

THE CASE AND OPPORTUNITY

FOR THE

GEORGIA INTELLECTUAL PROPERTY ALLIANCE (GIPA)

www.gaipalliance.org

Innovation distinguishes between a leader and a follower.

Steve Jobs

If you look at history, innovation doesn't come just from giving people incentives; it comes from creating environments where their ideas can connect.

Steven Johnson

Intellectual-property rules are clearly necessary to spur innovation:

if every invention could be stolen, or every new drug immediately copied,

few people would invest in innovation. But too much protection can strangle competition and can limit what economists call 'incremental innovation' - innovations that build, in some way, on others.

James Surowiecki

VERSION 2.0 October 1, 2018

ORIGINALLY RELEASED December 13, 2017

By Barry Brager and A. Mitchell Foley

Abstract

No global region has more potential to move imagination & creativity forward – from idea to market, for the benefit of society – more efficiently and cost-effectively than Georgia. Now is the time to <u>balance</u> Georgia's growing business climate and creative ecosystem, via a new IP alliance, to maximize value from generating, protecting, enabling & monetizing intellectual property for outstanding success from innovation. Result metrics include a calendar of visible projects and time-to-market success stories.

IP is necessary for the benefit of society

- Intellectual property (IP) is the mechanism that protects and leverages the ideas and innovations that drive global society forward.
- Every child grows up imagining their own world of success. Yet in the "real world," only wellprotected ideas earn the respect & support required to deliver the economic and social returns that are recognized as true successes.
- The legal frameworks for documenting and protecting IP (brands, patents, trademarks, copyrights, trade secrets, designs, know-how and more) are available in every developed country, and these frameworks offer major incentives for others to invest the time, money, and resources essential to develop commercial endeavors to fruition.
- Without the protections from such IP mechanisms, creations of the mind would be free to be copied, taken and used by the rest of the world without any compensation, credit or control by the creator.
- Today's IP systems for idea protection are broken (overprotective) in some respects, and revolutionary (highly enabling) in others. Uncertainty in costs of IP protection, the need to litigate to collect on IP value, inconsistencies in cross-border IP enforcement and the rise of new digital IP models are limiting a universal understanding of when and how to best utilize IP while increasing transaction costs for IP licensees, buyers and sellers.
- In fact, most people first develop awareness of IP in its negative contexts: counterfeiting, piracy, hacking, plagiarism, patent "trolls" and infringement. There is a better way to help members of society appreciate the upside of IP, to protect and transact their creations, and to prepare them to address disputes with confidence and certainty.
- There is a real need and significant opportunity to bring faith and transparency in a *balanced* IP system in order to reduce friction and to finance new decades of creativity during the next industrial revolution and beyond.

- Utilized properly, IP laws, rules and valuations provide reliable incentives to facilitate transactions; mechanisms to address disputes; data to drive decision-making; and business connections that build human networks – enabling the transformation from ideas, to protected assets, to prototypes to full commercial promise.
- Georgia seeks to be the first and best destination to deliver widespread appreciation of the incentives from a balanced IP system to fully capture & maximize marketplace value for creators and beneficiaries, for the benefit of society.

Georgia's ecosystem is ready to become a model for IP success

- There are already many IP organizations, regional IP strategies and innovation centers in existence throughout the world. Some are government-driven, others are legal or administrative in nature, and some represent self-organized facilitators or owners of IP.
- However, there is no organization chartered to represent the interests of all classes of creators, sponsors & enablers for all forms of IP, existing to lead by example as to how to efficiently and cost effectively incentivize generation, protection, enablement and monetization of ideas, using the full range of IP mechanisms, for the benefit of society.
- The Atlanta/Georgia ecosystem is recognized as nurturing growing leadership in a wide range
 of corporate, technology, healthcare, arts, entertainment, sports and quality of life metrics.
 Georgia has been recognized for many years as one of the top states for businesses. Recently,
 Georgia has become among the top locations for filmed entertainment. Through film, Georgia
 has become recognized as the "Hollywood of the Southeast" by drawing in hundreds of
 entertainment industry projects. This activity not only develops an enormous amount of IP, but
 also brings in great IP talent and generates global recognition for the state.
- The Atlanta/Georgia region is also a "top five" location for many other success metrics in the US and worldwide (see Appendices).
- Georgia's corporate leaders, creative councils, educational institutions, economic development authorities, self-organized coalitions, knowledge societies and entrepreneurial accelerators are all working to improve this ecosystem with technological innovation and digital inspiration.
- These organizations have different origins & missions; but all share a common vision to creatively leverage Atlanta and Georgia's rapid rise in corporate growth; STEM & legal education; quality of life; and artistic rankings; to demonstrate innovative leadership across the US and beyond.

