

Ben Franklin TechVentures 116 Research Drive Bethlehem, PA 18015-4731

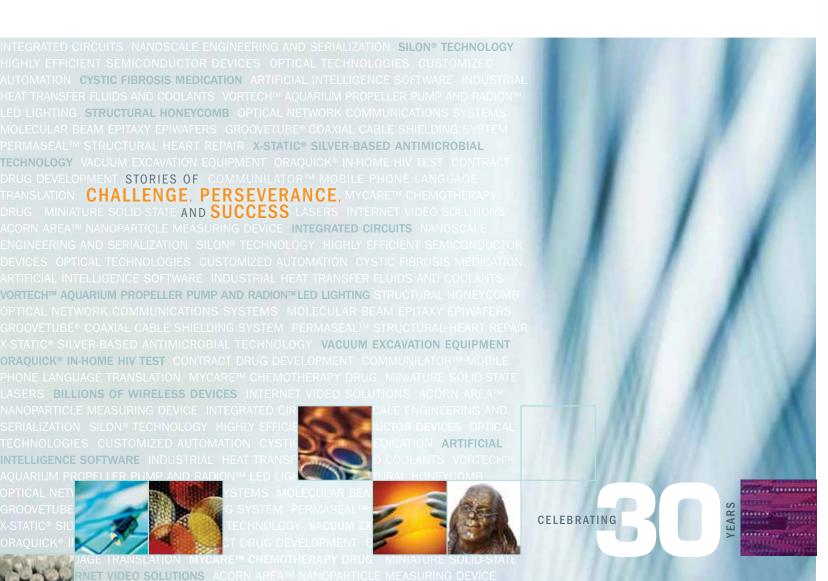
www.nep.benfranklin.org

Address Service Requested

Non-Profit Org. US Postage Permit No 504 Lehigh Valley, PA













TOMORROW> STORIES OF CHALLENGE, PERSEVERANCE, AND SUCCESS







Life poses challenges to all of us. If we work tirelessly, receive help from experienced mentors, and bring our talents and passion to what we do, we increase our chances of success substantially. This is also true for both new and established companies. This year's annual report celebrates the 30-year anniversary of the Ben Franklin Technology Partners by highlighting our clients' achievements.

To prosper, companies need an exceptional management team, a comprehensive and practical business plan, access to funding, and a realistic assessment of market potential. They require efficient and technologically superior manufacturing methods, input from skilled consultants, and effective market channel strategies. The Ben Franklin team's experience and expertise make us uniquely qualified to provide clients with assistance in precisely these areas.

This report highlights the accomplishments of five alumni clients that represent many other stories of success among the companies we serve. These companies create and retain jobs that substantially enhance the lives of thousands of workers and

their families. They also create products that compete globally and improve the human condition. CICLON Semiconductor Device Corporation, now Texas Instruments – Lehigh Valley, for example, produces critical components used in literally billions of wireless devices worldwide. Saladax Biomedical, in conjunction with Ortho Clinical Diagnostics, has developed tests for the early detection of Alzheimer's disease.





These are the first fully automated tests and have higher performance than competitors. Armed with this information early enough, doctors may be able to administer therapies to avert dementia.

The Ben Franklin program was created by the Commonwealth of Pennsylvania in 1982 to play a leadership role in building the state's technology economy, strengthening regional economies, and creating and retaining high-wage, high-skilled jobs. In the three decades since Ben Franklin was established, we have delivered on those objectives with excellence. With a return of \$3.50 of incremental state tax revenue for every dollar of investment in the program, Ben Franklin is among the most successful economic development organizations in the world.

For the last 30 years, we have catalyzed the success stories you'll read about in these pages and hundreds more. We complement our financial investments with targeted advice and crucial connections that support clients and accelerate their growth. We help build northeastern Pennsylvania's technology economy one company at a time.

R. CHADWICK PAUL, JR.

President and Chief Executive Officer

Ben Franklin Technology Partners of Northeastern PA



A Message from the CEO ${f 1}$ Program Overview ${f 3}$

Investments 4 Technologies Developed 12

Ben Franklin Alumni 15

Computer Aid 16 Custom Processing Services 17

OraSure Technologies 18 Strong Pools and Spas 19 TMG Health 20

Ben Franklin TechVentures 21 Ben Franklin Venture Idol 22 i xchange 23

Financial Information 25 Results 26 Boards and Staff 27

PROGRAM OVERVIEW INVESTMENTS

BEN FRANKLIN TECHNOLOGY PARTNERS of NORTHEASTERN PENNSYLVANIA (BFTP/NEP)

is part of a four-center, state-funded economic development initiative that was created in 1982. The northeastern center is headquartered at Ben Franklin TechVentures®, a technology incubator/post-incubator facility on the Mountaintop Campus of Lehigh University in Bethlehem. Regional offices are located in Bloomsburg, Reading, and Scranton.

BFTP/NEP's mission is to promote, sustain, and invest in the development of our regional economy through innovation and partnering. Our strategy encompasses three key areas:

- Developing early-stage, technology-based companies
- Helping established companies creatively apply new technology to achieve industry leadership and compete effectively in a global market
 - Promoting innovative community-wide initiatives that foster a supportive business environment for high-growth companies

As hundreds of companies have experienced, Ben Franklin delivers hands-on support, connections to critical resources, and investment funds at companies' most vulnerable times. Ben Franklin Technology Partners helps clients to achieve and sustain market success and competitive advantage. We are evaluated on the basis of the commercial accomplishments of our clients that are achieved as a result of our assistance.

Capital – Ben Franklin makes investments that typically range from \$30,000 to \$150,000 per year for up to three years. We take calculated risks investing in young, unproven companies. We assist early-stage firms as they prepare to raise additional capital and provide them with an important initial endorsement.

We also support established companies by providing investments in innovation and access to our network of university and industry experts and facilities. Work is usually technology development or application-driven and is accomplished with a college or university partner.

Business and Technical Expertise – Each company in the Ben Franklin portfolio benefits from the collective experience of seasoned professionals who focus on turning high-potential ideas into high-growth businesses. In-house expertise is complemented by the Ben Franklin Solutions Network of advisors, service providers, and investors, creating a powerful and comprehensive support program for clients.

College and University Resources – We tap into the strength of Pennsylvania's colleges and universities, whose faculty and students work directly with many of our clients. Ben Franklin provides a crucial link between client companies and the wealth of knowledge, facilities, and human resources in the Commonwealth's higher education institutions.

Infrastructure – BFTP staff apply years of business incubation expertise in support of the 10-member Ben Franklin Business Incubator Network. This collaboration is among the largest incubator networks in the nation. Prospective Ben Franklin clients must offer significant potential for job creation and retention and future growth through innovation. Ben Franklin works with the most promising ventures on an enterprise-wide basis to enhance their entire way of doing business.

VISIT WWW.NEP.BENFRANKLIN.ORG for ADDITIONAL INFORMATION.

In order to build the regional technology economy, the Ben Franklin Technology Partners of Northeastern Pennsylvania allocates a portion of its resources to project investments and business and technical assistance work through the Challenge Grant provided by Pennsylvania's Ben Franklin Technology Development Authority. This year, through the Pennsylvania-funded Alternative Energy Development Program, Ben Franklin also invested substantially in companies that are either developing new energy-related technologies or are seeking to employ energy-conservation processes. All clients were competitively selected as having the greatest potential for creating or retaining highly paid, sustainable jobs, introducing novel products or processes, and filling a promising market niche.

CHALLENGE GRANT INVESTMENTS A SOUND STRATEGY, INC.

East Stroudsburg, Monroe County

Design a national product expansion plan and assist the company in developing a more comprehensive business strategy that will help raise additional capital. A Sound Strategy, Inc. is a software development company that provides solutions that manage business processes more efficiently. The company's flagship product, siteMaster, helps clients utilize web-based platforms to increase customers' bottom lines and improve internal operations. These custom, proprietary applications will be expanded in existing vertical markets.

BFTP Investment: \$35,000 | Total Project Budget: \$71,000

APPALACHIAN APPS, LLC

Wilkes-Barre, Luzerne County

Complete a financial model and develop investor documentation, including a revised business plan and investor presentation materials. Appalachian Apps seeks to become the industry leader in Appertainment™. Appertainment is smartphone applications for the entertainment industry that feature a more robust platform and greater social media interconnectivity than existing technology.

