

Building Georgia's Digital Entertainment Future

- ▶ Entertainment Technology Leadership
- ▶ Economic Benefits For All Georgia
- ▶ Diverse Voices, Inclusive Innovation



REPORT PREPARED BY THE
CREATIVE MEDIA INDUSTRIES INSTITUTE
GEORGIA STATE UNIVERSITY



(678) 902-9525
GEORGIA
STORAGE CONTAINERS
INC.

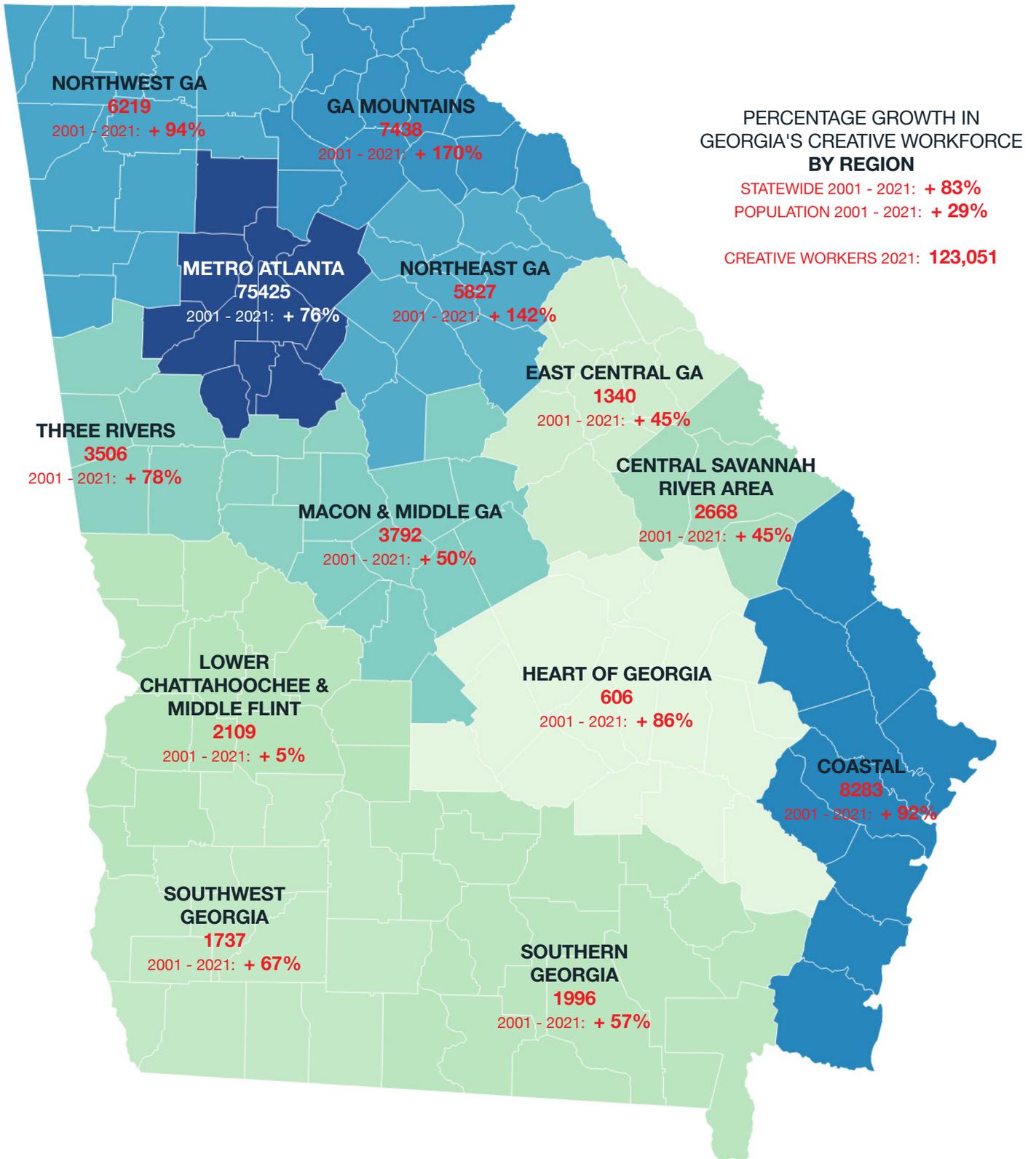
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Georgia Creative Workforce 2021



Source: Bureau of Economic Analysis • Created with Datawrapper

Media industries employment is most significantly growing outside of the traditional Georgia city centers.

Key Findings

This report offers a series of recommendations and findings regarding the status of the creative industries in Georgia, including the following:

- ▶ **Entertainment investments build Georgia's economy.** Creative industry work is not only an attractive option for urban economic and workforce development, but is also contributing to rural economic development as content creation work radiates beyond Atlanta and Savannah. To the extent the industry is encouraged, the gains are likely to accumulate in the state's suburban and rural communities.
- ▶ **Tax incentives have expanded film and television production, and are rapidly making Georgia a hub for digital content creation: game design, music, visual effects.** This broader ecosystem for media work is likely to continue to offer economic benefits to Georgia, so long as the basic contours of the tax credit remain intact.
- ▶ **Georgia leads the nation in diversifying media industry work.** Georgia workforce training programs are more diverse than the industry as a whole, and the state's leadership in the film, hip hop and other creative industries includes a range of artistic voices eager to tell their stories.
- ▶ **Georgia's creative industries are thriving as COVID recedes.** Surging demand for streamed entertainment and the adoption of COVID protocols in Georgia production studios helped Georgia rebound quickly, leading the nation with a model for safe production practices amid a pandemic. Media production has rebounded across all sectors to pre-pandemic levels or higher.

Executive Summary

In fifteen years, Georgia has joined California and New York as a global production capital.

This report explores dimensions of the Georgia media production tax incentive system, aiming to supplement research focused on traditional economic impact measures. These include attention to the potential merits of media industry investments when accounting for their contributions to statewide economic infrastructure, as enabling workforce opportunities for Georgia's diverse labor markets, and as a future facing strategy for building Georgia's status as a global digital capital. Its main conclusions include the following:

Creative industry investments have succeeded in making Georgia an international center for entertainment content creation. Film, music, and digital entertainment credits have proved a successful strategy for delivering corporate tax relief and sector-specific investments in the entertainment industries. The approach of focused but transferable tax credits yield a double benefit: incentives able to lure entertainment work to the state while also making tax relief available to any enterprise seeking to do business in Georgia. As the number of states offering entertainment tax relief has dwindled, Georgia has emerged as the clear regional winner, eclipsing otherwise robust entertainment work in Louisiana, Florida, and North Carolina. The sector has fully rebounded from the impacts of COVID, and the implementation of Covid protocols in Georgia production studios have enabled Georgia to lead the national recovery in media content creation work. Georgia studios are booked solid, and direct spending numbers have set significant annual records.

The tax incentive system has not only expanded film and television production work, but is rapidly making Georgia a main location for digital content creation on a wide scale: game design, music, visual effects. This broader ecosystem for media work is likely to continue to offer economic benefits to Georgia, so long as the basic contours of the tax credit remain intact. Recent efforts to tally the economic benefits likely underestimate the sector's true impact: federal data sources tend to undercount gig and freelance contractor work, and cases where a freelance artist is now able to boost their income thanks to more robust opportunities. And recent debates over the extent of the credit's indirect economic impact, which reasonably questioned the most reliable multiplier figure, now tend to ignore indirect impacts altogether.