- IP issues recur as a central theme (as opportunities and challenges), for all of these organizations. However, based on multiple conversations and review of various charters, often IP as a focused topic does not get the proper "share of voice" perhaps due to its connotations or the expertise needed to fully exploit it.
- <u>The current momentum of Georgia's academic, business, legislative and lifestyle climate, in</u> <u>contrast to gaps related to the conversation around IP, indicate that now is the right time to</u> <u>develop a balanced model IP ecosystem in Georgia, by increasing the "share of voice"</u> <u>addressing IP issues & concerns among the region's leading support organizations.</u>

Georgia has – and can evolve – the right incentives for a balanced IP ecosystem

- There are 3 essential reasons why Georgia should work towards a balanced IP ecosystem now:
 - (1) intellectual property is critical to moving society forward
 - (2) IP complexity presents a significant hurdle to much of society
 - (3) there is no organization in the world lobbying for IP incentives in society's best interests
- A balanced IP ecosystem should foster a collaborative effort by regional organizations to reward marketplace activities that efficiently bring together well-protected ideas (without overprotection); innovative commercial opportunities (with global potential); and available growth capital (tapped from Georgia's public and private investors).
- An efficient global marketplace that is reliant on IP and based in Georgia should reduce the time to market for developing and applying ideas to practical solutions that drive creative, scientific and technological progress for the common good.
- Among the most important enablers of a balanced IP ecosystem and an efficient marketplace are (well-understood) incentives that encourage investment and reduce friction in transactions. Georgia offers a wide variety of IP-friendly incentives that can be leveraged to support ecosystem growth and marketplace evolution including: job tax credits; research and development tax credits; investment tax credits; retraining tax credits; small business tax relief; angel investor tax credits; film, television, and digital entertainment tax credits; and state financing which can be used to draw in more STEM based companies and jobs.
- <u>Georgia's incentives demonstrate the willingness of the state government to create a business-</u> <u>friendly environment. As such, state economic development and government leadership should</u> <u>be engaged to link IP incentives to current and future marketplace opportunities.</u>

The GIPA will lead the way

- The Georgia Intellectual Property Alliance (GIPA) is needed to promote & leverage Georgia's implicit and explicit innovation & business incentives to aid ideators & creators to generate, protect, enable and monetize ideas & intellectual property for the benefit of society.
- The GIPA will link innovation, human and financial resources to help balance Georgia's IP ecosystem to benefit society. Through a sustained calendar of activities, GIPA aims to establish Georgia as a global marketplace recognized for reducing the time-to-market of IP-rich projects, with support sought from state economic development and government leadership.
- <u>The GIPA will focus on initiating visible IP projects for the "3 legs of the IP stool": Technology,</u> <u>Health, and Arts/Sports/Entertainment, in order to demonstrate to Georgia residents and the</u> <u>world, how to best leverage Georgia's academic resources, business climate and incentives to</u> <u>accelerate maximum return on ideas with a minimum of friction.</u>

Ways for GIPA to help incentivize idea generation

- Enable cooperative networks. It is often difficult for creators, clinicians and inventors to receive accurate and cost-effective advice and/or access investors and potential business partners to develop their ideas. GIPA needs to enable cooperative networks between Georgia's existing entrepreneurial organizations & institutions in order to host multi-disciplinary events where people from the general public can pose questions, express ideas, seek feedback, and solicit investment and partnership.
- **Regular cross-discipline IP dialogues**. As home to the CDC and top medical universities, Georgia is the center for some of the most innovative and globally influential health related research and development. However, the field of medical research and development is severely disjointed and non-congruous between institutions and even between separate departments within the same institution. With the CDC as a base, GIPA should assist Georgia's existing healthcare & medical device organizations & institutions to meet regularly on IP issues in cross-disciplinary collaborative research, open data sharing and improving results from clinical trials to move potential cures to market.
- Attract content dealmakers. Although Georgia's film, television, and digital entertainment tax incentives have been very successful in bringing the actual filming of movies and television to Georgia, much of the content licensing, pre- and post-production is still performed out of state.
 GIPA should work with Georgia's creative councils and legislators to evolve messaging &

incentives that bring more agents, dealmaking and digital content development to Georgia, attracting the full spectrum of creativity in the entertainment industry to the region.