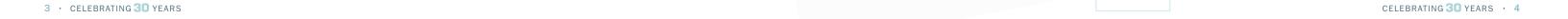
BFTP Investment: \$35,000 | Total Project Budget: \$79,568

ARIOTECH

Ben Franklin TechVentures, Bethlehem, Northampton County

Customize and deploy a new type of information-sharing platform for hospital-discharged chronically ill patients and their care providers, and pilot the technology in three major northeastern U.S. hospitals. Released patients will be better able to adhere to their medication regimens, manage their symptoms, and learn more about their diseases. They will more efficiently communicate with their care providers about important physiological information, including blood sugar, blood pressure, pulse oximetry, and others. This will help hospitals lower costs and improve patient experiences and health outcomes.

BFTP Investment: \$50,000 | Total Project Budget: \$456,500



BIOSAMPLE SOLUTIONS LLC

Ben Franklin TechVentures, Bethlehem, Northampton County

Complete development and begin commercialization of the BioCookie™, a proprietary sample-preparation technique for application in DNA and RNA extraction technology. BioSample manufactures DNA and RNA extraction kits for laboratory tests on blood and saliva. These new tests will allow for the development of increasingly sophisticated drugs and more personalized medicine regimes. Sample preparation will be greatly simplified and accomplished at twice the speed of the current methodology.

BFTP Investment: \$105,000 | Total Project Budget: \$445,000

C.F. MARTIN & COMPANY, INC.

Nazareth, Northampton County

University Partner: The Pennsylvania State University

Complete development of computer models to predict the sound quality of prospective top plates on new guitar models for this producer of acoustic stringed instruments. The new products will provide the optimum sound radiation and tone that is sought by the target demographic. This will help maintain Martin's brand versus current and future competitors.

BFTP Investment: \$7,483 | Total Project Budget: \$25,700

CERNOSTICS, INC.

Danville, Montour County

Validate a diagnostic and prognostic test that predicts the risk of developing esophageal cancer in patients with Barrett's Esophagus. The test employs a "spatial systems biology approach" to anatomic pathological testing, in contrast with the current pathology testing that is a largely manual and subjective process. Cernostics will continue development of this molecular diagnostic test with biopsy specimens and clinical data from Geisinger Health System, Danville, in order to select and refine biomarkers and complete software development. Additional clinical validation studies will lead to commercialization of the test via Cernostics' clinical reference laboratory.

BFTP Investment: \$60,000 | Total Project Budget: \$183,375

ECOTECH MARINE LLC

Bethlehem, Northampton County

University Partner: Lehigh University's Enterprise Systems Center

Improve supply chain processes through modifications to an existing Enterprise Resource Planning system and plan for expansion. EcoTech's patented VorTech™ propeller aquarium pump connects to the tank using strong magnetic forces rather than through a hole in the glass wall. Conventional pumps located within the tank are large and generate considerable heat, which can harm aquarium inhabitants. The company's product enhances the aquarium ecosystem and has also been adapted for use in the spa/pedicure market. EcoTech's new Radion™ LED lighting unit features 34 energy-efficient LEDs with a five-color spectrum for improving aquarium growth, wider coverage, better energy efficiency, and a customizable spectral output.

BFTP Investment: \$25,000 | Total Project Budget: \$162,464

EGGZACK

Ben Franklin TechVentures, Bethlehem, Northampton County

Refine a strategy for assembling a strategic partner network to help EggZack market and sell its software as a service (SaaS) solution to a much larger base of customers. The patent-pending SaaS platform requires only a single entry to undate a client's website

marketing agencies.



BFTP Investment: \$50,000 Total Project Budget: \$133,000

HIGHWOOD USA, LLC

Tamagua, Schuylkill County

University Partner: The Pennsylvania College of Technology

Improve heat resistance and impact strength of styrenic plastic, a material used in the production of synthetic wood. Highwood manufactures and markets a line of extruded synthetic wood products for fencing, decks and docks, outdoor furniture, spa cabinets, walkways, and railings. The synthetic wood products markets are growing, and these material improvements will allow the company to attract a greater market share.

BFTP Investment: \$14,547 | Total Project Budget: \$44,094

LMC SOFTWARE SOLUTIONS

Morgantown, Berks County

Assist LMC Software Solutions with operations and marketing support for its Enterprise Technical Support Center product as well as its Development Operations initiative for software development. This will provide the company with new customers and increased sales. LMC's new software platform supports information technology staff as they address IT problems within their companies. 24/7 monitoring and log trails are built in, providing complete audit and compliance functions. This new software platform improves productivity and service availability at a reduced cost.

BFTP Investment: \$50,000 | Total Project Budget: \$300,000

MICRO INTERVENTIONAL DEVICES

Ben Franklin TechVentures, Bethlehem, Northampton County

Develop a new, minimally invasive structural heart repair product called Permaseal™ and begin commercializing it. Micro Interventional Devices designs, develops, and commercializes proprietary technologies targeting unmet needs in the treatment of structural heart disease. The Permaseal closure device is intended to close myocardial punctures, incisions, and otomies in structural heart repair procedures. This product will serve the large market of surgical patients who would otherwise be unable to undergo high-risk procedures, particularly for the increasingly popular Transcatheter Aortic Valve Implantation procedure (TAVI).

BFTP Investment: \$100,000 | Total Project Budget: \$618,500

PALACE FOODS, INC.

Reading, Berks County

University Partner: Lehigh University

Optimize and upgrade the current company facility to increase capacity and efficiency to meet increasing demand. Palace Foods manufactures Indian cuisine and ethnic specialty foods.

BFTP Investment: \$11,881 | Total Project Budget: \$72,221

PIVITEC, LLC

Ben Franklin TechVentures, Bethlehem, Northampton County

Complete design and begin commercialization of five hardware products and one software control application for this developer of audio streaming and distribution products. Modern performances in theaters and houses of worship require a variety of approaches to provide performers the ability to hear their own performances as well as cues. Wired systems currently in use require extensive cabling, limiting performers' movements, and

have limited audio source reception. Pivitec uses wireless mobile devices and personal computers as interactive controllers for its network devices to address problems in live professional audio products.



BFTP Investment: \$70,000 | Total Project Budget: \$153,000

PROVA SYSTEMS

Carbondale, Lackawanna County

Support the launch and commercial development of Fleet Genius™ Fleet Manager in a Box. PROVA manufactures a wireless OBD-2 diagnostic device and trip logger for use in passenger cars and light-duty trucks. This device allows proactive, real-time field management of vehicles using data derived from its usage patterns and collected from its on-board computers. The devices provide a unified set of data points for analysis from any vehicle, allowing for an efficiency comparison among a company's entire fleet. The system can be used in fleet management applications and by dealers and outsourced fleet maintenance services. It also supports applications in usage-based insurance (UBI), drive-by emissions testing systems, and secure vehicle access control systems.

BFTP Investment: \$55,000 | Total Project Budget: \$210,000

STRONG INDUSTRIES, INC.

Northumberland, Northumberland County University Partner: Lehigh University's Enterprise Systems Center

Identify and implement operational improvement opportunities that developed during the company's recent business transformation and growth. Strong Industries was originally a molder of various consumer goods, including a line of pet products. Since then, Strong has grown significantly and has transformed the company to focus on the pool and spa market. The Lehigh team will generate specific recommendations to improve both the production operation and business processes.

BFTP Investment: \$20,000 | Total Project Budget: \$246,765

SUCCESSTSM LLC

East Stroudsburg, Monroe County

Create a graphical user interface for the company's product that addresses Disaster Recovery Management (DRM) in a cost-effective and affordable manner. In the event of a disaster, this product reduces downtime from four hours to 15 minutes. SuccessTSM has created a platform that works with IBM's widely used Tivoli Storage Manager (TSM) system to make the DRM process easier, faster, and more reliable through an easy-to-navigate graphical user interface. The interface will be developed through a series of beta tests, leading to a final product and launch. Concurrently, the company will develop the necessary infrastructure to commercialize its initial product, including the implementation of a marketing plan, hiring and training personnel, and capitalizing the company.

BFTP Investment: \$110,000 | Total Project Budget: \$387,175

TAYLORED BUILDING SOLUTIONS, LLC

Taylor, Lackawanna County

Complete a computer program to manage the financial function of this manufacturer of high-end modular homes and components for traditional stick-built homes. With this investment, the company will also implement novel marketing and sales strategies.

BFTP Investment: \$60,000 | Total Project Budget: \$3,271,191



VIGON INTERNATIONAL

East Stroudsburg, Monroe County

University Partner: Lehigh University's Enterprise Systems Center

Automate the batch record management system and the work order information system at this manufacturer and supplier of high-quality flavor and fragrance ingredients. By improving these systems at Vigon, the company will be able to increase its market share and add new capabilities to its operation.