Georgia's media industries are diverse, and the state is well positioned to train a workforce able to address ongoing diversity

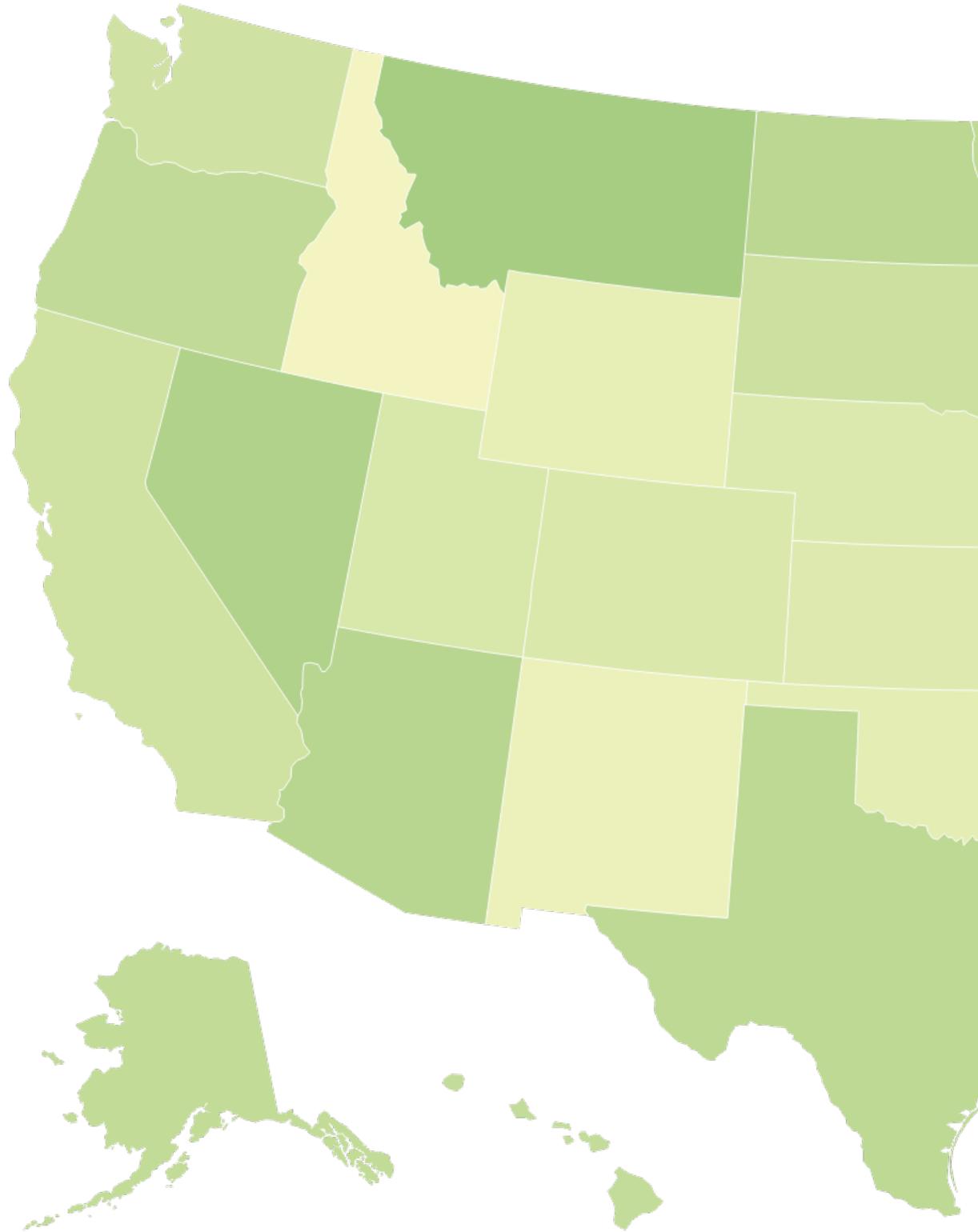
crises in the film and videogaming industries, especially. Georgia workforce training programs are more diverse than the industry as a whole, and the state's leadership in the film, hip hop and other creative industries includes a range of artistic voices eager to tell their stories. Diversity is both a calling card and a brand for Georgia, given the strong role played by companies including Tyler Perry Studios and the state's emergence as a hip hop capital. Georgia's universities, and affiliated initiatives like the Georgia Film Academy, attract increasingly diverse student interest.

Entertainment investments are building Georgia's statewide economy. Creative industry work is not only an attractive option for urban economic and workforce development, but can also be envisioned as contributing to rural economic development as well. To the extent the industry is encouraged, the gains are likely to accumulate in the state's suburban and rural communities. The national jobs and economic impact demonstrate that work in Georgia's creative industries has radiated beyond Atlanta and Savannah, and some of the most rapid growth extends statewide.

Changes to the existing credit would create significant risks to the viability of Georgia's creative sector. States that have implemented caps on media production credits have collapsed the industries in their states (e.g., film and non-news television production activity slumped in North Carolina, Louisiana, and Florida, all to Georgia's benefit, after those states imposed caps). The projected reliability of the ongoing tax credit system have undeniably played a role in facilitating Georgia's transition from an initial phase (where Georgia mainly hosted studios from elsewhere) to a new and more durable era where significant permanent investments in studio relocation and infrastructure are taking place (e.g., Trilith Studios, Gray TV, NBC/Universal).

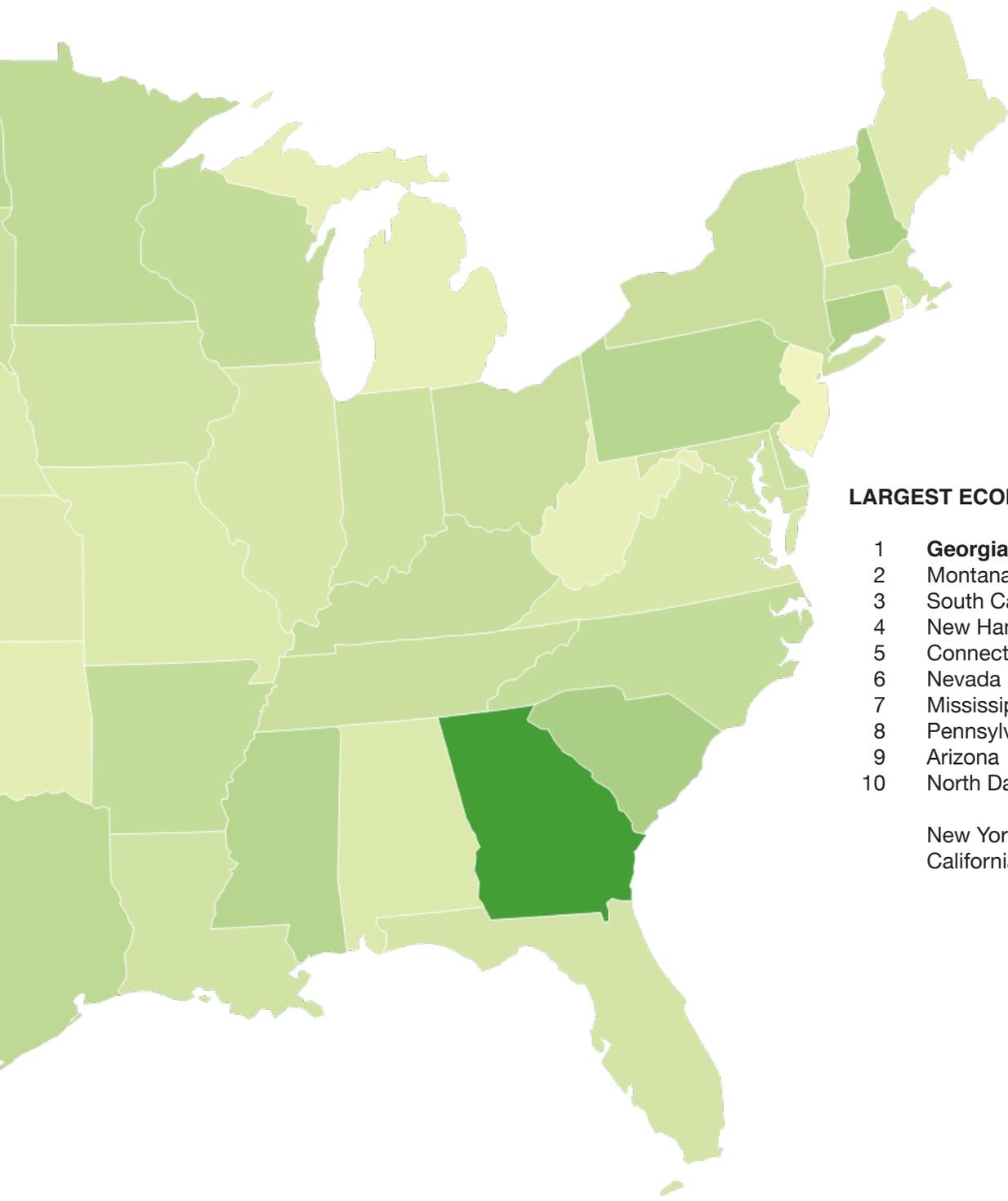
If Georgia wishes to build a digital economy that transcends the important value of its film and television sectors, policymakers should consider targeted further investments in technology centered content creation sectors (such as music, postproduction, videogames and esports). The convergence of content creation platforms, where a worker trained in a particular software package is thus trained for work in film/TV but also game design or music, means investments in these other areas produce benefits greater than the sum of their parts.

