



Software, IT, and R&D in the Bluegrass April 2020

Lexington is a thriving area for research and development. With a highly educated workforce, a state-leading culture of innovation, and infrastructure to support entrepreneurs, Lexington has the assets to support R&D in any field. Home to the world headquarters of Lexmark, Tempur-Sealy, Big Ass Fans, and Valvoline and industry giants Conduent, IBM, OpenText, and Alltech, large corporations find Lexington to be their ideal destination. Lexington consistently receives high praise for its capacity for innovation and entrepreneurship such as #4 Top Potential Tech Growth Centers by the *Brookings Institution* (2019), Top 10 Best Cities for Entrepreneurs by *The Penny Hoarder* (2018), #18 Best of the Midwest: Startup Cities by *Midwest Startups* (2018), #14 City with the Fastest Growing Rate of New Startups by *FiveThirtyEight* (2016), and #4 Best Entrepreneurial Activity by the University of Nebraska-Lincoln (2015)¹. Furthermore, according to StatsAmerica's Innovation Index 2.0, the Lexington-Fayette Metro is the state-leader in innovation recording the highest score for overall innovation capacity with Fayette County itself in the top 10% of U.S. counties².

Many of Lexington's companies are not traditional laboratory research and development operations, but, nevertheless, they possess an innovative core that produces cutting edge advancements. This is especially true of the city's smaller companies and startups that do not categorize resources as R&D but use innovative processes to create value from ideas and become successful enterprises. Every year, an average of **269 patents** are issued to Lexington inventors, with a total of **4,040 patents since 2005**.³ The University of Kentucky (UK), located in Lexington, produces cutting edge R&D and has been a valuable partner to many businesses and entrepreneurs.

Software & IT

IBM operates branch offices in Lexington, employing 200 people at IBM Global Services. In 1991, IBM created a spin-off, Lexmark, a major provider of printing products, imaging, software, solutions, and services. Lexmark is headquartered in Lexington and has 1,600 employees in the city conducting R&D and managing the global

¹ "Bluegrass Rankings" *Commerce Lexington Economic Development*, Commerce Lexington Inc.

² "Innovation 2.0." *StatsAmerica*, Indiana Business Research Center.

³ *PatentsView*, United States Patent and Trademark Office. Data is through 2019 for Lexington, KY.

enterprise. Lexmark leads all Lexington companies in patents with 2,754 patents awarded⁴. Later that year, Lexmark was acquired by a consortium of investors including PAG Asia Capital and Apex Technology Co., Ltd., a Chinese-owned manufacturer of inkjets and laser cartridge components. Since the acquisition, Lexmark has been able to expand their market in China and greater Asia.

Funai Electric Company, Ltd. acquired Lexmark's inkjet technology assets, over 1,500 patents, and a manufacturing facility in 2013 and opened a subsidiary, Funai Lexington Technology Corporation. The new company employs 35 people and conducts research and development in inkjet and microfluidic technologies. Funai recently completed a new state-of-the-art facility that opened in 2018.



Groundbreaking ceremony for Funai Lexington Technology Corporation in 2017. Photo: Brett Construction.

Although not headquartered in Lexington, Conduent is a major employer in Lexington. In 2016, Xerox announced a split into two companies: a company that retained the Xerox name and Conduent. Conduent is a leader in business process and IT outsourcing across a variety of industries and the public sector. Thousands of companies rely on Conduent to help improve their processes, manage client operations, and focus on their core business. Conduent is also an expert in IT solutions for all levels of government. Currently, Conduent employs 2,500 people in Lexington and is one of the region's largest employers.



[Expleo Group](#) is a leading software testing and consultant company with over 15,000 employees across 30 countries. Expleo provides end-to-end, integrated engineering, quality services, and management consulting. In 2015, Galmont Consulting was purchased by Software Quality Systems (SQS), a global specialist

supplier of software quality systems, for \$22 million⁵. By acquiring Galmont, SQS diversified and extended its geographic operations, expanded its revenue base, and created new business opportunities through Galmont's established business relationships. In 2018, Assystems Technologies acquired SQS. This acquisition was later joined by management consultants Moorhouse and Stirling Dynamics. In 2019, Assystems rebranded to Expleo Group⁶. As with many mergers and acquisitions of Lexington companies, Expleo Group kept operations in Lexington. This recommitment to the region is proof that Lexington is a profitable location for software and IT and that Lexington's workforce can provide the innovative skills that these companies need to thrive.

Lexington also has a unique group of software startups and entrepreneurial companies. To help foster innovation and help entrepreneurs succeed, the University of Kentucky opened the Advanced Science & Technology Commercialization Center (ASTeCC). ASTeCC is a premier business incubator that provides lab space for startups and connects researchers and entrepreneurs to economic development activities such as commercializing and

⁴ *PatentsView*, United States Patent and Trademark Office. Current as of April 27, 2020.

⁵ "Acquisition of Galmont Consulting LLC." SQS. SQS USA Inc.. Aug. 2015. Web. 4 Dec. 2015.