BFTP Investment: \$14,765 | Total Project Budget: \$125,730

XIGO NANOTOOLS

Ben Franklin TechVentures, Bethlehem, Northampton County

Organize manufacturing policies and procedures to prepare for expanded sales at this manufacturer of Acorn AreaTM. The Acorn Area is a patented, tabletop-size device that rapidly measures the wetted surface area of nanoparticles using magnetic resonance imaging technology. Nanoparticles are minute; they typically have diameters that are 1/1,000th the diameter of a human hair. Measuring the wetted surface area of nanoparticles directly relates to product performance in many industrial applications, including energy, electronics, ceramics, and pharmaceuticals. Nanoparticle properties are key predictors of material performance, and currently there are no other efficient methods to measure wetted nanoparticle surface area.

BFTP Investment: \$50,000 | Total Project Budget: \$104,000

ALTERNATIVE ENERGY DEVELOPMENT INVESTMENTS

ALPHA PACKAGING

Bethlehem, Northampton County University Partner: Lehigh University's Enterprise Systems Center

Implement practices and install equipment to reduce energy consumption by 20% at this manufacturer of plastic bottles and jars primarily for the nutritional, pharmaceutical, personal care, houseware, consumer chemical, and food and beverage markets. The plastic container industry is highly competitive both domestically and internationally, and controlling energy costs is essential to maintaining competitive advantage.

BFTP Investment: \$48,000 | Total Project Budget: \$278,023

ATEECO, INC.

Shenandoah, Schuylkill County University Partner: Lehigh University's Enterprise Systems Center

Complete facility planning through operational space creation, consolidation, and centralization of administrative functions at this producer of frozen pierogies for retail and institutional customers. The company seeks to substantially increase capacity and develop new product offerings, grow sales, improve production efficiencies, reduce scrap, and streamline factory flow.

BFTP Investment: \$41,174 | Total Project Budget: \$275,497

CAMBRIDGE-LEE INDUSTRIES, LLC

Reading, Berks County

College Partner: Northampton Community College's Emerging Technology Applications Center

Conduct an on-site assessment to analyze the company's energy consumption and identify ways for the firm to lower energy usage, improve energy efficiencies, and minimize waste in order to reduce operating costs. Cambridge-Lee is a world leader in the manufacture of copper tubing.

BFTP Investment: \$40.500 | Total Project Budget: \$196.000

CARPENTER TECHNOLOGY CORPORATION

Reading, Berks County

College Partner: Northampton Community College's Emerging Technology Applications Center

Complete investigation of methods to recover waste heat from high-temperature exhaust streams at this producer of specialty cast-wrought and powder metallurgy and titanium alloys. Carpenter manufactures for niche applications in the automotive, aerospace, consumer products, energy, defense, industrial, and medical markets.

BFTP Investment: \$55,000 Total Project Budget: \$175,055

CEWA TECHNOLOGIES

Ben Franklin TechVentures, Bethlehem, Northampton County

Complete prototype testing and finalization of the commercial design of a new kind of point-concentrated solar power dish that will deliver energy at a lower cost due to its novel shape and



construction. The dish, called a toroid solar collector, is capable of providing thermal power for HVAC, power generation, desalination, and process heat applications at a cost comparable to fossil fuel-based sources of energy without government subsidy. Such cost competitiveness is novel in solar power and critical to the growth of this alternative energy source.

BFTP Investment: \$250,000 | Total Project Budget: \$852,000

CLYDETEC SYSTEMS, INC.

Orefield, Lehigh County

Develop a new class of broadband laser diodes (BLDs). ClydeTec's BLD has application in both computer and optical communications, and its new BLD is expected to open a new path for energy-saving solutions. Reducing power consumption is becoming one of the most significant challenges in computer and optical communications.

BFTP Investment: \$100,000 | Total Project Budget: \$334,000

CONSOLIDATED STORAGE COMPANIES. INC.

Tatamy, Northampton County

College Partner: Northampton Community College's Emerging Technology Applications Center

Complete a plant-wide investment-grade energy assessment at this manufacturer of storage and shelving systems and tool chests in order to identify areas and methods to greatly reduce energy consumption. Energy costs are significant cost drivers in this highly price-sensitive industry. The company produces primarily for the industrial supply and military sectors.

BFTP Investment: \$28,050 | Total Project Budget: \$72,000

FUTURE POWER OF PA INC.

Moosic, Lackawanna County University Partner: Wilkes University

Analyze geological formations near the Good Spring IGCC facility to determine if it is a viable location for carbon dioxide utilization when gasifying coal. The project will assess the availability of brine water to combine with carbon dioxide to produce key raw materials. The project will also analyze the transportation of carbon dioxide to identified utilization sites. The 270-megawatt Integrated Gasification Combined Cycle power plant being proposed for Good Spring, Pa., has the ability to capture or repurpose its carbon dioxide by-product.

BFTP Investment: \$74,000 | Total Project Budget: \$306,000

GEORG FISCHER HARVEL, LLC

Easton, Northampton County

University Partner: Lehigh University's Enterprise Systems Center

Complete a sustainability analysis at Harvel with the goal of reducing energy consumption by at least 15%. Harvel is an international leader in the field of thermoplastic extrusions, primarily manufacturing PVC and CPVC piping. Energy costs are one of the top drivers of manufacturing expenses in extruded plastic production. A cost savings in this area is significant.

BFTP Investment: \$40,000 | Total Project Budget: \$225,284

HITACHI METALS AUTOMOTIVE COMPONENTS USA, LLC

Lawrenceville, Tioga County

University Partner: The Pennsylvania State University

Develop a collagen-based core binder system that will displace the current petroleum-based phenolic urethane and resin binders that are used by this manufacturer of ductile iron castings. The expected results are improved profitability, enhanced worker safety, reduced emissions, and decreased energy consumption and costs.

BFTP Investment: \$36,750 | Total Project Budget: \$191,509

K.C. LARSON INDUSTRIES, INC.

Williamsport, Lycoming County
University Partner: Bucknell University

Conduct translational research to determine the feasibility of manufacturing and marketing a new hybrid solar energy system that combines a solar photovoltaic panel and solar thermal heat transfer to generate both electricity and hot water. The company's product provides retrofit capability, cost advantages, and energy efficiencies in generating both electricity and hot water. The system will serve the residential, commercial, industrial, and institutional markets.

BFTP Investment: \$21,582 | Total Project Budget: \$44,752

ODYSSEY LAND DEVELOPMENT GROUP, LLC

Northampton, Northampton County

Complete development of a new strategic business plan for Odyssey and utilize student interns for the testing of a new energy-efficient photo reactor that recycles wastewater. The technology utilizes algae to consume carbon dioxide generated by the wastewater and converts it into biofuel. This also reduces the need for chemicals to treat the wastewater. Odyssey is developing a number of concepts for green and renewable energy production and has advanced some to the prototype stage and enjoyed early sales.

BFTP Investment: \$30,000 | Total Project Budget: \$60,000



OUADRANT EPP

Scranton, Lackawanna County

College Partner: Northampton Community College's Emerging Technology Applications Center

Complete assessment of a geothermal application that utilizes mine water as a method to reduce energy costs in Quadrant's manufacturing process. Quadrant produces engineered polymer products in sheets, rods, and tubes. The investment will allow the company to assess the feasibility of displacing the need for chilled process water using mechanical refrigeration with mine water as a coolant. Implementing this environmentally friendly process will enhance the company's profitability and competitiveness in its cost-sensitive market.

BFTP Investment: \$12,288 | Total Project Budget: \$38,076

SIMPLEX HOMES, INC.

Scranton, Lackawanna County

University Partner: Lehigh University's Enterprise Systems Center

Increase productivity and decrease production costs in order to enable sales growth in Simplex's line of energy-efficient modular homes. The company is a regional leader in high-quality modular construction and is positioning itself as an industry-leading builder of energy-efficient homes. Simplex is involved in building a prototype Net Zero home that is both environmentally conscientious and economically prudent for homeowners.

BFTP Investment: \$17,500 | Total Project Budget: \$111,700

SNAKE CREEK LASERS

Hallstead, Susquehanna County

Experimentally verify a new opto-thermal laser-resonator theory and advance current laser designs to improve output-power tunability and reproducibility over large ranges and reduce power laser source requirements by 50%. Snake Creek Lasers is a premier supplier of miniaturized lasers, laser modules, and high-power cryogenic lasers for defense and commercial applications. This investment will also help the company to identify secondary sources for critical components.