The report also notes the need for better data so that the impacts can be more broadly understood. For example, currently available information distorts the policy conversations about tax credit policy around the narrow data emphasized in state audits and to federal datasources that suffer from significant limitations.



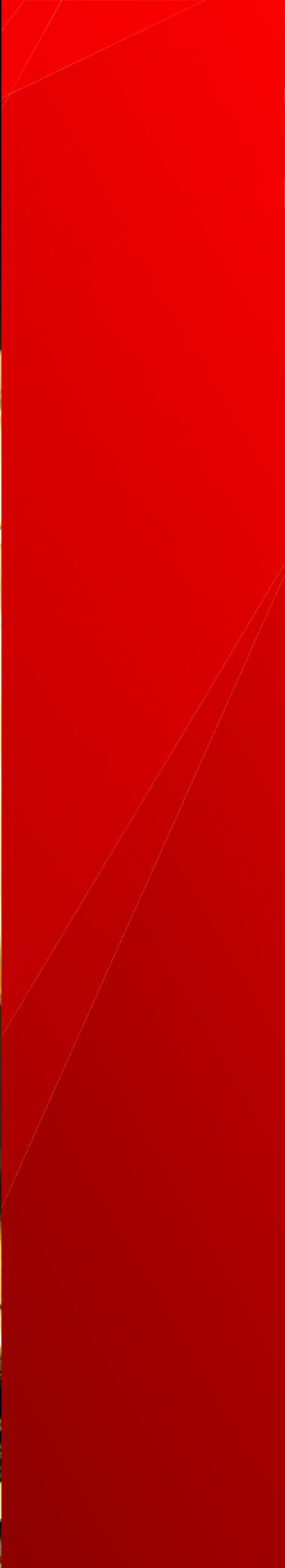
SOURCE: Bureau of Economic Analysis • Created with Datawrapper

Percentage expansion of creative sector economic impact / 2008–2019
Heading into the pandemic economy, no state had generated greater percentage growth than Georgia



LARGEST ECONOMIC EXPANSION

| | | |
|----|----------------|------|
| 1 | Georgia | 210% |
| 2 | Montana | 169% |
| 3 | South Carolina | 167% |
| 4 | New Hampshire | 166% |
| 5 | Connecticut | 164% |
| 6 | Nevada | 159% |
| 7 | Mississippi | 154% |
| 8 | Pennsylvania | 153% |
| 9 | Arizona | 152% |
| 10 | North Dakota | 149% |
| | New York | 135% |
| | California | 128% |



The future of the entertainment production sector

Georgia leads the way in robust workforce training and development to the extent it attracts students, young people, and those seeking to make a career change into the work of media production. Any young person preparing for a career in the 21st century economy will benefit from knowing the basic mechanics of web design, video and audio editing, storytelling and how applications work. GSU's CMII, SCAD, Georgia Tech, Kennesaw State, and Morehouse have all created unique programs emphasizing the collaboration of emerging technology with traditional storytelling.

Announcements made in the last two years, on the heels of Mark Zuckerberg's decision to brand Facebook (now Meta) as the world's first "metaverse" company, include major investment announcements by Microsoft, Nvidia, Epic Games, and Roblox to build metaverse projects, and many of these companies have expanded Georgia operations. Accelerated by the need to work remotely, to be sure, aspirations to develop fully immersive technologies for collaboration are now expanding rapidly. This trend, among others, now means digital production is the 21st century's most vital literacy (website, apps, streaming), and shapes every sector (education, health services, manufacturing, PR/marketing/sales). No new business venture, small or larger, can launch or thrive without a clearly organized plan for online sales, marketing, distribution, and customer service. Any young person preparing for the 21st century workforce must now know something about the basic mechanics of web design, video and audio editing, storytelling, and how applications work.

► Three coming trends

TREND 1 ► The expansion of immersive content. Virtual production has achieved widespread public attention thanks to its role in films like Disney's *Lion King*, and, before that, *Avatar*, *Ready Player One* and *Solo: A Star Wars Story*. A number of production houses are now active in this space, of course—examples include Third Floor, the Fox VFX Lab, Halon Entertainment, FrameStore, and Glassbox Technologies. Increasingly sophisticated efforts to integrate digital tools into real-time capture (e.g., the use of high-resolution moving image digital backdrops and projections, the growing reliance on simulcams, and the use of real time rendering tools) now make the prospects for economic efficiencies in virtual pre-viz more appealing than ever.

Virtual pre-production is here to stay, and cannot be read as simply an industry fad. Virtual pre-viz, especially when married with live action stunt preproduction, seems likely to achieve significant cost savings (better and cheaper, the argument goes, to precisely and virtually coordinate ideal locations, camera and light positions, and stunt action in pre-viz than to pay much more to correct action sequencing later in production, with full crew and talent billing clocks spinning). The production



quality expectations on television shows will only increase, making advanced digital tools even more central. As TV explores the full possibilities for interactive storytelling, the resulting demand for multiple story arcs will further expand.

Feature film and television production has changed to rely increasingly on advanced forms of digital motion capture, special effects, and image compositing. The special effects used to capture performances for games and film/television are technologically aligning (one example: the same software most commonly used in game design, Unreal Engine, was also used to accomplish virtual preproduction and animation work in the film *Lion King*). As David Huerling put it, “existing technology trends are being suddenly supercharged by the necessities imposed by the coronavirus. Shooting close to home has never been more appealing, and that impulse aligns neatly with ongoing advancements in LED backings and virtual production.”¹

The success of the Georgia-lensed *Walking Dead* franchise illustrates how episodic television can form the basis for a multimedia platformed entertainment industry. The franchise began, of course, in the comic book

world first envisioned by Robert Kirkman, and by the start of its fifth season, a staggering average of 14.4 million viewers were watching each episode. *Walking Dead* has been the top cable show for viewers between 18 and 49 for eight of the last eleven seasons, even as its ratings crested and the main series came to a close. Beyond *Walking Dead*, the Chris Hardwick-hosted after show *Talking Dead*, and *Fear the Walking Dead*, AMC has scheduled *Walking Dead: World Beyond*, and spinoffs based on the Rick Grimes and Daryl and Carol characters are in development. Mobile games, toys, and other merchandising further sustain fan interest. And, while audience share declines have grown, “linear ratings don’t mean what they once did in a post-Netflix world. To that end, AMC currently has multiple Advertising Based Video on Demand and Subscription Video on Demand deals for the show. Netflix has the SVOD rights to *Walking Dead*, while Hulu has the SVOD rights to *Fear the Walking Dead*. There are also dedicated *Walking Dead* channels on the AVOD services IMDb TV, Pluto and Dish Network/Sling. AMC has launched a Twitch channel for *Walking Dead* content, including a weekly show that will do deep dives into past

¹ David Huerling, “Creativity goes remote,” *Variety*, November 11, 2020, pg. 80.

episodes.”¹ In 2019, *Walking Dead* and *Fear the Walking Dead* collectively generated \$91.6 million for the AMC networks. “According to data from mobile intelligence firm Sensor Tower, the 2015 mobile game *The Walking Dead: Road to Survival* from Scopely has generated \$372.3 million in lifetime revenue, and has accumulated close to 50 million downloads.”²

TREND 2 ▶ The gig economy and the openings it creates for media entrepreneurship. Enormous attention has been given in the last fifteen years to the emergence of an increasingly gig economy, which is to say, a workforce increasingly dominated by those who operate more as independent contractors than as full-time employees. The implications of this sea change in global labor patterns has important consequences. Critics worry that a shift to project-based work separates workers from the traditional mechanisms of career stability (such as company-supported pensions, access to health insurance, and benefits including subsidized continuing educational credentialing). As workers are expected to fully take on the expenses of their own professionalization, and as public policies created for a different time lose their relevance given the new conditions of employment, some argue a new *precariat* economic class is forming.³ Others more optimistically note that levels of satisfaction tend to range higher among those who are self-employed even in gig work. Even when workers turn to gig work out of economic necessity, it turns out, they often prefer the benefits, such as the power to be

one’s own boss, over the risks.⁴

What the rest of the world is now discovering has long been prevalent in the creative media industries. Work in film, game design, and music production has always been project based—creative teams are pulled together, a film or game or song is created, and the team disperses. Work may be of very short duration—a couple months or even weeks—and seldom connected to health insurance. Because such project-based work is often brief, it’s economic benefits can be hard to track; Bureau of Labor Statistics reports notoriously undercount creative industries employment, for instance, since it only captures full time positions and the duration of creative work is often too brief to tally in annual W-2-based income reporting.