⁶ "Our Story." About Us. Expleo Group. Web. 29 Apr. 2020. <https://expleogroup.com/about-us/our-story/>

licensing. Smaller, independent organizations have joined ASTeCC and have successfully engaged the growing software and technology community in Lexington. In fact, [63 new companies](#) have “graduated” from ASTeCC.

BBDP

Bluegrass Business Development Partnership

To further the progress of assisting entrepreneurs, Commerce Lexington Inc., the University of Kentucky, and the City of Lexington formed the Bluegrass Business Development Partnership (BBDP), funded by the City of Lexington. The BBDP’s goal is to be a one-stop, super-service provider, linking entrepreneurs with the information they need to be successful, including assistance in financial planning, business plans, funding sources, real estate, and service providers.

Another successful partnership is SPARK, which is managed by Commerce Lexington Inc. and UK’s Office of Technology Commercialization (OTC). SPARK connects great ideas, investors, and business resources to promote a vibrant, entrepreneurial ecosystem in Lexington. In 2019, SPARK and its companies created **260 new jobs and raised \$74.4 million of investment**. In total, these companies employ 992 people and report an average salary of \$71,700⁷. They represent industry sectors in biotechnology, advanced manufacturing, e-commerce, independent game development, software development and IT, energy technologies, and business services—further demonstrating Lexington’s position as a leading location for high-growth, high-wage, technology-based jobs.



WHERE BUSINESS IGNITES

In 2018, the Kentucky Cabinet for Economic Development (CED) and KY Innovation, the entrepreneurship arm of the CED, announced the [Regional Innovation for Startups and Entrepreneurs \(RISE\)](#) initiative. The initiative represents the birth of a new entrepreneur-led strategy for enhancing entrepreneurial ecosystems across the



state. RISE restructures previous state, entrepreneurship programs by clustering resources regionally and consolidates expert mentoring, business development, and angel/venture capital investment resources. The Lexington division of RISE is led by Awesome Inc, Lexington’s local accelerator, and includes \$750,000 in funding for entrepreneurial programs. This increased investment in Kentucky’s innovators and their communities provided by the RISE initiative clearly demonstrates a commitment to sustaining and increasing the economic impacts of entrepreneurs in Central Kentucky and across the Bluegrass.

⁷ “SPARK recognizes entrepreneurial community for creating 260 jobs and raising \$74.4 million in investment.” *Press Release Archive*. Commerce Lexington Economic Development, Nov. 2019. Web. 29 Apr. 2020. <https://locateinlexington.com/about-us/media-center/>

One of the first outcomes produced by the Lexington RISE partnership was [Startup Lex](#). Inspired by Startup Atlanta and StartupCincy, Startup Lex “is an entrepreneur focused community made for encouraging growth, education, and giving first.” Moderated and curated by a partnership between local, support organizations, including Commerce Lexington, the organization aggregates and promotes entrepreneurial events, jobs, and other opportunities through its calendar, newsletter, and Slack channel. Perhaps the most valuable resource provided by is the Startup Lex Guidebook. The guidebook acts as an on-ramp and roadmap for Lexington startups by clearly outlining local resources for funding, education, protecting a good idea, and more⁸.



KY Innovation funds the Kentucky Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) State Matching Funds Program to help create, recruit, and retain small businesses, including high-tech and biotech. The SBIR/STTR Matching Funds Program is an innovative initiative that provides matching funds up to \$150,000 for Phase I and \$500,000 for Phase II for Kentucky businesses. Since 2006,⁹ the Commonwealth’s matching funds have contributed to 22 licensing agreements, 208 patents, the relocation of 42 companies, and \$46.3 million in federal grants awarded from six agencies¹⁰. These matching funds coupled with low business costs and low costs of living across the state provide the businesses with an increased purchasing power for every dollar

a company receives from an SBIR/STTR grant. In 2019, Lexington was ranked the [#6 City with the Lowest Startup Costs by SmartAsset.com](#). This program has attracted many research-driven businesses to the region, further supported by access to Lexington’s highly educated workforce.



Lexington has been extremely successful in recruiting SBIR/STTR companies from other states. Over 40 companies have relocated to Kentucky; 28 of which have located in Lexington. These companies have been a tremendous asset to our technology and R&D sector by adding over \$21 million in federal grants and research to the community, as well as receiving over \$13 million in state, match funds. The companies employ nearly **130 employees with an average wage of over \$65,000 a year**¹¹. Many of the founders and researchers of these companies have invested in Lexington not only through employment and research funds but through investment in real estate, angel investing, and time devoted to our economic development efforts.

One Lexington SBIR success story is [Engi-Mat Co.](#), a research and manufacturing company focused on nano materials engineering. The company was originally founded in Georgia in 1994 as nGimat Co. Engi-Mat chose to expand their operations to Lexington in 2010 largely due to the SBIR/STTR Matching Funds Program and the



⁸ “Creating a Community for Entrepreneurs.” Startup Lex. Startup Lexington. Web. 30 Apr. 2020. <https://www.startuplexington.org/>

⁹ April 30, 2020.