BFTP Investment: \$100,000 | Total Project Budget: \$250,000



SOLARPA

New Tripoli, Lehigh County

Complete development of a process for applying a new, proprietary coating, NanoCoat, that enhances photovoltaic effects and improves the efficiency of solar cells. SolarPA's single-layer anti-reflective coating improves optical absorption, thermal transport and emission, light concentration, manipulation, emissivity, reflectivity, and scattering, thereby maximizing the solar energy available for conversion into electricity. This results in increases in solar module efficiency up to 10% and reduced manufacturing costs by up to 10% as compared with current silicon-based technology. The reduced manufacturing costs translate to lower prices to the consumer, thereby enabling broader market adoption of solar energy.

BFTP Investment: \$58,000 | Total Project Budget: \$125,000

SUNSTREAM EARTH

Allentown, Lehigh County

Complete construction and testing of a prototype of a new type of solar-powered thermal generator for electricity production. This new technology will allow electricity to be produced on-site utilizing only ambient solar heat, without the need for connection to the power grid. The generator requires a much smaller footprint and is more efficient than conventional solar-generation technologies.

BFTP Investment: \$110,000 | Total Project Budget: \$240,000

TOBYHANNA ARMY DEPOT

Tobyhanna, Monroe County

University Partner: Lehigh University's Enterprise Systems Center

Tobyhanna repairs the circuit card assemblies (CCA) of various older technologies, including through-hole and surface-mount. With this investment, Tobyhanna will develop a new capability to test and repair all CCA technologies, including fine-pitch surface-mount and ball-grid array CCA within a new centralized CCA test and repair facility. This will significantly reduce energy costs on the Base and allow Tobyhanna to greatly expand its capacity and workload. Tobyhanna is the U.S. Defense Department's recognized leader in the areas of automated test equipment, systems integration, and downsizing of electronic systems. With almost 5,500 employees, Tobyhanna is the largest employer in the Pocono Northeast region.

BFTP Investment: \$30,000 | Total Project Budget: \$579,331

WARD MANUFACTURING

Blossburg, Tioga County

University Partner: The Pennsylvania State University

Design and install a core-making machine at this producer of malleable and cast-iron pipe and fittings. The machine will process low-volatile organic compound (VOC) binders as those binders are optimized. The equipment will facilitate an immediate 29% reduction in the energy needed to make cores using conventional binders. Energy savings will grow to as much as 50% as the low-VOC binders are fully adapted for use.

BFTP Investment: \$25,000 | Total Project Budget: \$125,000

CONGRATULATIONS TO BEN FRANKLIN

CLIENTS AND ALUMNI THAT WERE HONORED

WITH LEHIGH VALLEY BUSINESS' 2012

BUSINESS OF THE YEAR AWARDS:

EcoTech Marine – Winner, Business of the Year (26-100 employees)

XiGo Nanotools – Winner, Emerging Business of the Year

CEWA Technologies – Finalist, Emerging Business of the Year

Puritan Products – Finalist, Business of the Year (26-100 employees)

BUSINESS AND TECHNICAL ASSISTANCE INVESTMENTS

ACURLITE STRUCTURAL SKYLIGHTS, INC.

Berwick, Columbia County

Provide strategic planning assistance for this producer of custom skylights, curtain wall systems, architectural glass enclosures, and engineered point-supported glazing.

BIOSAMPLE SOLUTIONS LLC

Bethlehem, Northampton County

Provide International Organization for Standardization (ISO) Certification Assistance to this producer of DNA and RNA extraction kits for laboratory tests on blood and saliva.

CAMBRIAN BIO-TECHNOLOGIES, INC.

Jim Thorpe, Carbon County

Provide management support to this producer of agricultural nutrients and health and beauty products that utilize Ecklonia sea kelp extract as the principal ingredient.

HFIELD TECHNOLOGIES, INC.

Bethlehem, Northampton County

Provide assistance with patent filing to this designer and manufacturer of high-gain wireless network adapters for personal computers.

PIVITEC, LLC

Bethlehem, Northampton County

Support a website upgrade for this manufacturer of products that process and distribute audio signals and use mobile devices or PCs to control the audio mix in live performances.

XIGO NANOTOOLS

Bethlehem, Northampton County

Provide upgrades to the website and trade show materials of this producer of a shoeboxsize device that rapidly measures the surface area and size distribution of a sample of nanosized particles.



TECHNOLOGIES DEVELOPED BY BEN FRANKLIN CLIENTS AND ALUMNI

AANETCOM (acquired by PMC Sierra – Nasdaq:PMCS) leveraged proprietary technology to produce integrated circuits for very high-speed digital network applications, increasing performance and enabling next-generation services to accelerate the network transformation.

AUTHENTIX, INC. developed a wide array of nanoscale engineering and serialization solutions that help Fortune 500 companies and governments fight counterfeiting, smuggling, diversion, and adulteration, resulting in clients' recovery of \$11 billion to date. Authentix solutions are utilized in the oil and gas, pharmaceutical, spirits, tobacco, and consumer product industries, as well as in currency.

BIO MED SCIENCES, INC. developed Silon® technology, a "synthetic skin" product that blends the best properties of silicone and Teflon® in innovative products for wound care, scar management, and skin renewal.

CICLON SEMICONDUCTOR DEVICE CORPORATION (acquired

by Texas Instruments – Nasdaq:TXN) designs and markets highly efficient semiconductor devices that have been designed into hundreds of millions of products offered by world leaders in electronics, including smartphones, tablets, notebooks, and e-readers.

CYOPTICS INC. develops core optical technologies to enable bandwidth for high-speed networks. The company is a full-line global supplier and an industry leader in optical network components.

DEMCO AUTOMATION designs and manufactures automated equipment for assembling, testing, inspecting, and packaging small parts. The company's products are used in the medical device, pharmaceutical, biotech, electronics, semiconductor, telecommunications, automotive, commercial/industrial, and consumer products industries.

Demco's unique, customized automation capabilities streamline production, helping U.S. manufacturers to be more cost competitive in a global economy.

DIGESTIVE CARE, INC. produces Pertzye™, a patented, innovative bicarbonate-buffered pancrelipase composition to help cystic fibrosis (CF) and other patients more efficiently digest and utilize fats. In May 2012, the company received FDA approval for this medication. CF patients have seriously compromised lung function as well as problems with insufficient digestive enzymes to absorb nutrients from food. Left untreated, this digestive insufficiency can lead to severe malnutrition.

DISCOVERY MACHINE, INC. developed a patented methodology and an artificial intelligence software solution that allow clients to capture the expertise from an enterprise's pivotal performers and deploy that knowledge in job aids, training systems, simulations, and enterprise systems. Discovery Machine's methodology and software help organizations protect and utilize human capital, whose knowledge and experience are critical assets. The technology has been used successfully by the U.S. military, international organizations, and commercial companies.

DYNALENE INC. develops and manufactures industrial heat transfer fluids and coolants used in chemical, pharmaceutical, food, and electronics industries. Its newest fluids will be used in solar and thermal energy storage applications. These products exhibit higher heat tolerance, ranging up to 1,050°F, than existing coolants, increasing versatility and cost effectiveness in energy applications.

ECOTECH MARINE LLC's patented VorTech™ propeller pump allows the motor to be located outside of hobby reef aquariums through a magnetically coupled design, for better heat control and flow to protect aquatic life. Its new Radion™ LED lighting unit improves aquarium growth, coverage, and energy efficiency, and provides a customizable spectral output.

HEXCEL CORPORATION provides value-added machining, forming, and bonding of structural honeycomb assemblies for use in commercial aerospace, space and defense, wind energy, and industrial applications.

INFINERA CORPORATION designs and manufactures leading-edge optical network communications systems for the Internet and telecommunications networks.

Infinera's systems are the backbone of many of the world's largest Internet networks.

IQE, INC. produces molecular beam epitaxy epiwafers for a variety of applications, including mobile handsets and wireless infrastructure; Wi-Fi, GPS, and satellite communications; optical communications; CDs and DVDs; laser printers; medical products; barcodes; and high-efficiency LEDs. This year's new applications include solar cell wafers and security projects such as night-vision cameras and airport scanners.

MEGAPHASE, LLC developed GrooveTube®, a revolutionary, proprietary coaxial cable shielding system that was successfully utilized on the seven-year-long Hayabusa space probe, the first and only asteroid dust capture from deep space. GrooveTube is unique and ideal in high-reliability applications, including electronic equipment; even when flexed, GrooveTube retains its ability to operate at very high frequencies and maintains excellent mechanical and electrical properties.