• (Re)training for Industry 4.0. The world is in the midst of a new industrial revolution. However, it is estimated that hundreds of millions of people will face job elimination or transition in the coming decades due to new technologies. The GIPA should assist existing Georgia organizations and institutions to begin addressing workforce (re)training to inspire new opportunities in emerging areas that build on the region's strengths including: additive manufacturing; artificial intelligence; augmented reality; autonomous vehicles; blockchain; cybersecurity; digital content; drones; gaming; Internet of Things; personal genomics, space flight and tissue engineering.

Ways for GIPA to help improve idea protection

- Online IP support for new creators. Georgia hosts an abundant creation and innovation ecosystem with a world-class (and cost effective) quality of life, but it is often difficult for students, young STEM professionals, non-profits, and start-ups to get trusted and affordable advice on the best way to protect those ideas to comfortably request attention and capital from the many world-class corporations and institutions operating in Georgia. GIPA should develop a state-wide forum of IP professionals to provide digital support and online advice to local creators and innovators in need of IP protection to encourage them to promote, market and leverage their innovations and creations.
- Promote model IP standards. Georgia's corporate community maintains a high standard of ethics and a "can-do" culture of deal making. Likewise, Georgia's investment community seeks to grow Georgia's funding climate and make Georgia a destination for high-growth startups. An improved culture of trust in Georgia would go a long way for innovators and creators who know they won't get ripped off when presenting their ideas and inventions. The GIPA should work to promote the use of model licensing standards and design a brief "confidentiality pledge" to build confidence that the first and safest place to disclose a new idea is in Georgia.
- IP dispute resolution destination. Georgia has an emerging but under-utilized cluster of alternative dispute resolution resources. The GIPA should work to create regional and global awareness of Georgia State University's International Mediation Center and Emory's Center for Advocacy and Dispute Resolution. To position these to a global audience, a co-located facility could be designated near or in conjunction with Hartsfield-Jackson International Airport to offer neutral, efficient, low cost, and accessible assistance to all parties in need.

- Anti-counterfeiting epicenter. Counterfeiting is one of the greatest economic crimes of our time. As a logistics hub, the Atlanta airport is a central institution with the opportunity to develop world-class measures in tracking, disabling and discouraging counterfeit transport. The GIPA should work with the Airport and local law enforcement to better leverage regional resources in the detection of counterfeit products, drugs and devices; as well as prosecution of counterfeiters using the best of Georgia's legal and court resources.
- Thought leadership on new IP models. IP protection will evolve with new business models that will challenge norms but which inevitably will create conflicts. The GIPA should facilitate dialogue across Georgia organizations and institutions on IP issues about new digital models (e.g., open-source software, crowdsourcing, data sharing, social donation, blockchain, piracy for a cause, the gig economy, etc.) to build confidence in protections afforded by IP.
- Work-at-home IP examiner capital. IP protection comes from expert decisions by government employees. Georgia should be home-base for this expertise. The GIPA should support incentives for IP law firms wishing to relocate or expand in Georgia. It should also advocate in order to designate Georgia as the preferred destination for work-at-home patent, trademark and copyright examiners.

Ways for GIPA to stimulate and incentivize enablement with IP

- Make IP a new "plank" for existing groups. Georgia has a large number of organizations, assets, and groups between the three (technology, healthcare, arts/entertainment/sports) legs of the IP stool, all with similar goals and initiatives, but there is a lack of coordination, communication, and collaboration among them. GIPA should offer to add a "new plank" to a select group of enabling Georgia entities, to offer them the IP expertise needed to facilitate creation, commercialization, and progress that they can share with their professional, technical or ecosystem support constituencies.
- Innovation talent coordination between industry & academia. Georgia is the home state or base of education for many of the world's most prolific doctors, attorneys, artists, inventors, technologists and entrepreneurs, but there remains a lack of efficient coordination between those with talent & ideas and those with the means to employ this talent and invest in transforming their intellectual property into commercial results that benefit society. GIPA should facilitate collaboration models between universities, enabling organizations and hiring managers from creative/innovative industries to match students, local entrepreneurs and

emerging practitioners that produce or focus on IP, with state-based technology based employment, contract and project opportunities.