¹⁰ “SBIR/STTR Funding and Match.” KY Innovation. The Kentucky Cabinet for Economic Development. Web. 30 Apr. 2020.

<https://www.kyinnovation.com/sbir/>

¹¹ Commerce Lexington Economic Development figures.

access to the city's highly educated workforce. The business received over \$1.3 million in matched funds in addition to their over \$2.6 million in federal awards because of their decision to locate in Kentucky. After establishing operations in Kentucky, in 2019, the company officially made Lexington their headquarters¹². Since then, Engi-Mat has had continued success including recognition by *R&D World's R&D 100*¹³.

The University of Kentucky Contributions to Lexington's R&D

The University of Kentucky is the heartbeat of innovation and technology in Lexington, offering many opportunities for collaboration between researchers and industry. Since 2011, **UK has invested \$2.3 billion in residential, community, academic, research, healthcare, and athletics facilities**¹⁴. This investment demonstrates the university's commitment to empowering both students and faculty to succeed in their individual and collaborative pursuits. To date, UK's patent portfolio includes 618 worldwide patent assets, many from interdisciplinary and industry collaboration¹⁵. The interdisciplinary advantage UK provides is clearly indicated by their status as one of only eight universities in the country with robust programs in agriculture, medicine, engineering, and pharmacy located on one contiguous campus.



Aerial of the University of Kentucky Coldstream Research Campus.

[UK's Coldstream Research Campus](#) is a premier business location designed to recruit high-tech and biotech companies and to house university centers and startups. Coldstream is home to over 50 companies in biotech, pharmaceutical, equine health, and other industries employing over 2,250 employees¹⁶. Some of Coldstream's current tenants include the headquarters or regional facilities of Tempur Sealy, Piramal Pharma, OpenText, Komatsu, A&W Restaurants, and Henry Schein Animal Health. Additionally, the campus contains 50-acres of development ready land with utilities, roads, redundant electrical power, and high-speed data connections.

¹² "About Engi-Mat." Engi-Mat Nano Engineered Materials. Engi-Mat Co. Web. 30 Apr. 2020. <https://engi-mat.com/about-engi-mat/>

¹³ "Engi-Mat's Marvite Materials Earn R&D 100 Award." *Press Release Archive*. Commerce Lexington Economic Development, Oct. 2019. Web. 30 Apr. 2020. <https://locateinlexington.com/about-us/media-center/>

¹⁴ "Why Campus Modernization Matters: Building a Campus, Building a Commonwealth." *UKNow*. University of Kentucky, 11 Dec. 2018. Web. 30 Apr. 2020. <https://uknow.uky.edu/campus-news/why-campus-modernization-matters-building-campus-building-commonwealth>

¹⁵ "Stats and Rankings." *University of Kentucky Research*. University of Kentucky, Dec. 2015. Web. 04 Feb. 2019. <https://www.research.uky.edu/research-data/stats-rankings>

¹⁶ "Coldstream Quick Facts." *Coldstream Research Campus*. University of Kentucky, n.d. Web. 04 Feb. 2019. <http://www.uky.edu/coldstream/coldstream-quick-facts>

The University of Kentucky's complex and extensive healthcare network includes academics, research, and patient care, resulting in large amounts of data in various formats. In 2015, the University launched the [Institute for Biomedical Informatics \(IBI\)](#) to consolidate multidisciplinary data from across the academic and medical systems. The IBI created an innovative informatics infrastructure to improve patient care, education, and research, and it brings together a diverse set of expertise from many colleges within the University, including faculty specializing in molecular and cellular biochemistry, cancer research, pharmacy, computer science, biostatistics, communication, and pathology.

The [UK Computer Science Industry Partners Association](#) (IPA) connects the Department of Computer Science with the private sector and stakeholders in mutual collaboration and benefit. Members of the association are invited to participate in exclusive IPA-only events. The IPA offers industry partners access to faculty expertise, opportunities for collaborative research projects, and a pool of talented students entering the workforce. Some of the major industry partners include OpenText, Dean Dorton, TrinSoft, Deloitte, Lexmark, and Intel.

The [UK College of Pharmacy](#) is another asset to Lexington R&D. Ranked the [#6 Best Pharmacy Program in the nation by U.S. News & World Report \(2020\)](#), the cutting-edge medical research on disease and drug development performed by the grad students, postdoctoral scholars, and faculty has benefitted the area and the nation. Graduates enrich the workforce and faculty members have created 25 startup companies since 1989. The facility itself is the largest pharmacy education building in the world, and UK pharmacy research faculty ranks fourth out of 354 institutions in scholarly activity¹⁷.

Life Sciences and Biotech R&D

The life sciences industry represents a wide range of complex markets and is a large part of R&D in Lexington. In fact, most of the R&D expenditures at the University of Kentucky are devoted to life sciences¹⁸. Lexington provides an environment where any market niche of the life sciences industry can grow, and biotechnology is particularly prominent in Lexington, with over 100 biotech companies.