MICRO INTERVENTIONAL DEVICES is developing
Permaseal™, a minimally invasive structural heart
repair product that closes myocardial punctures,
incisions, and otomies. This product will serve the
large market of surgical patients who would otherwise
be unable to undergo high-risk procedures.

NOBLE BIOMATERIALS, INC. developed and manufactures X-STATIC®, a proprietary silver-based antimicrobial technology used for applications requiring management of all forms of bacterial contamination, including advanced wound care, infection control, and odor elimination for medical, defense, industrial, and consumer markets.

OMEGA TOOLS, INC. provides vacuum excavation equipment and tools to the utility industry, allowing companies to locate and repair pipe leaks through an 18-inch vertical tunnel rather than a four-foot-by-four-foot trench. This small-hole technology reduces underground utility repair time by 75%.

ORASURE TECHNOLOGIES manufactures oral fluid diagnostic and collection devices to detect or diagnose critical medical conditions, including rapid tests for the detection of antibodies to HIV. In July 2012, OraSure received approval from the FDA for its OraQuick® In-Home HIV Test for sale directly to consumers in the over-the-counter (OTC) market – making it the first and only rapid OTC HIV test approved in the U.S.

PARTICLE SCIENCES is one of the world's leading contract drug development services companies with a comprehensive suite of services focused on the formulation and support of advanced drug delivery solutions. The company works with life sciences companies ranging from start-ups to over half of the top 10 pharmaceutical and biotech leaders.

RANTNETWORK, INC.'s Communilator™ is an advanced mobile phone language translation application that is capable of reading and translating foreign text, such as books, posters, and menus, in 46 languages through the mobile phone camera. The application can deliver translations in more than 3,000 language pairs, provide high-quality speech for translations in 21 languages, and facilitate bilingual communications through SMS and email.

SALADAX BIOMEDICAL INC. developed MyCare™ tests that help oncologists personalize chemotherapy drug dosing by providing information on drug concentration in their patients' blood. The optimum level of medication is critical to effectively treat the cancer while minimizing debilitating and potentially life-threatening side effects. Most recently, in conjunction with Ortho Clinical Diagnostics, Saladax has developed tests for the early detection of Alzheimer's disease.

SNAKE CREEK LASERS, LLC produces the world's smallest and most powerful miniature solid-state lasers for commercial and military applications. In addition, the company conducts research on new, enabling multi-laser materials and high-average/high-peak power cryogenic lasers.

VIDDLER INC. provides secure, branded video solutions for major Internet brands and small- to mid-sized companies worldwide. The company delivers complete video management, monetization, reliability, service, and visibility on all leading desktop, laptop, and mobile devices.

XIGO NANOTOOLS produces the Acorn Area™, a patented, tabletop-size device that rapidly measures the wetted surface area of minute nanoparticles using magnetic resonance imaging technology. The surface area of a nanoparticle directly relates to product performance in many industrial applications, including energy, electronics, ceramics, and pharmaceuticals.









COMPUTER AID, INC.

ALLENTOWN

Computer Aid, Inc. (CAI) is an Information Technology best practices leader in software (IT) functions, specializing in legacy systems outsourcing and consulting as well as application development and desktop services. This substantial Lehigh Valley employer was one of the initial start-ups to reside in the Ben Franklin Business Incubator, predecessor to Ben Franklin TechVentures, in 1984.

Now a global operation with offices in Europe, Asia, and Canada, CAI traces its beginning and initial success to assistance and mentorship within the Ben Franklin Incubator. "From the first day we entered the incubator, we gained advice and support that we needed and found invaluable for our start-up," said Tony Salvaggio, co-founder of CAI. "Ben Franklin provided us with affordable working space, shared office equipment, accounting support – and professional advice that we needed in our earliest days."

By the time CAI outgrew the Ben Franklin Incubator in 1986, the company employed 100 people. Today CAI employs 3,000 and is managing active engagements with more than 100 Fortune 1000 companies and government agencies around the world.



COMPUTER AID, INC.

CUSTOM PROCESSING SERVICES, INC.

ORASURE TECHNOLOGIES, INC.

STRONG POOLS AND SPAS

TMG HEALTH, INC.







Custom Processing Services (CPS) specializes in micronizing and grinding of materials into ultrafine particles. Customers worldwide use the processed materials in a wide range of products, including chemical powders, waxes, polymers, minerals, metals, fillers, and pigments.

> In 1998, the young company applied for seed funding from Ben Franklin. While the financial investments from Ben Franklin were crucial to the company's success, CPS also found great value in the connections that BFTP/NEP helped forge. Ben Franklin introduced CPS to the Greater Berks Development Fund, which helped the company access a number of federal and state investment programs to fund equipment and working capital needs. BFTP also connected the company with Penn State for analysis of its machinery, which validated its efficiency and provided an important endorsement.

Steadily increasing sales fueled the company's purchase of additional facilities in 2004 and 2007. In fall 2011, CPS opened a state-of-the-art facility to process food- and pharmaceutical-grade products, serving new markets in those industries. Starting with two founders, the company now employs more than 100 people and is at the forefront of the micronizing industry.









ORASURE TECHNOLOGIES, INC.

BETHLEHEM

OraSure Technologies is a leader in the development, manufacture, and distribution of oral fluid diagnostic and collection devices and other technologies designed to detect or diagnose critical medical conditions. Its innovative products include rapid tests for the detection of antibodies to HIV and HCV at the point-of-care and testing solutions for detecting various drugs of abuse.

> OraSure's founders initially formed SolarCare, Inc. to develop and market a sunscreen towelette. The start-up launched in the Ben Franklin Business Incubator, predecessor to Ben Franklin TechVentures. SolarCare successfully licensed its sunscreen towelette to Schering-Plough and quickly expanded into enzyme immunoassay tests for the insurance risk assessment market. With funding from Ben Franklin and an additional \$9.1 million in private investment, the company merged with Epitope, Inc., Beaverton, Ore., and became OraSure Technologies, Inc. (NASDAQ:OSUR) in 2000. All operations were moved to Bethlehem shortly thereafter.

OraSure's OraQuick® Rapid HIV Test uses oral fluid rather than blood to simplify and speed testing for HIV. The ability to test for this disease rapidly and non-invasively has been lauded as a key tool in the fight against HIV/AIDS. In July 2012, the company earned international acclaim by receiving U.S. FDA approval to sell its OraQuick HIV test directly to consumers in the over-thecounter (OTC) market, making it the first and only rapid OTC HIV test approved in the U.S. Beginning in 1987 with four founders, today OraSure employs 250 and has introduced products that have monumental positive impact on global health.

17 · CELEBRATING 30 YEARS CELEBRATING 30 YEARS · 18

STRONG POOLS AND SPAS

NORTHUMBERLAND

Strong Pools and Spas manufactures plastic pools, spas, saunas, and backyard ponds using rotational molding methods. Rotational molding is a cost-effective way to produce large, hollow plastic parts. In 1994, Strong was a start-up manufacturer of pet enclosures with one employee.

The company teamed with Ben Franklin repeatedly during its evolution for help with business operations, strategic planning and advice, technical support, plant layout planning, product and process improvements, and business planning. Ben Franklin invested in Strong over several years and linked it to two Ben Franklin Centers of Excellence for product and process improvements.

With extensive and patented technologies, Strong successfully adapted and re-invented itself over its history. The company continues to grow and now employs as many as 325 people, making it a significant regional employer in rural Northumberland County. Today, Strong Pools and Spas is one of the largest spa manufacturers in the world.



TMG HEALTH, INC.

SCRANTON

TMG Health provides turnkey business process outsourcing services and information systems to the Medicare, Medicaid, and health plan markets. Medicare is expected to continue to grow as more baby boomers enter retirement.

Supported by Ben Franklin as a start-up in 1998, the company effectively gained market share and emerged as a major Scranton employer with more than 1,100 on staff.

Ben Franklin provided seed capital and business support resources to TMG at a critical stage in the company's development, allowing it to design, test, and implement Health Insurance Portability and Accountability Act (HIPAA)-compliant software modules. The proprietary modules provide customers with electronic access to government-mandated HIPAA-compliant formats.

With explosive revenue and employment growth, TMG Health has generated significant income and jobs, and substantially boosted the information technology sector in northeastern Pennsylvania.



BEN FRANKLIN TECHVENTURES

Ben Franklin inaugurated one of the first business incubators in the nation in 1983 and managed and developed its award-winning incubator to be among the best. In 2007, BFTP/NEP relocated its original incubator across the street on Lehigh University's Mountaintop Campus to Ben Franklin TechVentures®, a former Bethlehem Steel laboratory.