These realities give rise to significant increases in entrepreneurial activity. It can be economically beneficial for performers, craft workers, digital and audio engineers, and others to incorporate as small businesses, to invest in brand promotion and wider marketing, and to create models for creative content distribution more attentive to the social media and streaming platform environments.

Georgia is well situated to build on these models of media entrepreneurship. The Rockefeller Foundation identified Atlanta as one of ten American cities slated to receive small business start-up capital connected to diversity outcomes.⁵ Several media and entertainment companies have made investments in entrepreneurship programs (the Atlanta Hawks, for example, has underwritten a portion of the Women’s Entrepreneurship Initiative).⁶ Rates of entrepreneurship in Georgia slightly outpace

1 Joe Otterson, “State of the ‘Dead’: With a new spinoff launching and its flagship show winding down, AMC’s zombie franchise is at an inflection point,” *Variety*, ****, 2020, pgs. 11–12.

2 Otterson, *Variety*, 2020.

3 See, for example, the case made by Guy Standing, *The precariat: The new dangerous class* (Bloomsbury 2011).

4 McKinsey Global Institute, *Independent work: Choice, necessity, and the gig economy*, October 2016.

5 Jessica Saunders, “Atlanta among ten U.S. cities chosen for new \$10M Rockefeller Foundation program,” *Atlanta Business Chronicle*, June 18, 2020.

6 “Atlanta Hawks to present Women’s Entrepreneurship Initiative \$100K,” *Metro Atlanta CEO*, March 19, 2021.

the national average, and Georgia start-ups on average create more jobs than do small enterprises elsewhere in the United States.¹ Data from 2021 led CardConnect to recognize Georgia as the second most entrepreneurial state in the nation.²

Entrepreneurship is expanding among minority communities—the share of Black entrepreneurs has increased in the last two years, for example.³ That fact has led some commentators to argue that, as the economy emerges out of COVID, the time is right to create a more inclusive entrepreneurship. David Sax, a Bloomberg columnist, for example, has argued: “For the benefit of larger numbers of students and those with more diverse backgrounds, entrepreneurship education should focus on a wider range of paths for starting a business, including small and mid-sized companies, multigenerational ownership, and even lifestyle businesses.”⁴

The wide reach of the statewide University System of Georgia and Technical and Community System of Georgia means the benefits of entrepreneurial education can be utilized as levers of rural economic development.⁵ As the Kauffman Foundation has argued, “What makes entrepreneurship education programs especially valuable is how they encourage a deep sense of professional and personal responsibility at an early age...

Workforce development programs need to be overhauled so that workers receive fresh options while also learning the fundamentals of entrepreneurship—and, in turn, foster economic growth.”⁶

The topics taught in arts- and creative-industry-focused entrepreneurship programs are especially relevant to wider business formation and successful venture scale-up. Design thinking has emerged as a useful tool, developed by those attuned to arts innovation, in organizing disruptive innovation in larger corporate sectors. A number of research initiatives have documented the benefits that accrue when arts and entrepreneurship training programs are conjoined.⁷

TREND 3 ▶ The integration of the computational and media entertainment sectors. As the so-called metaverse comes into clearer reality and wider use, **the computational and entertainment sectors are likely to converge more fully.** Both require high speed digital networks, the capability to sustain complex data visualizations, and both increasingly utilize geospatial tagging and world-building software to create more compelling virtual environments for realistic interaction. Unlike Second Life, which created a closed network for collaborative world building, the promise of the metaverse resides in an open architecture, so that (as Nick Bilton recently described it) one “clicks and you’re on (or in). But there will be countless ways in which you can access it. You can imagine entering some

1 “Entrepreneurship in 2020: Georgia snapshot,” Kauffman Foundation, March 2020.

2 “Georgia residents recognized as 2nd ‘most entrepreneurial’ in the US,” *Metro Atlanta CEO*, December 1, 2021.

3 “Who is the entrepreneur? The changing diversity of new entrepreneurs in the United States, 1996–2020,” *Trends in Entrepreneurship Series*, Kauffman Foundation report, April 2021.

4 David Sax, “A reset for entrepreneurship: Silicon Valley hijacked the concept for the privilege of a few. The present crisis affords an opportunity to redefine it so it’s more inclusive,” *Bloomberg Businessweek*, June 29, 2020, pgs. 28–32.

5 John C. Austin, “With techies fleeing the coasts, America’s heartland has a shot at economic revival—if we save its higher education institutions,” Brookings Institution, February 11, 2021.

6 Randi Druzin, “Young people deserve entrepreneurial opportunities: Policymakers should make a greater effort connecting young entrepreneurs with helpful people and tools,” Kauffman Foundation special report, November 2020.

7 Cf., Richard Paulsen, Neil Alper, and Gregory Wassall, “Arts majors as entrepreneurs and innovators,” *Small Business Economics* 57: 639–652 (2021); Peter Purg, Silvia Cacciatore, and Jernej Cucek Gerbec, “Establishing ecosystems for disruptive innovation by cross-fertilizing entrepreneurship and the arts,” *Creative Industries Journal* (2021) preprint (<https://doi.org/10.1080/17510694.2021.1969804>).



aspects of it on your smartphone or computer, or perhaps through a game console or your television, which would give you a different kind of immersive experience. And where the true metaverse experiences will likely flourish is through virtual reality and augmented reality.”⁸

As a 2019–2020 XR Industry Insight Report noted, “Many sectors are really seeing the value that can be brought from investing in XR capabilities, particularly education, architecture, engineering, construction, manufacturing and healthcare fields. For those that take the dive into immersive tech, the gains are real and demonstrable, strengthening the case for investment and deployment. **A massive 93% of enterprises that have decided to use VR have seen a positive effect on their business** with 57% saying that uplift was very positive. It is worth noting that these respondents to our survey are relatively early adopters and therefore likely to be enthusiastic and successful users. Nonetheless, this is spurring on greater investment that will further accelerate gains and

adoption.” Investment cycles continue to favor integrated XR/VR/AR mergers, despite the disappointing results generated by highly hyped firms like Magic Leap.⁹

The large tech companies are now regularly announcing acquisitions that confirm the idea of convergence. Microsoft has been investing in game and entertainment content creation for some time now, especially putting resources into its Xbox hardware business, and including the acquisition of the game studio Bethesda and Activision Blizzard (a \$68 billion buy) in addition to their growing Game Pass subscription service. Microsoft has been on something of a game studio acquisition binge: ZeniMax Media, Rare, 343 Industries, The Coalition, Mojang, Ninja Theory, and more. Facebook owns Oculus and has been building out its Spark AR platform. Apple is developing an AR overlay called AR[T]. Google bought Typhoon Studio and has been working to layer augmented reality information onto GoogleMaps and YouTube. Unity has purchased

8 Nick Bilton, “Into the metaverse: Like it or not, the next stage of the internet revolution is coming,” *Vanity Fair*, February 2022, pgs. 40–41.

9 For a skeptical take on the prospects for virtual reality, see David Karpf, “Never stop failing up,” *Wired*, November 2021, pgs. 18–19.

Weta Digital, which they described as a metaverse play. The Unity CFO has been quoted as saying that their non-games business is now growing even faster than its core game design business. The anticipated synergy between information technology, computational media, and digital entertainment is coming into sharper focus with each merger.