The Summit Biosciences team outside of their facility at the UK Coldstream Research Campus. Photo: Summit Biosciences

Alltech, a global leader and innovator in agtech and biotech, has two locations in the Bluegrass Region. Alltech's mission is to discover and deliver solutions aimed at the sustainable nutrition of plants, animals, and people. The company has its global headquarters located just outside of Lexington in Jessamine County, KY. In 1999, Alltech established the Alltech Lexington Brewing & Distilling Co. in downtown Lexington, which produces numerous award-winning beers and spirits such as Kentucky Bourbon Barrel Ale. Founded in 1980 by Irish scientist Dr. Pearse

¹⁷ "Research, Innovation, and Discovery." *University of Kentucky College of Pharmacy*. University of Kentucky. n.d. Web. 30 Apr. 2020.

<https://pharmacy.uky.edu/research-innovation-and-discovery>

¹⁸ "Stats and Rankings." *University of Kentucky Research*. University of Kentucky, Dec. 2015. Web. 04 Feb. 2019. <https://www.research.uky.edu/research-data/stats-rankings>

Lyons with only \$10,000, Alltech has maintained their commitment to driving innovation and entrepreneurship.

In 2009, Summit Biosciences Inc. chose to locate their operations in Lexington with an initial capital investment of \$5,055,000. In 2015, the company expanded its capacity with another investment of \$1,902,000. In 2020, Summit expanded their operations again with a capital investment of over \$20 million and the creation of 78 full-time jobs¹⁹. Today, Summit Biosciences is a fast-growing leader in the field of intranasal pharmaceuticals. The business specializes in developing, manufacturing, and commercializing generic and innovative nasal spray pharmaceuticals. Summit Biosciences is the only company in the United States focused on nasal spray development and manufacturing as its core competency and produces at their Current Good Manufacturing Practice (cGMP) certified manufacturing facility in UK's Coldstream Research Campus.

Research and Development in Other Industries

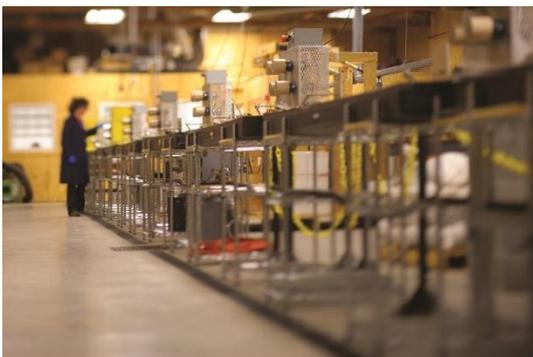
Many companies in Lexington and the Bluegrass Region are engaged in research and development in various industries, such as advanced manufacturing, automotive, aerospace, and animal and equine sciences. One of Lexington's largest employers is Valvoline, a leading provider of motor oil and automotive lubricants. Valvoline currently employs 650 people in Lexington and has constructed a 162,400 square foot facility as the new global headquarters for Valvoline. The facility has lab space dedicated to R&D on new synthetic oils that employs approximately 40 people. Valvoline is a testimony to the fact that Lexington has the human capital necessary to support R&D in any industry.



In February 2019, the E D Bullard Company expanded their operations from nearby Cynthiana to Lexington by opening a R&D facility called the Bullard Center. Bullard is a global leader in manufacturing personal protective equipment such as thermal imagers, hard hats, firefighter and rescue helmets, supplied air respirators, powered air-purifying respirators, and air quality equipment. The fifth-generation family-owned business, originally founded in San Francisco, created the "Hard Boiled" hat in 1919, also known today as the hard hat. In 1991, Bullard's headquarters relocated to Cynthiana Kentucky. Bullard's decision to build the Bullard Center in Lexington was largely motivated by a desire to greater utilize the talent in the city. The facility will be used by the company's marketing and product development teams to develop future Bullard products and services.



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Center for Applied Energy Research (CAER), courtesy of Dave Melanson.

The [UK Center for Applied Energy Research \(CAER\)](#) is a globally-recognized applied research and development center with an aim to enhance the usage of both Kentucky and the nation's energy resources for the benefit of the environment and people. CAER operates 10 specialized research facilities including an algae greenhouse to produce biofuels and bioproducts from algae while exploring optimal growth conditions, an engineered fuels lab that uses low-value or waste from coal to create high-value fuel briquettes and pellets, a fuels-processing development facility used to create fuels from petroleum substitutes, and a renewable

¹⁹ Commerce Lexington Economic Development figures.

fuels lab focused on establishing improved process for biomass use and, thereby, furthering the growing biofuels industry of Kentucky²⁰.

Approximately 80 professional scientists, engineers, and staff make up CAER and work closely with faculty and students. Like many research centers at the University of Kentucky, CAER not only produces world class research and technologies but is also actively engaged in local industry and education. The group's researchers have partnered with businesses including Cargill, Webasto, Minova, Duke Energy, and International Paper and have offered hands-on, research experiences across all levels of education. CAER prioritizes industry collaboration and investment into the next generation of STEM students in Kentucky.