Ben Franklin TechVentures helped address the region's increasing incubator and wet lab space needs by more than doubling the available wet lab space and more than tripling the office and dry laboratory space available at the original facility. Staff projected that the 35,000 square feet of rentable space would meet the region's requirements for about five years. Just 18 months after the grand opening, however, TechVentures was filled to near capacity.

Ben Franklin TechVentures², opened in October 2011, is a 47,000-square-foot addition to the original facility that increases the total facility size to 109,000 square feet. The architect was Spillman

Farmer Architects, and the construction manager was Allied Building Corporation. The addition is registered to be a certified Leadership Energy and Environmental Design (LEED) building. It has a photovoltaic solar array on its rooftop and

the latest energy-management and light-harvesting technologies from Coopersburg, Pa.-based Lutron Electronics integrated throughout the building.

Ben Franklin TechVentures will allow Ben Franklin to accommodate start-up companies that create as many as 200 sustainable, highly paid technology jobs and retain 100 more jobs in the first three years. Twenty-nine early-stage firms, employing 158 people, are currently located in Ben Franklin TechVentures. Since 1983, the Ben Franklin Business Incubator and TechVentures have graduated 55 successful companies, together grossing more than \$620 million in annual revenue and creating more than 5,400 jobs.

Ben Franklin TechVentures² won the Pennsylvania Economic Development Association Project of the Year Award in 2011, and received first-place national honors in the U.S. Environmental Protection Agency's 2011 ENERGY STAR Challenge Contest. In January 2012, the facility won the American Institute of Architects Eastern Pennsylvania 2011 Award of Merit and two Mid Atlantic Real Estate Journal Best of





2011 Awards. The National
Business Incubation Association
named Ben Franklin TechVentures the 2012 National

Incubator of the Year, a remarkable repeat of Ben Franklin's 2001 honor.

Most recently, the State Science and Technology Institute named TechVentures the winner of its Building Entrepreneurial Capacity 2012 national award. The Delaware Valley Green Building Council Lehigh Valley Branch also nominated the facility for its Sustainability Awards, Private Project.

Ben Franklin TechVentures² brings together entrepreneurs, Ben Franklin staff, and Lehigh faculty and students to accelerate the growth of the region's technology economy. The facility's new Innovation Institute meeting, learning, and conference facilities space will support clients and local partners. Ben Franklin TechVentures provides an entrepreneurial culture that supports early-stage firms at their most vulnerable times, fueling innovation and creating the jobs of the future.



It was a cross between "Shark Tank" and "American Idol" and with great networking and workshops. Three early-stage technology company entrepreneurs delivered investment pitches on Nov. 15, 2012, at Ben Franklin Venture Idol in Ben Franklin TechVentures. The ballots were tallied, and LifeAire Systems, LLC, Allentown, was named the winner, receiving a \$5,000 cash investment in the company as a prize.



LifeAire Systems develops and manufactures patented in-duct air purification equipment for environments in which air quality is critical. Recent research indicates

that 30 to 80% of hospital-acquired secondary infections among patients are caused by airborne pathogens. This technology addresses this problem, particularly in highly sensitive clinical settings such as in vitro fertilization, infection control, operating rooms, intensive care units, burn centers, and long-term care facilities.

Ben Franklin Venture Idol began in the afternoon with two optional workshops. "Getting to a Term Sheet" and "Negotiating a Term Sheet" were presented by panels of investment professionals and business leaders. Approximately 190 guests attended the sold-out Ben Franklin Venture Idol session, which included pre- and post-event executive networking receptions. The evening event began with a keynote address by Paul Martino, Bullpen Capital, entitled "The Lean Venture Capital Disruption."

Ben Franklin Venture Idol presenters included ArioTech Inc., LifeAire Systems, and Virtual Celebration, LLC. Led by emcee Chris McDemus, Lehigh University VENTURESeries, a panel of investors including Denny Boyle, Silicon Valley Bank; David Drahms, Osage Partners; Dr. Stephanie Olexa, Lehigh Valley Angel Investors; and Doug Petillo, Navigant Ventures, critiqued presentations, and the audience voted.

Ben Franklin Venture Idol illustrates a significant way in which early-stage entrepreneurs seek and obtain seed capital. The event was hosted by Fred Beste, Mid-Atlantic Venture Funds, and Chad Paul, Ben Franklin Technology Partners of Northeastern Pennsylvania.



I XCHANGE

On Tuesday, May 8, 2012, Ben Franklin hosted its annual i xchange at the Zoellner Arts Center on the campus of Lehigh University in Bethlehem. More than 500 technology entrepreneurs, business people, venture capitalists, economic developers, political leaders, and regional influencers from Ben Franklin's 21-county service area attended.

The i xchange combined the presentation of Ben Franklin's 18th annual Innovation Awards and executive networking sessions with a keynote address by **Leonard Brody**. Brody is a highly respected entrepreneur, venture capitalist, best-selling author, and twotime Emmy-nominated media visionary. He has helped raise millions of dollars for start-up companies, played a role in one of the largest Internet IPOs in history, and has participated in the building, financing, and/or sale of five companies.







Brody's presentation, entitled "This Monumental Shift - Exploring the Future of

Behavior, Technology, and Innovation," addressed how major technological and behavioral changes over the last 15 years have brought us to what is arguably the most reformative time in human history. Brody examined the evolution and division between our virtual and physical selves and how most businesses completely miss the virtual side. This is critical because we spend so much time interacting through our virtual selves, and people are frequently speaking the wrong language to the wrong people. The result: major and costly failures in marketing, human resources, and sales.

ENTREPRENEURIAL ACHIEVEMENT

Individuals who best exemplify the quintessential entrepreneurial spirit: a combination of ingenuity, hard work, and innovation that has resulted in the creation of a successful and growing business venture.



Patrick Clasen, Justin Lawyer, and Timothy Marks Founders and Principals, EcoTech Marine LLC, Bethlehem

Reef aquarium ownership is a sizeable and growing hobby. To properly care for expensive fish and corals within an aquarium ecosystem, adequate water circulation is required. Conventional pumps located within the tank are large and generate considerable heat, which can harm or kill sensitive aquarium inhabitants. EcoTech's patented VorTech™ propeller pump provides a gentle, controlled flow, which enhances the aquarium ecosystem. EcoTech also adapted the pump for use in the spa/pedicure market. EcoTech's new Radion™ LED lighting unit features 34 energy-efficient LEDs with a five-color spectrum for improving aquarium growth, wider coverage, better energy efficiency, and a customizable spectral output.

EcoTech's principals founded the company while still undergraduate students and built it into a multimillion-dollar enterprise with the help of several regional economic development partners. In addition to Ben Franklin, the company received support from



TO THE 2012 BEN FRANKLIN INNOVATION AWARDS WINNERS ...





the City of Bethlehem; Lehigh University through its Integrated Product Development Program, Small Business Development Center, and Enterprise Systems Center; Lehigh Valley Economic Development Corporation through its Southside Bethlehem Keystone Innovation Zone; the Manufacturers' Resource Center; and Northampton County. EcoTech has grown substantially over the past three years and is on track for more than \$12 million in revenue for 2012, almost doubling its 2011 sales. Beginning with three founders, the company now employs 30, plans to add 10 more full-time team members, and recently expanded into new space that quadruples its prevous area.

INCUBATOR GRADUATE

The company that has best demonstrated successful Ben Franklin business incubation. The business has been operated skillfully and confidently, meeting all challenges from the development of the product concept, execution of the business and technical plan, successful start-up and operation, to graduation from the incubator.



Net Driven, Scranton Elizabeth Clauss, Chief Operating Officer

Seventy-eight percent of consumers in the U.S. and Canada have access to the Internet. Yet three years ago, when Net Driven began marketing its service, most tire dealers and auto repair shops had nothing more than a static website, if they had any online presence at all. Despite the growing necessity for Internet marketing in this sector, developing an effective website and Internet marketing solution was too costly for most companies and outside of their skill set and expertise.

A graduate of the Scranton Enterprise Center, Net Driven has become the leading provider of websites and Internet marketing solutions to the automotive repair industry. In 2007, founders recognized that a growing number of consumers were shopping online for automotive repair, body work, parts, used cars, and tires, but the dealers did not have an effective way to market their products and services on the Internet. Net Driven responds to this niche market need by providing

an effective yet economical website and Internet marketing solution to independent automotive dealers. In just three years, this profitable company has increased revenue 800% and added 25 new employees.



PRODUCT INNOVATION

The company that best demonstrates the commercialization of a unique, innovative product that creatively and effectively meets a market need.