- Mapping business incentives to IP opportunities. Georgia has an abundance of tax credits and incentives to help grow new and existing businesses located in the state, however not all potential beneficiaries are aware of them. GIPA should inventory the incentives from Georgia's existing economic development organizations, coalitions, societies, incubators and other creative/innovation enablers, to align those incentives the aspirations and outputs of stakeholders in each of the 3 legs of the stool. Successful organization and communication of incentives, in the context of creating more value from IP, will attract more idea-rich companies to locate, hire and trade in Georgia to accelerate the development of Georgia as a model marketplace for commerce based on the fruits of ideas.
- Georgia as IP data central. Data is the intellectual fuel that drives decisions. While data can be located anywhere, it must be brought together systematically and intelligently to enable action. As regards IP, there is a vast need to aggregate and make searchable the data on the world's innovations whether to understand the prior art or anticipate the state of the art. GIPA should engage partners that have developed searchable databases and support data gathering initiatives to make Georgia a well-regard repository of secure, accessible data for human and machine learning in order to improve the value and commercialization of IP.
- Roadmaps to IP success. Navigating Georgia's ecosystem can be challenging, as all relevant players may not be known. Understood or appreciated. In concert with the ecosystem's organizations and institutions, GIPA should create "roadmaps" online and via social media to help local and global innovators and creators understand how to:
 - Get your company funded in Georgia
 - Get your film produced in Georgia
 - Get your artwork exhibited in Georgia
 - Get your book published in Georgia
 - Get your album recorded in Georgia
 - Get your game developed in Georgia
 - o Get your medical device launched in Georgia
 - Leverage your sensor data in Georgia

Ways for GIPA to accelerate efficient IP monetization

- Georgia as IP clearinghouse. Georgia has the resources and infrastructure to be a recognized center of innovation and creation but we like other regions suffer from inefficiencies and thus high transaction costs in the licensing, buying and selling of IP, innovations and technology. GIPA should work with IP owners, service providers and investors to develop a more efficient and transparent IP marketplace, one where ecosystem members offer expedited channels to receive, evaluate and price IP commercialization opportunities according to model guidelines and standards. GIPA should evaluate a neutral but effective way to create a centralized IP clearinghouse in Georgia that serves as source to exchange, sell, and market IP and to capture data on those transactions.
- IP showcases, with matchmaking. Large and small companies (and their investors) often face complexities in getting and staying connected. As a top corporate headquarters location, Georgia has more opportunities than just about any other US region to drive intra-corporate communications. GIPA should work to create showcase opportunities between large and small Georgia-based corporations that are seeking to develop new growth engines (and the investors that support them) in order to determine which of their strategic initiatives would be enabled by new IP and then to suggest large-small firm matches for possible deal making.
- IP service provider platform. Georgia's resource provider and service provider communities are vast. These groups often have deep expertise in legal, financial, strategic and marketing functions – capabilities desperately needed to transform ideas into IP and IP into a valuable commodity. GIPA should coordinate these providers into an efficient service platform that enables innovators to more efficiently transact IP between buyers and sellers, especially in key areas: artificial intelligence; augmented reality; autonomous vehicles; blockchain; cybersecurity; digital content; drones; gaming; the Internet of Things; personal genomics, space flight and tissue engineering.

How the GIPA will organize

- Incorporate
 - As non-profit 501 c(3) in 2018-2019
- Raise money (annually)
 - o Grants
 - Members
 - Supporters
- Create Board
- Establish Executive Committee (by Board appointment)
- Set goals (by workgroup consensus)
 - Year 1 general goals
 - Create workgroups by "stool legs"
 - Craft messages
 - Advance model IP ecosystem prototype projects
 - Year 2 general goals (to be determined by Executive Committee)