One of Lexington's unique assets for the advanced manufacturing industry is [Secat, Inc.](#) Secat is a metallurgical research laboratory specializing in aluminum product and process technologies. Their location in UK's Coldstream Research Campus grants them access to resources at the University of Kentucky and proximity to clients in their target markets. The company's R&D services support numerous aluminum product industries including automotive, marine, aerospace, construction, and electrical. Secat's suite of services supports local industry through materials testing, failure analysis, alloy development, and process enhancements in forging and casting, with much more as well. The Bluegrass Region's concentration of advanced manufacturers provides Secat access to clients and, in turn, their R&D activities draw even more aluminum industry players into the region.

Regional Innovation Activity

Lexington is part of the Golden Triangle Region which includes the metropolitan areas of Lexington, Louisville, and Northern Kentucky/Cincinnati. Much like North Carolina's Research Triangle, the Golden Triangle provides access to an educated workforce through multiple, research universities and proximity to a variety of industry clusters including healthcare, automotive, logistics, and aerospace. Both Louisville and Cincinnati are approximately an hour's drive from Lexington and offer additional workforce, talent, and innovation to support Lexington's research-driven companies.



The University of Louisville is a major research university with over 22,600 students enrolled in all levels of academia in 12 colleges²¹. The University supports interdisciplinary research collaboration among its faculty and has established 18 research centers to generate new knowledge and increase productivity²². The University of Cincinnati (UC) has an active research focus and received 949 sponsored awards totaling over \$205 million in FY2019²³. Additionally, the university has established the [University of Cincinnati Research Institute \(UCRI\)](#) as a resource to encourage and facilitate collaboration between industry and the institution.

²⁰ "Our Facilities." *University of Kentucky Center for Applied Energy Research*. University of Kentucky, n.d. Web. 30 Apr. 2020. <https://caer.uky.edu/labs/>

²¹ "Enrollment." *Data Center*. Kentucky Council on Postsecondary Education, 2019-20. Web. 30 Apr. 2020. <https://cpe.ky.gov/data/enrollment.html>

²² "Research Centers and Institutes." *Research and Innovation*. University of Louisville, n.d. Web. 30 Apr. 2020. <https://louisville.edu/research/centers-institutes-2>

²³ "Fact & Figures." *Office of Research*. University of Cincinnati, n.d. Web. 5 May 2020. <https://research.uc.edu/facts-figures>

Louisville and Cincinnati have attracted many R&D facilities and software companies. In 2016, the home appliance manufacturer Midea America established its first North American R&D center in Louisville, the Midea America Research Center (MARC). MARC's \$10 million facility contains enough space to employ approximately 60 people and includes lab facilities, testing equipment, and engineering. Other notable companies with locations in Louisville include Computershare, Appriss, Genentech, and Amgen. Computershare and Appriss develop software and data-drive solutions, while Genentech and Amgen are biotechnology development companies. Several Fortune 500 companies have located software and IT operations in the Cincinnati region, including Fidelity Investments, Procter & Gamble, and Citigroup.

In 2019, the Microsoft Corporation announced a partnership with Louisville to establish their regional artificial intelligence hub. The operation will contain Microsoft's Future of Work initiative which focuses on artificial intelligence, IoT, and data science. The initiative will help create a workforce equipped for the jobs of the future in Central Kentucky²⁴. Microsoft's Louisville location creates even more talent for employers to utilize in the Golden Triangle.



Local Attributes

Lexington's high quality of life consistently earns the city recognition from a variety of publications, such as #7 Best Large Real-Estate Market by *WalletHub* (2019) and #2 Most Affordable Cities to Live and Work by *Businessstudent.com* (2018). Lexington excels in affordable housing, quality public schools, high standard of living, and access to exceptional education and healthcare. Furthermore, the city's central location and excellent transportation system puts Lexington within a 600-mile radius of two-thirds of the country's population, personal income, and manufacturing facilities, meaning that the Bluegrass is within a day's drive of more than half of the U.S. market.

One of Lexington's greatest assets is its motivated, educated, and cutting-edge workforce. According to 2018 Census data, **42.9% of Lexington's population over age 25 has at least a bachelor's degree and 18.6% have an advanced degree**. Compared to other cities with populations of more than 300,000 people, **Lexington ranks as the #12 most highly educated city in the U.S. for bachelor's degree attainment and ranks #11 for advanced degree attainment**. Equally impressive, 59.6% of Lexington residents age 18 to 24 are enrolled in college or graduate school, ranking the city #4 in college enrollment rates²⁵. Lexington has also been noted as the #7 Best City for New College Grads by *SmartAsset.com* (2019) and the #2 Best Midsized City for New Grads by *Onlinedegrees.com* (2018).