RantNetwork, Inc., Bloomsburg

Kenneth Volet, Chief Executive Officer, and Elisa Grandizio, Chief Administrative Officer

RantNetwork's Communilator™ is the most advanced mobile phone language translation application in the world. It is capable of recognizing and translating foreign text, including books, newspapers, and menus in 44 languages and dialects captured with the host's mobile phone camera. The application also delivers translations to the host's mobile phone in 3,000 language pairs, provides high-quality voice for translations in 21 foreign languages, offers voice recognition for translation to text, and seamlessly integrates with the mobile phone's SMS and email systems.

Ben Franklin has invested three times in RantNetwork and introduced the company to follow-on funding opportunities. Despite considerable initial setbacks, RantNetwork's tenacity has paid off with a contract with Etihad-Etisalat (Mobily), the second-largest telecom carrier in Saudi Arabia, to launch an Arabic version of the Communilator. The company recently launched its iPhone/iPad, Android, and Blackberry app versions of the product. Communilator combines state-of-the-art technology into a single comprehensive system that is not offered by any current competitor.

23 · CELEBRATING 30 YEARS CELEBRATING 30 YEARS · 24

INNOVATIVE APPLICATION OF TECHNOLOGY

The company that best demonstrates a "break the mold" approach to integrating new or existing technology into a manufacturing environment.



AMETEK Specialty Metal Products -Reading Alloys, Robesonia

Dr. Colin McCracken, Director of Product and Market Development

AMETEK Specialty Metal Products - Reading Alloys produces master and specialty alloys and high-purity powders used in the aerospace and medical industries. Recently, the company has focused on applications in metal powders for the medical industry. Its products can be spray coated onto implants, which are ultimately used in the human body to provide an ideal surface for bone ingrowth. This application will substantially enhance the recovery of patients receiving medical implants.

AMETEK Specialty Metal Products - Reading Alloys recently opened a new manufacturing facility to support the growth in the metal powder market. Ben Franklin, with Lehigh University, supported the firm with plant layout studies, materials reviews, and productivity improvements, as well as an introduction to a key resource to manage the new operation. With 140 current employees, up 12% from last year, this company is a significant Greater Reading employer that is well positioned for growth.

MANUFACTURING ACHIEVEMENT

The company that best exemplifies achievement in the manufacturing arena, showing a proven track record of success and an unbending commitment to achieving and maintaining excellence in manufacturing.



Appeeling Fruit, Inc., Reading

Steve Cygan, President and Owner

Tripling revenue and increasing staff from 10 to 100 people over the last two years would be a notable accomplishment at any time and is even more impressive during an economic recession. Appeeling Fruit is a producer of fresh-sliced apple products for both food service and retail clients. Ben Franklin invested in the company four times to improve production efficiency, support facility planning, and manage manufacturing capacity for sustained growth.

Appeeling employs a number of people from the City of Reading, which is particularly impactful because the city has experienced greater-thanaverage unemployment difficulties. The new facility adheres to Good Manufacturing Practices and FDA requirements and is a showcase plant for food processing. Appealing Fruit is a tremendously successful manufacturer and a valuable business asset to Greater Reading.

Lehigh University's Enterprise Systems Center and the

Greater Berks Development Fund partnered with Ben

Franklin to support Appeeling's improvements.

PARTNERSHIP

An individual whose strong vision, dedication, and commitment have helped the Ben Franklin Technology Partners accomplish its goals. This support demonstrates a sincere desire to see the region thrive.



Tom Garrity, Managing Partner

Compass Point Consulting, LLC, Bethlehem

As managing partner of Compass Point Consulting, Tom Garrity provides strategy, execution, and ownership transition services to middle-market family and closely held businesses. Compass Point's mission is simple: build high-performance companies that can run without the owner. Serving meritoriously on the Ben Franklin Solutions Network, Garrity has been a supporter of Ben Franklin clients for many years. He has provided pro bono business plan reviews since 2004 and recently completed his 11th review. He participated in three company "Tiger Sessions," during which clients are reviewed comprehensively and constructively criticized to their long-term benefit. He worked with seven Ben Franklin clients to develop their business plans. He taught two classes on strategy and sales for Ben Franklin clients and followed up with individual client sales coaching.

Ben Franklin engages Garrity frequently to provide feedback to in-house staff, assistance to clients, and support to entrepreneurs and businesspeople throughout the region. In addition, Garrity has served on Originate Ventures' Open Court, critiquing early-stage firms, and as a judge for Lehigh University students' Integrated Business and Engineering program presentations. Garrity's continuous valuable contributions model selfless service and demonstrate his heartfelt desire to give back to the regional economy.

BEN FRANKLIN TECHNOLOGY PARTNERS STATEWIDE RESULTS

The Pennsylvania Economy League, a nonpartisan research organization, conducted an independent, objective evaluation of the economic impact of the Ben Franklin program from 2002 through 2006. The results, released in 2009, demonstrated that the four statewide Ben Franklin Technology Partners (BFTP) have created significant economic impact for the Commonwealth of Pennsylvania.



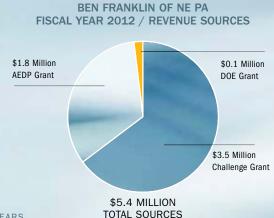
CLIENTS IN BEN FRANKLIN'S PORTFOLIO RAISED **MORE THAN \$350 MILLION OF ADDITIONAL** CASH INVESTMENT OVER THE LAST THREE YEARS WITH OUR HELP.

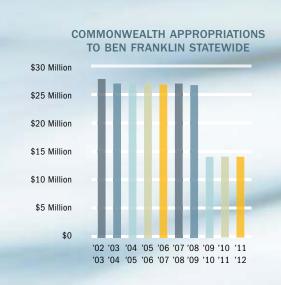
As a result of Ben Franklin's work with client

companies, Pennsylvania received more than \$517 million in additional state tax revenues. That represents \$3.50 of incremental tax revenue to Pennsylvania for every dollar of state investment in the program. BFTP boosted Pennsylvania's economy by \$9.3 billion (increase in gross state product) in that five-year period. Further, jobs created by Ben Franklin's clients pay 33% more

than the average nonfarm wage in Pennsylvania.

FINANCIAL INFORMATION





RESULTS

BEN FRANKLIN TECHNOLOGY PARTNERS OF NORTHEASTERN PENNSYLVANIA surveys its client companies on the economic impacts that are accomplished as a direct result of its investments. These figures are used to evaluate Ben Franklin's effectiveness. BFTP/NEP has achieved the following results:

	2011	CUMULATIVE
New Jobs Created	557	15,479
Existing Jobs Retained	101	21,459
New Companies Started	9	429
New Products and Processes Developed	110	1,127



BOARD OF DIRECTORS

Frederick J. Beste III Board Chairman CEO of the General Partners Mid-Atlantic Venture Funds

Ronald L. Bauer Retired Bosch Rexroth Corp.

Dean B. Girton
President
Girton Manufacturing Co., Inc.

Kenneth P. Guito Senior Director, Corporate Development sanofi pasteur

Jan S. Heller Executive Vice President, Finance St. Luke's University Health Network

Barbara T. Lampe Vice President Weyerbacher Brewing Company, Inc.

Peter Molinaro, Jr. Chief Executive Officer Adhezion Biomedical, LLC

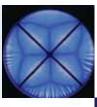
R. Chadwick Paul, Jr.
President and Chief
Executive Officer
Ben Franklin Technology Partners
of Northeastern Pennsylvania

James J. Peters Managing Partner Geisinger Ventures CEO MedMining

Margaret F. Plympton Finance Chair VP, Finance and Administration Lehigh University

Alan J. Snyder, Ph.D.
Vice President and Associate
Provost for Research and
Graduate Studies
Lehigh University

Thomas E. Stine *President Viddler, Inc.*





ADVISORY BOARDS
GREATER READING/BERKS
AND SCHUYLKILL REGION

The Honorable David Argall State Senator

Anthony Baran Chief Executive Officer Extol International, Inc.

Nicholas K. Bentley President American Polarizers, Inc.