For some time, virtual reality has been looking for a breakthrough moment that would enable it to grow beyond the confines of gameplay and other simulated environments. The sector is now again attracting significant investments, as engineers continue to work through the challenges of player motion sickness, a lack of a common platform standard, and economic upheavals. A growing number of developers are working on VR platforms; in late 2020 Valve released its first “Half-Life” game in more than ten years as a virtual reality exclusive, a fact that also increased sales of its headsets. PwC’s Global Entertainment and Media Outlook for 2021 estimated that global VR content revenues reaches \$1.8 billion in 2020, up YTY by 31.7%, and PwC projects 30% annual growth reaching \$6.9 billion by 2025.¹

A key is that VR’s salvation likely will lie in the convergence of game design and immersive content production. As game companies work to make their products more immersive, that in turn is expected to grow consumer interest.² The trend was accelerated by the pandemic; in early 2021, Facebook announced that more than 60 of their VR games (made for Oculus Quest and Quest 2) made more than one million dollars each in 2020. VR utilization is growing on Steam, the PC-based gaming platform, and price drops are making the purchase of VR headsets more attractive. Jaron Lanier, the

scientist who coined the term “virtual reality,” is skeptical about the prospects that VR will ever dominate gameplay but has argued the spillover economic use cases that are triggered by game development (he has noted the use of VR in developing automobile, surgical, and vaccine technologies) may create their greatest impact.³

As the computational ecosystem enables wider access to 5G internet, the fast expansion of VR applications will likely accelerate. As Peter Rubin puts it, “once you start pulling down data at speeds more than 100 times faster than your current phone, wireless headsets will be able to render VR representations that look exactly like you, doppelgangers that vault across the uncanny valley and ape your features and tics as you talk,” and “it doesn’t stop” there. “The mirrorworld, that global layer of data driving augmented reality, will finally leap past Pokemon Go and Minecraft Earth to become a ubiquitous, useful infrastructure,” a “warp pipe big enough and fast enough to make the entire world broadcastable at the exact speed of experiencing it.”⁴

The emergence of new financial systems (crypto-currencies, blockchain, etc.) also have implications for the consolidation of the computational and entertainment industries. The prospects for content creation may be significantly disrupted and transformed by blockchain, for example. Patrickson has noted that such systems, “by providing systems for digital rarity, transparent distribution records, faster royalty payments, dynamic pricing models that support micro/complex/compound payments, plus distributed data collaboration, blockchain-inspired technologies do seem to offer emerging tools for a more streamlined, artist-centric digital ecosystem...”⁵

1 Janko Roettgers, “VR is media’s fastest-growing market: It’s still small, but it’s growing faster than console gaming, streaming, and podcasts,” *Protocol*, July 12, 2021.

2 Derek Swinhart, “Virtual reality has real problems. Here’s how game developers seek to delete them,” *Washington Post*, January 21, 2021.

3 Qtd. in Noah Smith, “Virtual reality is starting to see actual gains in gaming,” *Washington Post*, February 4, 2021.

4 Peter Rubin, “The next virtual reality will become the new reality,” *Wired*, January 2020, pg. 41.

5 Bronwin Patrickson, “What do blockchain technologies imply for digital creative industries?” *Creativity and Innovation Management* 30: 585–595 (2021).

In the southeast, a once vibrant sense of competition among Georgia, Florida, Louisiana, and North Carolina has now fully consolidated in Georgia as the others have either capped or shrunk their incentives.

► Georgia's Production Incentives

By now the story of Georgia's investments in the film and television industry have been often told and debated. Whether the industry's economic impact is closer to \$11 or \$4.4 billion, a number whose calculation is driven by varying estimates of the expenditure multiplier effect, the number of active productions has swelled. In the 2017-2018 fiscal year, 34 major film productions and 33 independent films shot in Georgia (in 2008-2009, three features and eight indies were produced here).¹ In 2020, even at the height of the COVID shutdowns, 234 feature films, television productions, commercials, and music videos were made in Georgia. By 2022 the direct spend total generated by the film and television industry alone had jumped to \$4.4 billion.

Much of the scholarly literature attentive to the economic impact of state-level film industry production credits is critical of these efforts. A number of studies have argued to soften the more ambitious claims made relating to economic impact and net new employment. A common criticism is that state "race to the bottom" competitions for film industry business do not result in net new economic activity, but only move it from tax jurisdiction to tax jurisdiction, while diverting public resources better spent on other public needs. Others reflect the ideological perspectives that reflect conservative and liberal worldviews. Conservatives, for example, see tax incentives as counterproductively interfering in the work of otherwise free markets, a futile and misdirected attempt to pick winners. How can we know, one might ask, whether investments in, say, health or financial services innovation might provide better economic returns to taxpayers? Liberals, on the other hand, often see production tax credits as corporate welfare.

These ideologically sophisticated positions are complicated by the reality of the entertainment industry and its emergence in Georgia.

¹ Angelique Jackson and Gene Maddaus, "Did Hollywood help turn Georgia purple?" *Variety*, December 2, 2020.



Whether the government is generally able to pick winners better than a completely free market, **Georgia appears to have picked a winner in prioritizing media production.** The state's emergence as a production center has been unprecedented—now ranking among the nation's top three, with Los Angeles and New York—and direct spending alone in Georgia (in 2022) reached \$4.4 billion (the figure having dropped to \$2.2 billion in 2020 on account of COVID). In its 2020 rankings, *Business Facilities Magazine* had ranked Georgia first in film production.

After a period, roughly a decade long, when more than 40 American states offered film industry tax incentives, that number has retracted to some extent and only a handful of states today seriously contend for film industry production work. In the southeast, a once vibrant sense of competition among Georgia, Florida, Louisiana, and North Carolina has now fully consolidated in Georgia as the others have either capped or shrunk their incentives. Similar outcomes can be observed in the west, where California has reasserted its primacy in the sector, and in the northeast, where New York has done the same. The sheer volume of work done in Georgia, the sharp rebound in Georgia-located production work as regional COVID waves have ebbed and flowed, and the increasing diversification of the state's

entertainment sector all can be understood as vindicating the decision by the state's political leadership to invest in the creative entertainment industries.

The structure of tax incentives also subverts the argument that targeted sectoral credits are inevitably less economically beneficial than general tax relief. Georgia enables credit transferability, where a company unable to achieve the full benefit of a Georgia tax credit can sell them to other companies who can. The outcome can be understood as a “best of both worlds” situation. That is, the credits originate as supporting media production work, thus providing a sectoral discount for highly expensive short term projects. But the benefits of transferability mean that this sectoral focus is dispersed throughout the entire corporate sector. Any company highly motivated to make or expand a significant business or workforce development investment in the state of Georgia can purchase a discounted credit. **The production sector is boosted, but so too is the overall climate for business investment.**

Sidestepping or forgetting this fact about the Georgia credit can distort the public argument about its value. Critics of the credit commonly point, for instance, to the quickly escalating dollar value connected to media industry credits, when the reality is that a sizable portion of granted credits are actually claimed by other

sectors—light manufacturing, health, financial services, and so on. What can be critiqued as a film-only focused benefit is actually a much broader strategy for supporting investments in the broader Georgia economy.

New seed investments made to expand the credit to associated entertainment industries, especially music and videogames, have leveraged fast growth in those sectors that also imply that targeted investments are able to galvanize workforce development. While the music industry has long thrived in Georgia, activity in that area has grown at a faster pace since the credit extended to the industry, a fact signified in fall 2020 by the decision of the national GRAMMY organization to build a major museum and recording facility in Georgia.

The net economic impact of state tax credits is notoriously difficult to calculate. The research literature tends on balance to be skeptical of the economic gains argued by state run incentive proponents, but the findings have been mixed.²

2 Some studies argue that state economic development incentive programs have mixed effects. Cf., E.J. Blakely and N.G. Leigh, *Planning local economic development* (Thousand Oaks, CA: Sage, 2017), and T. F. Buss, “The effect of state tax incentives on economic growth and firm location decisions: An overview of the literature,” *Economic Development Quarterly* 15.1 (2001), pgs., 90-105. With respect to film in particular, some research argues that incentives create jobs, generate revenues, and trigger other indirect economic benefits. Cf., R.V. Adkisson, “Policy convergence, state film-production incentives, and employment: A brief case study,” *Journal of Economic Issues* 47.2 (2013), pgs. 445-454; N.F. O’Brien and C.J. Lane, “Effects of economic incentives in the American film industry: An ecological approach,” *Regional Studies* 52.6 (2018), pgs. 865-875. Still others are strongly critical of film incentives. Cf., M. Thom, “Lights, camera, but no action? Tax and economic development lessons from state motion picture incentive programs,” *American Review of Public Administration* 48.1 (2018), pgs. 33-51. Other research notes that the economic impact depends on where the investments go. An example of this is the argument made by Miller, that the economic benefits will be greater if they attract episodic television, since TV productions last longer, employ full time workers for longer periods, and may also invite worker relocation. See J.L. Miller, “Louisiana disguised: Film tax incentives and location representation in contemporary Hollywood films,” *Journal of Popular Culture* 50.3 (2017), pgs. 466–489.