These impressive statistics show the success of the region's colleges and universities. There are 10 institutions of higher education within 40 miles of Lexington enrolling nearly 70,000 students and awarding over 18,000 degrees and credentials annually. This includes the state's flagship university, the University of Kentucky, which is in Lexington. Furthermore, multiple community and technical colleges in the region bolster Lexington's educated workforce.

²⁴ "It's official: Microsoft's regional artificial intelligence hub has a home in Louisville." *Ben Tobin*. Courier Journal, 13 Nov. 2019. Web. 5 May 2020. <https://www.courier-journal.com/story/money/companies/2019/11/13/microlouisville-announces-location-microsoft-regional-ai-hub/4177932002/>
²⁵ Commerce Lexington calculations using U.S. Census Bureau American Community Survey 5-Year Estimates for 2018.

With an educated workforce, access to top colleges and universities, a strong commitment to R&D at the University of Kentucky, the ASTeCC Incubator, Coldstream Research Campus, and the backing of the Lexington business community, research and development will continue to thrive in Lexington and the Bluegrass Region.

Appendix A – Select Software & IT Companies in the Bluegrass

Apax Software | apaxsoftware.com
ArchVision Inc. | archvision.com
Avail | avail.co
Awesome Inc. U | awesomeinc.org
Bastian Solutions | bastiansolutions.com
Belcan | belcan.com
BlueFrame Technology | blueframetech.com
CirrusMio | cirrusmio.com
Computer Services, Inc. | csiweb.com
Conduent | conduent.com
Consolo Services Group | consoloservices.com
Control & Automation Inc. | conauto.com
Corrisoft | corrisoft.com
Crowe Horwath (Formerly SDGblue LLC) | crowe.com
Cypress Semiconductor | cypress.com
Dorma Kaba | dormakaba.com
Edvergent Learning | edvergent.com
Expleo Group (Formerly SQS USA Inc.) | expleogroup.com
Fooji | fooji.com
Frogdice, Inc. | frogdice.com
Fusioncorp | fusioncorpdesign.com
Gem + Jewel | gemandjewel.com
Global Parametrics | globalparametrics.com
Gun Media | fearthegun.com
Hippo Manager | hippomanager.com
IBM Global Services | ibm.com
Identify3D | identify3d.com
Legit Apps | legitapps.com
Lexmark International | lexmark.com
Medmovie | medmovie.com
Nursing CE Central | nursingcecentral.com
NymbL Systems | nymbL.healthcare
OmniLife | getomnilife.com
OpenText Corp. | opentext.com
Oracle Corp. | oracle.com
Pasiv Duty | pasivduty.com
Pivt (Formerly Gamifi) | gamifi.co
Quantum Spatial | quantumspatial.com
Rocker LLC | rocker.io
Scante | scante.net
SIS Holding Company Inc. | thinksis.com
Space Tango | spacetango.com
Super Soul | supersoul.co
Suran Systems, Inc. | suran.com
Tech29 | tech-29.com
Tenmast Software | tenmast.com
The SafeCare Group | safecaregroup.com
Thynk Health | thynkhealth.com
Trinsoft | trinsoft.com
Triyam | triyam.com

Appendix A – Select Software & IT Companies in the Bluegrass

VetData | vetdata.com
VividCharts | vividcharts.com
Volta, Inc. | voltainc.com
Xometry | xometry.com
Xooker | xooker.com
Zudy | zudy.com

Appendix B – Life Sciences, Biotech, and R&D Companies in the Bluegrass

AgTech Scientific | agtechscientific.com
Alkymos | alkymos.com
Alltech | alltech.com
AMR Lexington | amrlexington.com
Anavii Market | anaviimarket.com
AnnuLox | annulox.com
AntiOp | dpwermeling@gmail.com
Apical Hemp | apical.info
Aquatic Laboratories, LLC | aquaticlaboratories.com
Asphalt Institute Inc. | asphaltinstitute.org
Atalo Holdings, Inc. | ataloholdings.com
Avast Therapeutics | avasttherapeutics.com
BIOS CBD | bioscbd.com
Biological Prospects | biologicalprospects.com
Biomedical Development Corporation | biodevcorp.com
Blue Creek Corp | bluecreekcorp.com
Blue Equine Pharmaceuticals | blueequinerx.com
Bluegrass Advanced Materials | bgamaterials.com
Bluegrass Hemp Labs, LLC | bluegrasshemplabs.com
BrainChem | peter.huettl@gmail.com
Brockman-Hastings LLC | Todd.hastings@bh-llc.com
CABO Holdings, LLC | cabo-ky.com
Carina Medical | xfeng@carinaai.com
Catalent Pharma Solutions | catalent.com
Central Kentucky Solutions, LLC | chris.logan@me.com
Clark Material Handling Company | clarkmhc.com
Coplex Therapeutics | bclynn2@uky.edu
CytolInformatics LLC | karyn.esser@uky.edu
Doc Lane's | doclanes.com
DSM Nutritional Products LLC | dsm.com
ECM biosciences | ecmbio.com
Ecofibre | ecofibre.com
Elemental Processing, LLC | elementalprocessing.com
Engi-Mat | engi-mat.com
EmeraMed | emeramed.com
Enzymax | enzymax.net
Equi-Force | equiforce.com
Equine Diagnostic Solutions | edslabky.com
Equinext | novobrace.com
Equithrive | equithrive.com
Exatherm, LLC | mc3corp.com