Robert S. Carl, Jr. Executive Director Schuylkill Chamber of Commerce

Heather A. Chandler President Sealstrip Corporation

Andrea Chapdelaine Provost and Vice President, Academic Affairs Albright College

Forest Crigler Senior Vice President Fulton Bank

Michael Duddy Project Manager WORLD electronics

Christopher J. Fell Corporate Manager, Engineering and Alternative Fuels Interstate Resources

Walter F. Fullam Director of Continuing Education The Pennsylvania State University, Berks Campus

Ellen T. Horan
President and CEO
Greater Reading Chamber of
Commerce & Industry

Steve R. Horvat, CPA Partner, Small Business ParenteBeard LLC

Edward Kerins, Jr. CEO

Cambridge-Lee Industries, LLC

Richard A. Leiby, Jr. Vice President, Metals Operations East Penn Manufacturing Company

Edward J. McCann, Jr. Chief Operating Officer Berks County Workforce Investment Board

Colin G. McCracken Director of Product and Market Development Ametek, Inc. Thomas C. McKeon, AICP, CEcD Executive Director Berks County Industrial Development Authority

Peter Molinaro, Jr. Regional Advisory Board Chairman Chief Executive Officer Adhezion Biomedical, LLC

Michael A. Mullen President SFS Intec, Inc.

Douglas R. Myers Economic Development Analyst First Energy

Brian Noecker
Learning and Development
Coordinator
East Penn Manufacturing Company

Thomas Palamar Pottsville City Administrator Bureau of Economic and Community Development

Timothy D. Romig Executive Vice President Chief Lending Officer, Berks and Schuylkill Markets Customer USA Bank

The Honorable Judith L. Schwank State Senator

Kress Schwartz
Marketing and Communications
Manager
Quadrant Engineered
Plastics Products

Jon C. Scott President Berks Economic Partnership

Gregory J. Shemanski President Custom Processing Services, Inc.

Randy Simcox President RAS Packaging

Edward J. Swoyer, Jr.

President

Greater Berks

Development Fund

Anna D. Weitz, D.Ed.
President
Reading Area Community College

Frank J. Zukas
President
Schuylkill Economic
Development Corporation

LEHIGH VALLEY REGION

Donald M. Bernhard Manager of Economic Development and Community Affairs PPL Corporation

Ray C. Biery*
Managing Partner
ProtoCam

Peter Christian* President Enterprise Systems Partners, Inc.

Ed J. Coringrato President and CEO CyOptics, Inc.

The Honorable Charles W. Dent U.S. Congressman

Louis DiRenzo President and General Manager Puritan Products, Inc.

Thomas J. Garrity
President
Compass Point Consulting, LLC

Michael J. Gausling Managing Partner Originate Ventures

Ned D. Heindel, Ph.D. Professor of Chemistry Lehigh University

Bernard M. Lesavoy Partner Lesavoy Butz & Seitz LLC

Alvin T. Philpotts Director, Emerging Technology Applications Center Northampton Community College

Richard A. Principato* CEO Tower Products, Inc.

Michael S. Reffle* Vice President, Modules Infinera Corporation

Peter Reinke*
Vice President of Regional
Development
Lehigh Valley Economic
Development Corporation

Gregory L. Tonkay, Ph.D.* Associate Chair, Industrial Engineering Department Lehigh University

Scott Unger*
Executive Director
Allentown Economic
Development Corporation

Richard C. Warner, M.S.*

Professor of Business and
Entrepreneurial Studies
Lehigh Carbon Community

College

Kerry A. Wrobel Executive Vice President Lehigh Valley Industrial Park, Inc.

POCONO/NORTHEAST REGION

John L. Augustine Community Outreach Manager Marcellus Shale Coalition

The Honorable Elisabeth J. Baker State Senator

The Honorable John P. Blake State Senator

Jeffrey K. Box President/CEO Northeastern Pennsylvania Alliance

Penny S. Cannella President Penn's Northeast

Eric J. Esoda Executive Director NEPIRC

Kenneth P. Guito Senior Director, Corporate Development sanofi pasteur

Kristopher B. Jones Founder & CEO KBJ Capital Group

Deborah A. Kolsovsky Regional Manager, Wealth Management PNC Bank

Dr. Michael A. MacDowell President Misericordia University

The Honorable Phyllis Mundy State Representative

W. Kevin O'Donnell President CAN DO, Inc.

Raj Pawar Consultant Valmont Newmark

James J. Peters Regional Advisory Board Chairman General Partner Geisinger Ventures Mary Frances Postupack Chief Operating Officer, Center for Research and Economic Development East Stroudsburg University

Darlene J. Robbins
President
Northeast Pennsylvania
Manufacturers & Employers
Association

Julie Schumacher Cohen Director of Community Relations University of Scranton

Robert C. Sprung Principal Brook Venture Partners

Michael Sullivan
Executive Director
Pike County Economic
Development Authority

Donald A. Webster Consultant

Mary Beth Wood Executive Director Wayne County Economic Development

UPPER SUSQUEHANNA REGION

Scott Dawson
President
Core Business Solutions, Inc.

Dean B. Girton
Regional Advisory Board
Chairman
President
Girton Manufacturing
Company, Inc.

The Honorable John R. Gordner State Senator

Robert Hook Regional Advisory Board Vice Chairman

Robert A. Hormell Consultant

Dr. Alicia J. Jackson Dean of Sigmund Weis School of Business Susquehanna University

Dr. Robert P. Marande Dean, College of Science and Technology Bloomsburg University

Larry L. Michael Associate Dean, Workforce Development and Continuing Education Pennsylvania College of Technology

Donna Palombo Chief Financial Officer Acurlite Structural Skylights, Inc.

Rachel Smith
Executive Director
Workforce Development
Corporation of Central PA

Kristof A. Swartzentruber, PE Mechanical Engineer Metso Minerals Industries, Inc.

Anthony Ventello Executive Director Central Bradford Progress Authority

The Honorable Gene Yaw State Senator

* Lehigh Valley Region Manufacturing Advisory Board Member

STAFF

R. Chadwick Paul, Jr. | President and Chief Executive Officer

Diane I. Albert
Database Coordinator

Matthew J. Aucker Facilities Assistant Bloomsburg Regional Technology Center

Aaron B. Balch Chief Information Officer

Wayne K. Barz Manager Entrepreneurial Services

Louise A. Brong Client Services Specialist

Charles N. Diefenderfer Senior Project and Facilities Manager

Laura S. Eppler
Director of Marketing

Connie R. Faylor Regional Manager Greater Reading/Berks and Schuylkill Lori F. Hertzog Administrative Assistant

Craig A. Hill Client Services Specialist

Candace B. Hoffman Program Evaluator

Joseph M. Lane Vice President Enterprise Development

Laura L. Lawrence

Project Manager
Evelyn Leon

Administrative Assistant

Kerry M. McDonald Senior Maintenance Coordinator Ben Franklin TechVentures

James Z. Mickey Systems Administrator

Kathy Ann B. Minnich Chief Financial Officer

Kenneth G. Okrepkie Regional Manager Pocono Northeast

Julianne Riedy Administrative Assistant

Larry A. Seibert Regional Manager Upper Susquehanna

Janet L. Stainbrook Director Government and Community Relations

Linda A. Stark Accounting Administrator

Bonnie K. Stohl Accounting Assistant

Robert S. Thomson Regional Manager Lehigh Valley

BEN FRANKLIN TECHNOLOGY PARTNERS of NORTHEASTERN PENNSYLVANIA FEATURED IN FALL 2012 LEHIGH UNIVERSITY ALUMNI BULLETIN



BEN FRANKLIN
TECHNOLOGY PARTNERS
of NORTHEASTERN
PENNSYLVANIA

HEADQUARTERS

Ben Franklin TechVentures 116 Research Drive, Bethlehem, PA 18015-4731 610.758.5200 800.445.9515 info@nep.benfranklin.org

Wayne Barz, Manager, Entrepreneurial Services 116 Research Drive, Bethlehem, PA 18015-4731 610.758.5421 wbarz@nep.benfranklin.org

REGIONAL OFFICES

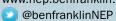
Connie Faylor, Regional Manager
Greater Reading/Berks and Schuylkill
610.376.6766 cfaylor@nep.benfranklin.org

Robert Thomson, Regional Manager Lehigh Valley 610.758.5262 rthomson@nep.benfranklin.org

Kenneth Okrepkie, Regional Manager Pocono/Northeast 610.849.9090 kokrepkie@nep.benfranklin.org

Larry Seibert, Regional Manager
Upper Susquehanna
610.849.9091 | Iseibert@nep.benfranklin.org

www.nep.benfranklin.org



🚺 Ben Franklin Technology Partners of Northeastern PA

Published by the Ben Franklin Technology Partners of Northeastern Pennsylvania © 2012

Director of Marketing: Laura S. Eppler Design: Gipson Studio LLC, Orefield, Pa. Printer: Christmas City Printing, Bethlehem, Pa. CEO Photography: John Sterling Ruth Studio

Ben Franklin TechVentures Photography: © 2011 Halkin Photography LLC

i xchange Photography: Hub Willson Photography