Bureau of Labor Statistics data can be difficult to adapt to assess production industry work for several reasons. It’s creative industry labor categories are both overly broad and too narrow. Film industry worker totals include the number who sell popcorn in movie theaters, while the most-closely associated post-production category misses most freelance work. The “gig,” or project-based, nature of most media production also makes BLS a conservative information source, since full-time salaried positions are the most readily captured by its data collecting techniques. It is thus possible, and advocates for the industry would say likely, that growth in film production has had economically galvanizing benefits for thousands of workers who might have worked before on two or three annual short term production projects but now work on eight or ten, but those gains may not be captured at all in the labor statistics.³

The economic impact literature points to an important factor shaping debates over film industry incentives. Some research notes that while incentives can generate net employment, potentially boost wages, and achieve other economic outcomes, they are likely to be insufficient, if taken alone, in leveraging significant long term industry investments. If a state otherwise lacks the infrastructure, the basis for a well-trained production workforce, and is a logistically difficult environment in which to work, then tax credits alone will not create a new film industry from nothing.⁴

3 BLS data is not the only information pertinent to assessing employment impact. Other studies rely on tax data (in Georgia this information is tracked by the Georgia Department of Revenue and the Georgia Office of Planning and Budgeting) and workforce data collected by the Quarterly Census of Employment and Wages (QCEW reports).

4 One might read Thom and Button, both critics of incentives, as offering versions of this argument. See Thom, “Light, cameras, but no action,” and P. Button, “Can tax incentives create a local film industry? Evidence from Louisiana and New Mexico,” *Journal of Urban Affairs* (2018), DOI: <https://doi.org/10.1080/07352166.2018.1530570>.

This may explain why some states have largely abandoned incentive programs (for example, Alaska). But judged by these wider metrics, Georgia presents a much stronger case: prior to the 2005 passage of the Georgia Entertainment and Industry Investment Act and its expansion in 2008, the state had already built a thriving entertainment industry (especially as a regional music and sports capital), was a regional production capital (with large audiences and nationally significant corporate media presence, including Turner and its associated networks, and Cox Enterprises), and well positioned given transportation and IT infrastructure to support industry work. There is thus the possibility that tax credit programs that might fail in situations where the film and TV industry is a new arrival will succeed in leveraging significant economic gains where the ground is better prepared.

The vexed attempts to calculate the multiplier benefits of expenditures on media production also make policy making evaluations difficult to make with confidence. Multiplier figures have traditionally simply used the standard, so-called RIMS II number. The thought was that this enabled apples-to-apples comparisons across sectors, each of which present complications. And so roughly similar multiplier figures were used to calculate the rippling economic benefits

gained by film industry work as were used to determine the multiplied economic impact of the state’s sports venues and its university system.

But, of course, use of a standard cross-sectoral number to estimate the economic multiplier benefits of film industry benefits can fall apart on closer examination, and these were examined at length in summer 2020 state-sponsored audits. Some economists doubt that investments in the entertainment sector multiply at all—the idea is that total budgets for entertainment are stable, and so if a family chose not to spend money going to see a movie, they would simply shift that money to see a theater production or a soccer game instead. Thus: no net new expenditures. Others concede a multiplier effect but question its magnitude, and the extent to which the benefits remain locally generative of new wealth within Georgia’s borders. Within an incentive system that allows tax credit portability, that is, even if industrial investments are made, the multiplier benefits are arguably not accruing to the benefit of the Georgia economy. Summer 2020 state-sponsored studies, emphasizing these and other uncertainties, significantly reduced what they concluded were the actual multiplying economic benefits of investments in the media industries.

EXPLORING PRODUCTION CREDIT BENEFITS MORE WIDELY



Credits can be utilized to expand the benefits of infrastructural investments statewide, including to rural Georgia.



Investments in the advanced technology digital sector help Georgia achieve its aspirations to be a global digital capital, given the rise of computational media.



Production credits, invested in the creative industries, can diversify Georgia’s creative workforce.



An expanded creative sector leverages workforce development, given strong student interest in creative industry careers.



This project does not re-litigate those issues. Nor does it perform alternative economic impact assessments. With respect to the existing incentive system, the point might simply be made that **the narrowly (and understandable) focus on return on investment, shaped within the larger contours of ideologically framed perspectives on any targeted tax incentives, may omit other important dimensions.**

These include historical concerns that states would race-to-the-bottom, involving themselves in futile bidding wars that simply move production projects from jurisdiction to jurisdiction, luring films here that would have simply been otherwise made there, all while foregoing tax revenue, are out of step with the more complex national reality. The number of states seriously contending to build a media production sector by relying on tax production credits is actually falling, while efforts to expand industry support are growing in the remaining states (e.g., Texas, California, New York). The same dynamic is at work in the southeast. Tax credit systems have been eliminated or seriously capped in Florida, North Carolina, and Louisiana, all of which had made early commitments to serious public investments, although state conversations are underway in all three to consider reactivating support. **Georgia has been the beneficiary of those reversions: in every case, workforce and**

projects that had projected work in Florida and other southern states came to Georgia.

It is easy to find commentary emphasizing that point, where the theme is the common sense of loss that “[fill in the blank] has lost [this-or-that] major project to Georgia.” And **while the Georgia credit is more generous now than it was at first enactment, the generosity has not been achieved by raising the core credit percentage, but by very slowly expanding access to the credit so that the gains seen in film might also be realized in the music, games, and digital entertainment sectors.**

Traditional objections to generous tax incentive systems, including the idea that their very generosity invites fraud, appear to have been corrected given the actions of the 2020 legislative session. Press coverage of production incentives nationwide often calls attention to lax oversight as a reason to reject the idea of sectoral incentives entirely. Those who have attended to the Georgia situation are aware of the 2020 findings reached by the Georgia Department of Audits and Accounts Performance Audit Division. Those findings concluded that because the “limited requirements and clarity in state law, inadequately designed procedures, insufficient resources, and/or agency interpretations of law,” the Georgia credit was insufficiently rigorous in assuring taxpayer investments were achieving



maximum value.⁵ The report suggested steps to tighten accountability in the credit's administration, the major ones of which were enacted in the 2021 session.

In contrast to economic development incentive strategies that seek to lure immobile industries that may only infrequently entertain invitations to relocate (imagine, for instance, an automobile factory), and which therefore require states to package highly specific incentive packages for particular companies—perhaps the most extreme example of governments playing the game of “picking winners”—**the media industries are much more mobile and responsive to incentive structures and programs.** Film industry work is project based. A production is launched, a final film is brought to fruition and then circulated,

and the talent disburses until the next project. This means that incentives can much more quickly mobilize enormous economic activity—in Georgia growth in film industry work has been exceptionally quick—without waiting for the more long term proposition of luring one vast infrastructure firm after another. This also means, by the way, that apparently modest tweaks to film incentive systems can dry up film production work in a region almost instantaneously—**within a year after production incentives were capped in Louisiana and Florida, for example, large studio industry project work had mainly disappeared.**⁶

The movement of investment capital toward and away from entertainment project work is also highly fluid, and this has often been cited

⁵ Greg S. Griffin and Leslie McGuire, “Administration of the Georgia film tax credit: Generous tax credit and insufficient controls incentivize misuse,” Georgia Department of Audits and Accounts Performance Audit Division, Report No. 18-03A (January 2020), pg. 1.

⁶ This distinction between mobile and immobile industries is a key starting point for the analysis done by Meares, Hutton, Brown and Morris. See Wesley Meares, Aaron Hutton, Savannah Brown, and Rachel Morris, “Show me the money: An analysis of Georgia’s state film tax credit program,” *Questions in Politics*, vol VII (2020), pgs. 40–55.

as an argument for incentives. Blockbuster films are expensive—hundreds of millions of dollars once talent, production, and distribution costs are factored in—with no audience guarantees. As Meares et al., note, “consumer reception is prone to change. Additionally, political instability in overseas markets, currency changes, and various counterfeiting, black market industries represent challenges and liabilities for any given film’s success at the box office.”⁷ Tax incentives are thus a major stabilizing force in securing capital for big projects.

The mobility characterizing content creation work today has created historically unprecedented opportunities to establish a significant market presence in states like Georgia, in an environment that has long favored the sunk cost infrastructural investments made by firms doing media work in Hollywood and New York. Movies can be more fully shot and edited on location than before, when much of the work occurred in permanent studios. Even iconic backdrops that would have required specific locations in the past can now be replicated virtually, using advanced special effects technologies. Major films are thus now more mobile than ever before—**an often commented on benefit Georgia brings to this situation is the geographical proximity of diverse locations (mountains and beaches and plains all within five hours) and the ease with which talent can easily navigate Georgia’s world-leading airport in Atlanta to arrive for work from anywhere else on earth.**

The instabilities of the current economic moment also complicate more ideologically straightforward arguments for and against the perpetuation of state film production incentives. While Georgia fared better than other states in economically navigating COVID-19—tax revenues in Georgia did not collapse to the



extent they did in other states—the nature of the uncertainties created by the pandemic may strengthen the case for sustaining the credit system. For example, the case has recently been made that tax credits can generate more significant economic multiplier benefits during economic downturns—the argument has a common sense appeal, since it seems plausible that when investors are navigating financial uncertainty and uncharted social transitions (a world without theaters? workplaces without offices?), production incentives can sustain an economic lifeline for investors who are on the fence, knowing the demand for entertainment is robust but exhibition prospects uncertain.