#1 top gaming city	http://www.movoto.com/blog/top-ten/top-10-cities- for-gamers/
#1 Mobile-friendly U.S. city	https://www.nerdwallet.com/blog/utilities/top- mobile-friendly-cities-2016/
#2 Metro Area for Quality of Engineering Universities	https://wallethub.com/edu/best-worst-metro-areas- for-stem-professionals/9200/#main-findings
#2 North American Metro Area for Competitiveness in the IT & Communications Industry	http://siteselection.com/cc/wmcc/2017/
#2 Next Big Tech Hubs That Are (Still) Affordable	https://www.realtor.com/news/trends/the-new- silicon-valleys-you-can-actually-afford-to-live-in/
#3 City for Musicians & DJs per Capita	https://wallethub.com/edu/best-places-to-get- married/18721/
#3 City for Videographers & Photographers per Capita	https://wallethub.com/edu/best-places-to-get- married/18721/
#3 Most Innovative Company in the Education Sector - (Georgia Tech)	https://www.fastcompany.com/3068580/the-10- most-innovative-companies-in-education-2017
#4 City to Live and Work as a Filmmaker	https://www.moviemaker.com/archives/best_of/bes t-places-to-live-and-work-as-a-moviemaker-2017/
#5 best city for tech talent	https://www.cbre.com/about/media- center/companies-are-willing-to-pay-a-premium-for- top-tech-talent
#5 best U.S. city for tech startups	https://www.bizjournals.com/atlanta/news/2016/07 /06/atlanta-no-5-american-city-to-launch-tech- startup.html
#5 North American Metro Area for Competitiveness in the Chemicals & Plastics Industry	http://siteselection.com/cc/wmcc/2017/
Top 5 emerging fintech hubs in the United States	https://bankinnovation.net/2017/08/top-5- emerging-fintech-hubs-in-the-u-s/
One of the top seven cities most destined to become the capital of the cybersecurity industry.	http://fortune.com/2017/04/06/cyber-security- cities/

#7 for Fintech Startups in US	http://finovate.com/friday-fun-fintech-startups-us-
	<u>city-top-12/</u>
#7 Major American City of the Future 2017/18 (overall)	FDI Intelligence, "American Cities of the Future, 2017/18
#8 best city for STEM Professionals	https://wallethub.com/edu/best-worst-metro-areas- for-stem-professionals/9200/
#8 City for Gamer & Developer Opportunities	https://wallethub.com/edu/best-cities-for- gamers/36270/
#9 best city for tech workers	https://www.forbes.com/pictures/feki45ehefi/9- atlanta-georgia/#3d4f56d92951
#9 best city for STEM jobs	https://www.forbes.com/pictures/efkk45ekdik/no-9- atlanta/#39362aac7a77
#10 Metro Area for Bachelor & Graduate	https://info.siteselectiongroup.com/hubfs/PDFs/201
Degrees Awarded Per Year in Computer &	7-US-Tech-City-
Information Science & Services	Report.pdf?submissionGuid=32e4653d-8296-4dd5- a8c4-f30d60a7cb6d
#10 Metro Area for Absolute Tech Job Growth	https://www.brookings.edu/blog/the-
	avenue/2017/03/08/tech-in-metros-the-strong-are-
	getting-stronger/
Arts & Sciences Cities of Distinction Award, granted by Phi Beta Kappa Society for the City of Atlanta's quality, depth, range and vibrancy in regard to its community engagement with	https://www.pbk.org/web/atlanta
the arts and sciences	
Runner-up to the Top 20 Tech Startup Ecosystems Globally; Among the Top 10 Tech Startup Ecosystems Nationally	https://online.flowpaper.com/7c3c077c/StartupEcosystem Report2017Freev161/

APPENDIX B: Atlanta/Georgia Quality of Life Rankings

#1 Most Efficient Airport for the 14th Consecutive Year	https://eturbonews.com/159070/air-transport- research-society-announces-2017-airport-efficiency- winners
#1 Moving Destination in the Nation for 2016, marking its 7th straight year in first place	https://blog.gopenske.com/news/penske-truck- rental-releases-2016-top-moving-destinations-list/
#1 City for Remote Workers	https://www.forbes.com/pictures/589cbd194bbe6f0

