partners  
Crystal Ventures  
Development Capital  
Draper Triangle Ventures  
Early Stage Partners  
Frantz Medical Ventures  
Isabella Capital  
Key Principal Partners  
Max-Ventures  
Miami Valley Venture Funds  
Morgenthaler Ventures  
Mutual Capital Partners  
MWV Pinnacle Capital Fund  
Nationwide Mutual Capital  
NCT Ventures  
Oakwood Medical Investors  
Panzica Investments  
Primus Capital Funds  
Reservoir Venture Partners  
River Cities Capital Funds  
Riverside Capital Microcap Fund  
SunBridge Partners  
Talisman Capital  
Triathlon Medical Venture Partners

## ANGEL NETWORKS AND FUNDS

Akron ARCH Angel Network  
Clarion Capital  
CoreNetwork  
Custer Capital  
Findaway Ventures  
Growth Strategies Group  
North Coast Angel Fund  
Ohio Tech Angels  
Queen City Angels  
RMS Capital  
Sycamore Partners  
Symark

## SEED VENTURE FUNDS

Case Technology Ventures  
Cincinnati Children's Tomorrow Fund  
Cleveland Clinic Innovations  
Glengary Ventures  
GLIDE Fund  
JumpStart



# The \$1.2 Billion Opportunity

Since 2001, the major institutions with a stake in Northeast Ohio’s economic success—from venture capital funds to universities and research institutions, from financial institutions and philanthropy to the State of Ohio—have collaborated in unprecedented ways to increase the pipeline of high-growth business start-ups. Working with a common vision, they have created a network that can support and encourage the most promising emerging companies through their entire stage of value creation, from their earliest stages of development to their eventual sale or other liquidity event.

This range of coordinated collaboration has borne more fruit than even its architects might dare have dreamed initially. The region now boasts a robust pipeline of promising, venture-worthy companies in various points of development along the funding continuum. From 2004-2006, the region has seen 35-40 seed and early-stage opportunities each year.

The burgeoning pipeline has created a new challenge and an opportunity: **the Cleveland area will need to generate and attract an estimated \$1.2 billion in additional equity funding over the next five years** to support the needs of its emerging technology companies.

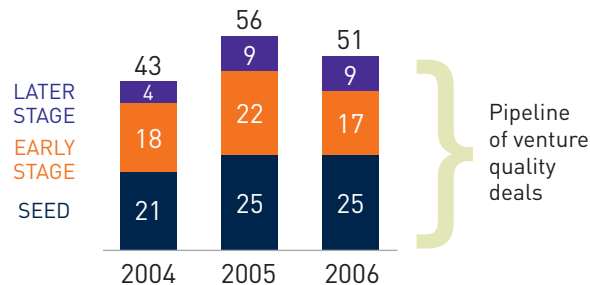
To meet this challenge, the importance of Ohio-based venture firms, especially those that participate at the seed and early-stages of venture financing, cannot be overstated. **The region must generate or attract \$375 million in seed and early-stage capital over the next five years to continue funding the stream of companies emerging from the innovation infrastructure.** Efforts such as The Ohio Capital Fund and the Ohio-Midwest Fund as well as other Third Frontier programs are a starting point to help fill that gap. Much more, though, will be needed.

Regional venture firms play a vital role in attracting follow-on investment from national investors. At last count, 41 VC firms, many from the East and West coasts, have made follow-on investments in Cleveland-area companies in the last three years, drawn to the region in many cases by their peers in Ohio. That trend should continue to grow as regional venture portfolios continue to mature: **an estimated \$800 million of the equity requirement could be provided by follow-on growth equity sources, much of that from national investors.**

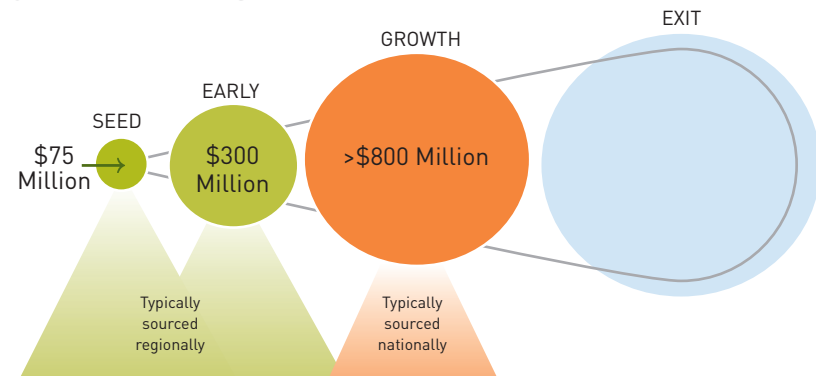
With so many entities from within the region and the state collaborating on planting the seeds for innovation and then nurturing the ventures through their early stages, the companies emerging from this pipeline are prepped for success. **Isn’t this the kind of market in which you and your institution should participate?**

## BUILDING PIPELINE

Number of Companies by Stage of Financing



## CAPITAL NEEDS



## COMPANIES RECEIVING INVESTMENTS, 2004-2006

### Medical Device

AxioMed Spine  
 CardiInsight Technologies  
 CleveX  
 Critisense  
 Early Sense  
 Fused Multimodality  
 Imaging  
 Great Lakes  
 Pharmaceuticals  
 Imadent  
 Imalux  
 IntElect  
 Interventional Imaging  
 Merlot OrthopediX  
 NDI Medical  
 NeoMed  
 Ogenix  
 Orthohelix  
 PeriTec BioSystems  
 Symbionix  
 Symphony Medical  
 Synapse Biomedical  
 Syncro Medical  
 Think-A-Move  
 Trek Diagnostics

### Biopharmaceutical

AnalizaDx  
 Arteriocyte  
 Athersys  
 Cleveland BioLabs, Inc.  
 Copernicus Therapeutics  
 CSF Therapeutics  
 Icon Interventional  
 PrognostiX  
 Tolera  
 Transcutaneous  
 Technologies  
 Vascular Biogenics

### Health Care IT & Service

American Safety & Health  
 Institute  
 Lifeline  
 MDG Medical Inc.  
 MemberHealth  
 NCRx Optical  
 NextMed Systems  
 PetsDx  
 ProPractica  
 Roscoe Medical  
 WholeHealth  
 Workflow.com

### Information Technology & Software

AVE Intervision  
 Axentis  
 Ayalogic  
 Banyan Technology  
 BlueBridge Networks  
 ComSense  
 Embedded Planet  
 Embrace Pet Insurance  
 Everstream  
 Flashline  
 Inspherion  
 IQS  
 Knotice  
 Northcoast PCS  
 PsiBase  
 SageQuest  
 SamePage Solutions  
 Sypherlink  
 TOA Technologies  
 Turning Point  
 Unitask

### Business & Consumer Services

Comparison Market  
 Day-Day  
 Employ Media  
 InnoDesk  
 Nine Iron Innovations  
 NineSigma  
 Pfungsten Publishing  
 Predictive Services  
 PreEmptive Solutions  
 PsyMax  
 QuickPayNet  
 Tooling University  
 Visual Edge Technology

### Advanced Materials

Aria Analytics  
 Delta Plant  
 Five Star Technologies  
 FLX Micro  
 MAR Systems  
 MIMFlow Technologies  
 Ovation Polymers  
 Stanton Adv. Ceramics  
 Technology Management  
 Thin Battery Solutions  
 Trivum Technologies

### Other Technology

Contained Energy  
 Heritage Fare  
 One Source Technologies  
 Stratum Energy Systems  
 Teraphysics



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