The legislature routinely grapples with the challenge of sustaining economic vibrancy in rural areas, given depopulation and other demographic changes (e.g., aging, and the long-term tendency of populations to move from rural communities into the suburbs and larger cities). **Work in the creative sector is a prime candidate for economic rejuvenation that is geographically dispersed.** With the right digital infrastructure and base of local creative talent, any locale can attract film or television productions. And when a studio is built, the infrastructure value is the full equivalent of a light manufacturing center, IT supported, sound and light controlled shell with well-equipped load-in access. As this infrastructure expands and local talent connects to filmmaking, the

7 Meares et al., “Show me the money,” pg. 41.

economic benefits are also geographically expanded.

Efforts to assure that growing economic prosperity in Georgia reach all its citizens are also the focus of strategic planning connected to reducing economic inequality and undoing the way it falls more heavily on communities of color. The media industries are not immune to racism and sexism, of course, and Hollywood struggles to conquer them. But if the core creative teams working in game design and film production are inadequately reflective of the nation's diversity, the audiences for their content are surely not. Minority media makers are more urgently than ever drawn to careers in the creative industries, since they present opportunities for sharing a broader range of our stories, articulating points of view otherwise less readily available, and connecting every citizen to the potential benefits of economic prosperity.

Those strategizing Georgia's future often settle on the idea that the state will thrive to the extent it emerges as a global digital capital. Those who express these aspirations are not just imagining digital film production or esports, to be sure—they are also thinking more widely about how to attract information technology, health informatics, data science,

biotechnology, and computationally cutting-edge financial service companies to Georgia in ever growing numbers. But in schools struggling to evoke student interest in the core STEM disciplines, the work of learning to make entertaining content is often today a gateway that induces students into more advanced work in computer science, information systems and network security endeavors, and other scientific and medical enterprises. Computer science programs increasingly teach game design as a way to spark interest in advanced coding work.

These themes—the potential implications of an ongoing robust creative media sector for Georgia's future—form the basis of the information presented in what follows. **Creative project work that is geographically accessible and dispersed, that tells the story of Georgia's people in a more interesting and inclusive way, and that situates Georgia's workforce as motivated to lead a digital technologies future—these are benefits not often understood when the lens is narrowly focused on tracking net tax revenue, ROI, and full-time permanent job creation.** But without attending to these other issues, the true costs and value of statewide incentive investments will never be fully understood.



► Entertainment after COVID

The major content creation industries have been hit hard but unevenly by the successive waves of COVID. Television and film production were, for a good part of late 2020, almost completely shuttered while new safety protocols were devised and implemented. The exhibition industry—movie theaters and theme parks especially—encountered long term threats to their survival.

Meanwhile, entertainment platforms consumed at home—videogames, esports, streaming media, and to a lesser extent virtual reality—broke sales and use records. At-home gameplay was fun and provided a social outlet, especially for those playing the large franchise games like “Call of Duty.” At the height of the lockdown in March, April, and May 2020, game sales surged 35%, 73% and 52% respectively, and hardware sales grew even more explosively (63%, 163%, and 56%). While analysts express caution given the ongoing uncertainties, sector leading studio heads have often articulated reasons why these new levels of engagement might stick: “Activision Blizzard says because of connections made by new players, Electronic Arts concurs given engagement levels, and Take-Two adds in the changes in demand they see for interactive entertainment.”⁸

COVID-19 has thus altered the conduct of “business as normal” in mainstream film and television production, causing us to reassess the ways we organize the labor of capturing images. Georgia’s own Tyler Perry Studios pioneered one model of safe filmmaking by placing cast and crew in a “bubble” for the duration of the shoot. The Georgia Film Academy has demonstrated industry leadership by making an online course available to professionals around the world seeking to determine best practices for capturing images in a pandemic and beyond.

In June 2020 Governor Brian Kemp announced plans to reopen the film/television industry in Georgia as a way to jump-start the economy following the pandemic shutdown. Gov. Kemp estimated that 40,000 workers would be employed as 75 production projects started in the state within the next calendar year, including major productions from Disney, Netflix, NBCUniversal, Paramount, and Warner Bros.

The paradox—unprecedented demand for entertainment content and an unprecedented set of constraints that blocked content production—implies a faster than normal rebound for the media industries than for others whose entire business model has been thrown into question by a new normal of social distancing and its consequences for social interaction. Those elements of the production sector able to work remotely thrived as the pandemic raged. Postproduction and visual effects work that could be accomplished on widely distributed computer networks continues apace—one of the first major projects to be completed that way, ironically, was the Amazon Prime show “Utopia,” which follows the implications of a viral outbreak and was planned long before COVID came onto the scene.⁹ Postproduction work was still complicated—the same bandwidth issues confronting parents home schooling their children were compounded by the high bandwidth demands to produce accomplished special effects. But digital content creation firms were already prepared to cope given a business model reliant on sophisticated IT pipelines.

Entertainment production companies in 2020 faced the same broader headwinds as other companies, especially the management of liability and insurance costs, against the

8 Brian Henry, “Analysts and Publishers Say the Boom in Game Sales is Here to Stay,” *GamesIndustry.biz*, September 30, 2020.

9 The story of how this was accomplished was recounted by Jessica Rhoades, the “Utopia” executive producer. Jessica Rhoades, “Lessons from Pandemic Post-Production,” *Variety*, 2020, pg. 14.



backdrop of worker concerns about on-set safety protocols. A return to work agreement was finally agreed to in September 2020, several months after the production unions (Directors Guild of America, SAG-AFTRA, IATSE, and Teamsters) had, in June, adopted “Safe Way Forward” protocols, and after an Industry-Wide Labor Management Safety Committee Task Force had published return-to-work regulations that same month. Amazon, Apple, CBS, Disney, HBO, Netflix, and others negotiated for four months to finalize the agreement given the complexities of safe testing, protective equipment needs, clean, quarantine pay, and workplace redesign.¹⁰

Georgia was especially aggressive in implementing set protocols, and was the first state to adopt best practices. As Lee Thomas, Deputy Commissioner of the Georgia Film Office, described it, “Temperature checks, regular COVID-19 testing, zoning, sanitizing, and maintaining social distancing were some of the methods employed by productions to mitigate the possibility of transmission and put thousands of Georgians and Georgia businesses working and supporting the industry in our

10 For a summary of these negotiated outcomes, see David Robb, “Hollywood Labor Unions and Management Finalize Return-to-Work Agreement,” *Deadline*, September 21, 2020.

state back to work. According to the local IATSE 479, these methods have been very successful—with a less than 1% positivity rate on cast and crew on Georgia sets.”¹¹ In Georgia, Tyler Perry’s “Camp Quarantine” protocols laid the foundation for earlier returns to full work than were readily available elsewhere.

Several things are certain about post-coronavirus filmmaking. As more Americans spend more time at home, there is pent-up demand for new content that will need to be filled post-pandemic. Viewers will still want to see big-budget blockbuster filmmaking (the kind that happens in major studios like EUE/Screen Gems and the former Pinewood Studios Atlanta, now Trilith Studios). New paradigms of image capture that work with smaller crews to ensure safety are likely to emerge. Post-coronavirus project work will need to be nimble and responsive to quickly changing situations.

Trends in pandemic filmmaking / content creating points to a rise in the democratization of content creation and its creators. In fact, at the beginning of the pandemic in March 2020, technology news site *The Verge* announced that the pandemic would be “Twitch’s moment.”¹² The site proved prophetic: Twitch currently has more than 7.13 million active streamers monthly, adding hundreds of thousands of new broadcasters since the start of 2020. Viewers spent 5.71 billion hours watching live-streamed content on Twitch in May, nearly double the 867 million hours spent in December, according to market-research firm International Data Corp.¹³

While esports and video game fans have been creating and livestreaming content for at least a decade, the desire to interact with others during the quarantine combined with the need for content—and the ability to earn an

11 Lee Thomas, “Georgia film and television production off to strong start in 2021,” *Metro Atlanta CEO*, February 19, 2021.