	e558662be/1-atlanta/#1f9d6d8577aa
#1 Metro area for network speed and data performance and #3 for overall network performance	http://www.rootmetrics.com/en-US/content/2016- 1h-metro-ranking
#1 City for Fitness Centers per Capita	https://wallethub.com/edu/best-and-worst-cities- for-an-active-lifestyle/8817/
#1 City for Venues & Event Spaces per Capita	https://wallethub.com/edu/best-places-to-get- married/18721/
#1 Place to Celebrate 4th of July	https://wallethub.com/edu/best-4th-of-july- celebrations/4651/
#1 City for Major League Soccer Attendance (Atlanta United)	https://www.bizjournals.com/atlanta/news/2017/07 /13/atlanta-united-no-1-in-league-attendance.html
#1 City for Pet-Friendly Restaurants per Capita	https://wallethub.com/edu/most-pet-friendly- cities/5562/
#3 City for Restaurants per Capita	https://wallethub.com/edu/best-cities-for-new- years-resolutions/28749/
#3 City for Hotels per Capita	https://wallethub.com/edu/best-places-to-get- married/18721/
#3 City to Get Married	https://wallethub.com/edu/best-places-to-get- married/18721/
#3 Office Market for Green Buildings (EPA ENERGY STAR and/or USGBC LEED certification)	https://dimension.maps.arcgis.com/apps/MapJournal/index.html ?appid=a835df78ffe64a92be638610132b9b95
#4 University City in the World, home to two of the world's top 100 universities – (Georgia Tech) and (Emory University)	https://www.timeshighereducation.com/student/bes t-universities/best-university-cities-2017
#4 Place for Lowest Travel Cost & Fewest Hassles	https://wallethub.com/edu/best-summer-travel- destinations/3792/
#4 Metro Area for Largest Increase in Population, 2015-2016 (90,650)	http://www.ajc.com/news/local/metro-atlanta-the- country-for-2016-population- increase/cwN4iV16FuUyE1D09zKEPO/
#4 City with Highest Percentage of Hispanics with at least a Bachelor's Degree	https://wallethub.com/edu/best-and-worst-cities- for-hispanic-entrepreneurs/6491/
#5 Metro Area for Net Migration Change	U.S. Census Bureau, Population Division, March 23,

	2017
#5 City for Highest Percentage of Population Aged 18 to 49	https://wallethub.com/edu/best-cities-for- gamers/36270/
#5 City for Recreation	https://wallethub.com/edu/best-worst-cities-for- recreation/5144/
#5 City for Lowest Average Food Price	https://wallethub.com/edu/best-worst-cities-for- recreation/5144/
#5 City for Freelancers and Telecommuters	https://www.moneytalksnews.com/the-10-best- american-cities-for-working-from-home/
#6 U.S. Destination You Need to See in 2017	https://www.lonelyplanet.com/best-in-us
#6 City to Start a Career	https://wallethub.com/edu/best-worst-cities-to- start-a-career/3626/
#6 City for Sports Clubs per Capita	https://wallethub.com/edu/best-and-worst-cities- for-an-active-lifestyle/8817/
#6 Place to Visit in Summer	https://wallethub.com/edu/best-summer-travel- destinations/3792/
#7 City for Staycation	https://wallethub.com/edu/best-cities-for- staycations/4341/
#7 City for Theatres & Concert Halls per Capita	https://wallethub.com/edu/best-cities-for- staycations/4341/
#7 Hottest Hotel Market	CBRE, "Top Hotel Markets for RevPAR Growth 2016 to 2018,"
#8 City for an Active Lifestyle	https://wallethub.com/edu/best-and-worst-cities- for-an-active-lifestyle/8817/
#9 overall US Metro area for Millennial Population (Ages 21–34)	https://info.siteselectiongroup.com/hubfs/PDFs/201 7-US-Tech-City- Report.pdf?submissionGuid=32e4653d-8296-4dd5- a8c4-f30d60a7cb6d
#9 City in the Americas for Office Completions Forecast, 2017-2019	file:///C:/Users/Mitch/Downloads/CW_Global%20For ecast-Are%20We%20Overbuilding%20(1).pdf
#9 City for Food & Entertainment for Staycation	https://wallethub.com/edu/best-cities-for- staycations/4341/
#9 Largest Metro Area in the U.S., 2016 (5.8	U.S. Census Bureau, Population Division, March 23,

million people)	2017
Projected to be #6 Largest Metro Area in the U.S., 2046 (8.6 million people)	http://www.usmayors.org/wp- content/uploads/2017/05/Metro-Economies-Past- and-Future-Employment-12.pdf
#9 City for Economic Opportunities for Minorities	https://www.expertmarket.com/focus/research/best -cities-for-minority-entrepreneurs
#10 City for Entertainment & Recreational Facilities	https://wallethub.com/edu/best-worst-cities-for- recreation/5144/
#10 City for Recreation for Staycation	https://wallethub.com/edu/best-cities-for- staycations/4341/
#10 Moving Destination for Millennials	https://www.mayflower.com/contact- mayflower/news/vacation-moves-insights