Appendix B – Life Sciences, Biotech, and R&D Companies in the Bluegrass – Continued

Fluid Management Systems | fluidmanagementsystem.com
Fouser Environmental Services, LTD | fouser.com
GenCanna Global USA Inc. | gencanna.com
Gibson Bioscience | gibsonbioscience.com
GISMO Therapeutics, Inc. | gismotheapeutics.com
HA Concepts Inc. (Conquer HA) | conquerha.com
Hagyard Pharmacy | hagyardpharmacy.com
HEMPfinity, LLC | hempfinity.co.uk
Hera BioLabs | Hera BioLabs.com
Hippo Manager | hippomanager.com
Hummingbird Nano | hummingbirdnano.com
ICON plc | iconplc.com
Intralink Spine | intralinkspine.com
Invenio Therapeutics Inc. | agarwamukesh@yahoo.com
Kentucky Cannabis Company LLC | kycannabisco.com
Kentucky Mobile Extraction LLC | kentuckymobileextraction.com
Kinetic Vet | kineticvet.com
KYLEX Botanicals, LLC | kylexbotanicals.com
Lexsci Labs, Inc. | mhmorey@gmail.com
LifeLine Labs, LLC | lifelinelabsllc.com
LGC Group | lgcgroup.com
Medmovie.com | medmovie.com
MedRev Group | medrevgroup.com
MEP Equine Solutions | mepequinesolutions.com
Minerva Technology | kgesan@minervatechnology.com
MiRx Pharmaceuticals | mirxpharma.com
Mosquito Mate, Inc. | mosquitemate.com
Murty Pharmaceuticals | mpirx.com
Nano-Mite Technologies | nano-mite.com
Naprogenix Inc. | naprogenix.com
Nature's Rhythm LLC | naturesrhythmky.com
Neogen Corporation | neogen.com
Nursing CE Central | nursingcecentral.com
nyubl.systems | nyubl.healthcare
NX Development Corp. | nxdevcorp.com
OmniLife | getomnilife.com
Oraceuticals Inc. | chuan2@uky.edu
Orthopeutics | orthopeutics.com
ParaTechs Corporation | ParaTechs.com
Piramal Pharma Solutions | piramalpharmasolutions.com
Point Six, Inc. | pointsix.com
Process Managers, LLC | pronutech.com
Quanteon | quanteon.cc
Radical 200 Institute LLC | radical200institute.com
RedLeaf Biologics | redleafbiologics.com
Resonate Foods LLC | resonatefarms.com
Seikowave | seikowave.com
Signal Solutions | sigsoln.com
Space Tango, Inc. | spacetango.com
Stallion Therapeutics | edhall@uky.edu

Appendix B – Life Sciences, Biotech, and R&D Companies in the Bluegrass – Continued

Summit Biosciences Inc. | summitbiosciences.com
Symbiotix | symbiotix.com
TEC Biosciences | tecbiosciences.com
The Pilot Farm, LLC | pilotfarm.com
Thrive Animal Health | petthrive.com
Topasol | topasol.com
Transposagen Biopharmaceuticals | transposagenbio.com
Tribo Flow Separations LLC | triboflow.com
UHV Technologies (nanoranch) | nanoranch.com
United Hemp Industries LLC | unitedhempindustries.com
US Equestrian Federation | usef.org
USIOL | usiol.com
Valvoline | valvoline.com/
Venture Laboratories | ventlabs.com
VetData | vetdata.com
Voyekov Labs LLC | voyekovlabs.com
Water Warriors | waterwarriorssolutions.com
Wickliffe Veterinary Pharmacy | wicklifferx.com
Wyse Innovations | jwyse@wyseinnovations.com
W-Z Biotech LLC | 859-494-4134
Zelios | zelios.com

Appendix C – Total Patents Awarded to Lexington Companies Through 2019

Total Patents Awarded by Assignee/Organization Top-30 Lexington Companies	
Organization	Patents
Lexmark International, Inc.	2,762
University of Kentucky Research Foundation	706
Fluid Management, Inc.	101
Delta T Corporation	84
Tempur-Pedic Management, LLC	74
Mas-Hamilton Group	32
Tempur World, LLC	26
Board of Trustees of the University of Kentucky	18
Link-Belt Construction Equipment Co., L.P., LLLP	15
Clark Material Handling Company	14
LevTech, Inc.	14
Palmer Snyder Furniture Co.	14
Orthopeutics, L.P.	13
Elan Home Systems, L.L.C.	12
Lexair, Inc.	10
Tumor Biology Investment Group, Inc.	10
Audio Authority Corporation	9
The Valvoline Company, a division of Ashland, Inc.	9
ArthroDynamic Technologies, Animal Health Div., Inc.	8
Kaba Mas Corporation	8
MedPro Safety Products, Inc.	8
Valvoline Licensing and Intellectual Property, LLC	8
Alltranz Inc.	7
Health Technology Laboratories, Inc.	7
CBA Pharma, Inc.	6
Plastic Productions A LLC	6
Sumitomo Construction Machinery	6
WTVIII, Inc.	6
Acceleration Systems, LLC	5
Source: <i>PatentsView</i> , United States Patent and Trademark Office.	
Data current as of April 29, 2020.	