APPENDIX C: Atlanta/Georgia Business, Logistics, and Jobs Rankings

Twenty-six companies headquartered in metro Atlanta are among the 2017 FORTUNE 1000	https://www.metroatlantachamber.com/resources/ most-popular/fortune-500-fortune-1000-in-metro- atlanta
#1 World's Most Traveled Airport for 18 consecutive years	http://www.atl.com/media-center/press- releases/hartsfield-jackson-again-named-worlds- busiest-airport-september-13-2016/
#1 Best State for Doing Business 3 years running	http://www.areadevelopment.com/Top-States-for- Doing-Business/q3-2016/survey-results-top-states- analysis-676777.shtml
#1 Best Business Climate 4 years running	http://siteselection.com/issues/2016/nov/cover.cfm
#1 City for Availability of Internships	https://wallethub.com/edu/best-places-for-summer- jobs/21137/#main-findings
#2 North American Metro Area for Competitiveness in the Business & Financial Services Industry	http://siteselection.com/cc/wmcc/2017/
#2 Metro Area for Concentration of Non- employer Businesses	Atlanta Business Chronicle, "The Cities Where Companies Thrive"
#3 City for Job Opportunities	https://wallethub.com/edu/best-cities-for-

	jobs/2173/
#3 City for Minority Entrepreneurs	https://assets.entrepreneur.com/images/misc/14985 81401_top-cities-minority-entrepreneurs- infographic.jpg?_ga=2.47031269.334090079.1508188 026-180791630.1508188026
Four of Gartner's Top 25 Global Supply Chains are run out of metro Atlanta	http://www.gartner.com/technology/supply- chain/top25.jsp
#4 North American Metro Area for Competitiveness in the Transportation & Logistics Industry	http://siteselection.com/cc/wmcc/2017/
#4 City for Youth Market for Summer Jobs	https://wallethub.com/edu/best-places-for-summer- jobs/21137/#main-findings
#4 City for Most Entry-Level Jobs (per 100,000 working-age population)	https://wallethub.com/edu/best-worst-cities-to- start-a-career/3626/
#5 Metro Area for Highest Job Creation Index, 2016	http://news.gallup.com/poll/203996/houston-falls- no-tie-last-job-creation.aspx
#6 City for Job Seekers	https://www.nerdwallet.com/blog/finance/best- cities-job-seekers-2017/
#6 Metro Area for Number of Capital Investment Projects (among metros with population over 1 million)	Source: Site Selection, "2016 Governor's Cups," March 1, 2017
#6 City for Startup Costs & Access to Funding	https://assets.entrepreneur.com/images/misc/14985 81401_top-cities-minority-entrepreneurs- infographic.jpg?_ga=2.47031269.334090079.1508188 026-180791630.1508188026
#6 City for Corporate Innovation	https://assets.entrepreneur.com/images/misc/14985 81401_top-cities-minority-entrepreneurs- infographic.jpg?_ga=2.47031269.334090079.1508188 026-180791630.1508188026
#7 Major American City of the Future 2017/18 for Economic Potential	FDI Intelligence, "American Cities of the Future, 2017/18,"
#7 Major American City of the Future 2017/18 for Business Friendliness	FDI Intelligence, "American Cities of the Future, 2017/18,"
#7 City for Summer Jobs	https://wallethub.com/edu/best-places-for-summer- jobs/21137/#main-findings

#8 City for Professional Opportunities	https://wallethub.com/edu/best-worst-cities-to- start-a-career/3626/
#8 City with the Most Small Businesses (130,649)	https://www.bizjournals.com/bizjournals/news/2017 /02/22/small-business-in-america-the-cities-with-the- most.html
#9 City for Rate of New Entrepreneurs	https://assets.entrepreneur.com/images/misc/14985 81401_top-cities-minority-entrepreneurs- infographic.jpg?_ga=2.47031269.334090079.1508188 026-180791630.1508188026
1 of top 10 Cities for Open Jobs	https://www.glassdoor.com/blog/10-of-the-best- cities-for-open-jobs/

APPENDIX D: Atlanta/Georgia Healthcare Rankings

Top 10 Best healthcare cities in the U.S.	http://www.digitaljournal.com/pr/1781834#ixzz2valx Jkru
#5 North American metro area for competitiveness in the life sciences industry	https://www.metroatlantachamber.com/economic- development/featured/metro-atlanta-by-the- numbers

APPENDIX E: University System Rankings (Predominantly US News and World Report)

#1 Graduate Arts and Humanities Percentage of Total Publications that are Among the 10 Percent Most Cited (Georgia State)

#1 Undergraduate Biomedical Engineering Program (Georgia Tech) #1 Undergraduate Industrial/Manufacturing Engineering Program (Georgia Tech) #1 Graduate Industrial/Manufacturing/Systems Engineering Program (Georgia Tech) #1 Historically Black Colleges and Universities (Spelman College) #2 Undergraduate Civil Engineering Program (Georgia Tech) #2 Undergraduate Mechanical Engineering Program (Georgia Tech) #2 Undergraduate Aerospace/Aeronautical/Astronautical Engineering Program (Georgia Tech) #2 Graduate Aerospace/Aeronautical/Astronautical Engineering Program (Georgia Tech) #2 Graduate Civil Engineering Program (Georgia Tech) #2 Graduate Industrial and Organizational Psychology (Georgia Tech) #2 Graduate Information and Technology Management Program (Georgia Tech) #2 Public College for Big Paychecks – (Georgia Tech) #2 Graduate Student Counseling and Personnel Services Program University of Georgia #2 Graduate Public Finance and Budgeting Program University of Georgia #2 Graduate Public Management Administration Program University of Georgia #3 Undergraduate Insurance Program University of Georgia #3 Graduate Technical/Vocational Program University of Georgia #3 Graduate Biomedical Engineering/Bioengineering Program (Georgia Tech) #3 Graduate Physician Assistant Program (Emory University) #4 Graduate Nursing School Program (Emory University) #4 Undergraduate Engineering Program (Georgia Tech) #4 Undergraduate Electrical/Electronic/Communications Program (Georgia Tech) #4 Environmental/Environmental Health Engineering Program (Georgia Tech) #4 Undergraduate Chemical Engineering Program (Georgia Tech) #4 Graduate Discrete Mathematics and Combinatorics Program (Georgia Tech) #4 Historically Black Colleges and Universities (Morehouse College) #4 Most Innovative University (Georgia State) #4 Undergraduate Real Estate Program University of Georgia #4 Graduate Public Affairs Program University of Georgia #5 Graduate Computer Engineering Program (Georgia Tech) #5 Graduate Physical Therapy Program (Emory University) #5 Graduate Social Psychology Program (Emory University) #6 Undergraduate Quantitative Analysis Program (Georgia Tech) #6 Undergraduate Computer Engineering Program (Georgia Tech) #6 Undergraduate Materials Program (Georgia Tech) #6 Graduate Chemical Engineering Program (Georgia Tech) #6 Graduate Artificial Intelligence (Computer Science) Program (Georgia Tech) #6 Graduate Electrical/Electronic/Communications Engineering Program (Georgia Tech) #6 Graduate Systems (Computer Science) Program (Georgia Tech) #6 Materials Science Percentage of Total Publications that are Among the 10 Percent Most Cited (Georgia Tech) #6 Graduate Secondary Teacher Education Program University of Georgia #6 Online Graduate Education Program University of Georgia #7 Graduate Elementary Teacher Education Program University of Georgia #7 Graduate Higher Education Administration Program University of Georgia

#7 Graduate Printmaking Program University of Georgia

#7 Graduate Engineering School Program (Georgia Tech)

#7 Graduate Environmental/Environmental Health Engineering Program (Georgia Tech)

#7 Graduate Public Health Program (Emory University)

#7 Graduate Health Care Law School Program (Georgia State)

#7 Top Public Schools (National Universities) (Georgia Tech)

#8 Graduate Nurse Practitioner: Family Program (Emory University)

#8 Graduate Materials Engineering Program (Georgia Tech)

#8 Graduate Theory (Computer Science) Program (Georgia Tech)

#8 Engineering Global Research Reputation (Georgia Tech)

#9 Graduate Nuclear Engineering Program (Georgia Tech)

#9 Graduate Computer Science Program (Georgia Tech)

#9 Engineering Regional Research Reputation (Georgia Tech)

#9 Materials Science Total Citations (Georgia Tech)

#9 Graduate City Management and Urban Policy Program (Georgia State)

#9 Graduate Curriculum and Instruction Program University of Georgia

#10 Graduate Veterinary Medicine University of Georgia

#10 Social Sciences and Public Health International Collaboration (Georgia Tech)