Appendix D – Bluegrass Rankings

Below is a sample of the rankings and accolades that Lexington and Kentucky have received in 2019 and 2018.

2019

- #6 Top Manufacturing State (Kentucky), Business Facilities
- #7 State for Foreign Trade Zone Activity – Imports (Kentucky), Business Facilities
- #4 State for Automotive Manufacturing Strength (Kentucky), Business Facilities
- #10 Lowest Industrial Electricity Rates (Kentucky), Business Facilities
- #14 Top State Business Climate, Site Selection
- #4 Top Potential Tech Growth Centers, Brookings Institute
- #11 Best Untapped Cities for Startups in 2020, Fundera
- #19 States Leading the Charge on Renewable Energy, SmartAsset
- #15 Best Cities for Young Professionals, GOBankingRates.com
- #2 Best City for Antique and Flea Market Lovers, Livability
- #26 Best Big Cities to Live In, WalletHub
- #29 Best Places to Live in the USA, U.S. News and World Report
- #6 Cities with the Lowest Startup Costs, SmartAsset
- #5 Economic Growth Potential of Mid-Sized Cities, Business Facilities
- #7 Best Large Real-Estate Market, WalletHub
- #4 Best City for First-Time Home Buyers, WalletHub
- #5 Best-Run City in America, WalletHub
- 2019 Silver Shovel Award (Kentucky), Area Development
- Top 25 Best Places To Retire in 2019, Forbes
- #3 The 10 Safest & Most Dangerous Metro Cities in America for 2019, SafeWise
- #7 Best Cities for New College Grads, SmartAsset
- #7 Top 10 Best Cities in America for Eating Out Affordably, Money
- #2 State for Clean Energy Job Growth (Kentucky), E2
- #36 Top 100 Best Places to Live, Livability
- #6 Cities with the Best Work-Life Balance, SmartAsset
- The 50 Best Foodie Towns in America, The Daily Meal
- #5 2018 Top State for Number of Economic Development Projects (Kentucky), Site Selection Magazine
- #2 2018 Top State for Economic Development Projects Per Capita (Kentucky), Site Selection Magazine
- #2 2018 Top State for Most Top Micropolitan Areas (Kentucky), Site Selection Magazine
- #9 2018 Top Metro for Economic Development Projects, Site Selection Magazine

2018

#6 Cities with the Lowest Startup Costs, SmartAsset
#42 Best Place for Business and Careers, Forbes
#40 Best Cities for Gamers, WalletHub
#14 Cities That Must Be Seen in 2019, Viewfinder by Expedia
#2 Most Affordable Cities to Live and Work, BusinessStudent.com
Top 10 Best Main Street Towns, WhereToRetire
100 Best Places to Retire, WhereToRetire
Mac Conway Award for Excellence in Economic Development, Site Selection Magazine
Top 10 Best Cities for Entrepreneurs, The Penny Hoarder
#18 Best of the Midwest: Startup Cities, Midwest Startups
#8 Best City to Live in America, Money
#18 Best City for Veterans to Live, Veterans United
#1 Most Affordable Cities for an Early Retirement, SmartAsset
#6 Best City to Be a Game Developer or Designer, ValueGamers
#10 Best Large Real-Estate Market, WalletHub
#28 America's Best Small Cities, BestCities
#24 Best Cities for Young Professionals, Thrillist
#10 Most Affordable College Towns for Renters, Apartment Guide
#6 State with the Best Community-College System, WalletHub
#3 Best Cities to Raise a Family, Zumper
#3 Safest City in America, SafeWise
#31 Most Educated Cities in America, WalletHub
#9 City with the Most Diverse Industries, Business Facilities
#6 Economic Growth Potential of Mid-Sized Cities, Business Facilities
#9 Best Cities for Remote Workers, moveBuddha
#4 Best-Run City in America, WalletHub
#21 Best Places to Live in America, U.S. News & World Report
#6 City with the Best Work-Life Balance, SmartAsset
#3 Best City with the Highest Salaries and Lowest Costs of Living, GoBankingRates
#8 Best U.S. Destination, Lonely Planet
Top 12 Global Destinations to Visit in 2018, Newsday
Top 9 Destinations to Visit in 2018, Vogue
#10 Top Destination on the Rise, TripAdvisor
#2 Best Midsized City for New Grads, OnlineDegrees

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