12 Bijan E. Stephen, “This is Twitch’s Moment,” *Theverge.com*, March 18, 2020.

13 Sarah E. Needleman, “Everyone is a Live-Streamer in Covid-19 Era,” *WSJ.com*, August 9, 2020.



HOW GEORGIA'S ENTERTAINMENT SECTOR **BOUNCED BACK SO QUICKLY**

Innovative production protocols

Tyler Perry Studios was an inventive leader in designing a model for creating quarantined production that enabled its main shooting to continue with minimal interruptions.

Significant expenditures to modify studio infrastructure

Millions of dollars were spent by Georgia studios to train workers, bolster staffing to implement COVID protocols, and to physically modify studio infrastructure to better protect against the pandemic risks.

Strong partnerships with industry workforce organizations

From the start of the pandemic, IATSE's leadership and the head of the other production guilds were in close contact to create pipeline modifications and safety protocols.

A commitment to training and education

The Georgia Film Academy developed training modules that were quickly utilized nationwide by the content creation sector.

income—has prompted a wave of people with other interests to also create and livestream their own content. Facebook Inc., YouTube (owned by Google) and Patreon have also all experienced significant increases in new broadcasters. Facebook livestreams from pages created by individual creators and businesses doubled in the month of June 2020 from the prior year. Providers of digital tools for broadcasters also experienced an increase in the use of their products.¹⁴ Growth in the game development and animation sectors appear to be sustainable post-COVID. While patterns of gameplay are reverting to normal growth rates as people return to work and are occupied outside the home, they are still growing. The hunger for well-produced live entertainment is also rebounding as Broadway, music venues, and large-scale entertainment offers more sophisticated efforts to stage technologically impressive audience-drawing productions.

Meanwhile, other changes in the corporate structure of the entertainment industries also seem in position to further democratize content creation and initiate long-term change in what may be thought of as “the biggest transformation that Hollywood has seen in decades.”¹⁵ Legacy media companies, like WarnerMedia (HBOMax) and NBCU (The Peacock) introduced streaming services during the global pandemic, delays in production and the collapse of the box office. Corporate consolidation among the media distribution companies has occurred alongside the proliferation of media content creation start-ups taking advantage of the possibilities for building audience and fan interest on the web, on the most popular social media platforms, and given the continuing proliferation of special interest cable channels hungry for fresh content. Patterns of remote work popularized in the last

two years have accelerated the physical dispersion of creative work—why should a digital editor pay real estate and cost of living premiums to reside in Los Angeles or Manhattan when, for a drastically lower cost of living and an impressively rich quality of life and given a good computer connection, she can thrive in Albany or Valdosta?

Productions have significantly rebounded. Two key markers of project development — preproduction activity on programs or films, and reserved time in the state’s main studios — are strongly positive. Nearly forty scripted film and television projects were already underway by early 2021, and that number is climbing.¹⁶

The jolt COVID provided for old debates over workforce transformation, supply chain, and information technology will outlast the rise and fall of variants. And not only COVID, but understanding the implications of coming artificial intelligence, manufacturing automation, and emerging new materials—all these draw attention to the need that workers be adept at advanced technologies. Because we are learning to manage in a world where dangerous infectious diseases can widely circulate across national borders, a workforce with advanced digital skills will be essential as we face the unknowable future. A 2019 study done by the Markle Foundation makes the case, for example, that those trained in advanced digital skills will be economically favored in a post-COVID world, the best prepared to face coming digital blindspots, the tendency to ignore the full-system consequences of technological change. They argue, “Avoiding the Digital Blindspot demands that we focus on building not just new tech skills, but also the sort of foundational digital literacy that undergirds a more digitally resilient workforce capable of adapting and responding to new systems, tools, and processes. This requires action across the ecosystem.”¹⁷

14 Sarah E. Needleman, “Everyone is a Live-Streamer in Covid-19 Era,” *WSJ.com*, August 9, 2020.

15 Natalie Jarvey, “The High Cost of Chasing Netflix,” *HollywoodReporter.com*, February 3, 2021.

16 Thomas, “Strong start,” February 19, 2021.

17 *Digital blindspot: How digital literacy can create a more resilient American workforce*. A 2019 report of the Rework America Business Network, a Markle Foundation Initiative.

► Creative Content is Healthy and Growing

The expansion of Georgia’s creative industries, starting with film, television and music, and having by now expanded into virtual and postproduction, animation, gaming, and esports, has been a significant economic success story.

On a number of fronts, and across all creative sectors, the prospects for the industry as COVID recedes and the economy returns to normal are vibrant:

Film & Television. Although Georgia’s film industry existed before the 1970s, it was the 1972 production of the film *Deliverance* that brought the state national recognition as a film locale. *Deliverance* stars Ned Beatty, Ronny Cox, Burt Reynolds, and Jon Voight as Atlanta businessmen whose rafting excursion down a remote mountain river goes horribly wrong. Shot along the Chattooga River in Rabun County, the film was both a commercial and critical success.

The film’s economic success was not lost on then-governor Jimmy Carter, who went on to establish the state film commission in 1973 as a

way to market Georgia as a shooting location for future projects.

The small town of Covington would later feature prominently in a long-running successful television series, *In the Heat of the Night* (1988-94). The television series is loosely based on the 1967 film and the 1965 novel of the same title. It starred Emmy winner Carroll O’Connor (who also served as an executive producer) as police chief Bill Gillespie and Emmy and Oscar-nominated actor Howard Rollins as police detective Virgil Tibbs and was broadcast on NBC from March 6, 1988, until May 19, 1992, then on CBS from October 28, 1992, until May 16, 1995. Covington stood in for Sparta, Mississippi and production of the show became part of everyday life for the residents of the town, with many locals hired as extras and a number of area businesses serving the production crew.

Other television series filmed in Georgia during that time include *I’ll Fly Away* (1991-93), an NBC series starring Sam Waterston as a southern lawyer at the dawn of the civil rights movement was shot largely in historic Madison



as well as in Conyers, Covington, Monticello, Newnan and other locations. The Aaron Spelling-lensed series *Savannah* (1996) set in the city of Savannah, was the network's most successful program at the time.

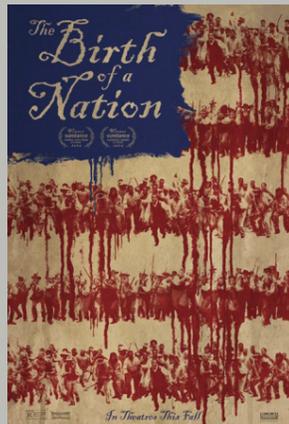
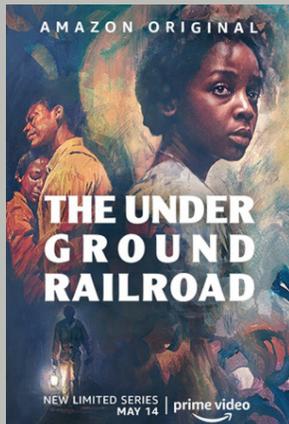
Along with television series, feature-film production continued in Georgia throughout the 1980s and 1990s. *Sharky's Machine* (1981), *My Cousin Vinny* (1992) and *Remember the Titans* (2000) were shot throughout the state. *Driving Miss Daisy* (1989) was set largely in the Atlanta area. The film won several Academy Awards, including Best Picture and Best Actress for Jessica Tandy. For the film *Fried Green Tomatoes* (1991), film crews transformed a local establishment in the small town of Juliette, in Monroe County into the cafe, where it remains as a tourist attraction for fans of the film.

The city of Savannah continued as a destination for production. *Forrest Gump* (1994) became forever linked with Savannah because of the bench sat on by main character, Forrest, played by Tom Hanks. The Academy Award-winning film *Glory* (1990), based on the true story of the first all-Black volunteer company to fight in the Civil War was also shot in Savannah and other coastal areas of the state. *Midnight in the Garden of Good and Evil* (1997), Clint Eastwood's adaptation of the best-selling work by John Berendt, was also shot in the city. In 2008, Georgia significantly expanded tax credits available to film and television

production, and the film industry in Georgia has undergone remarkable growth, generating \$2.9 billion in direct spending in fiscal year 2019 and a total economic impact that may range as high as \$9.5 billion (more conservative estimates of economic impact that received legislative attention in fall 2019 still assessed likely impact as in excess of \$5 billion, and these figures do not tally related economic impact in the game design, music, and wider creative industries that would connect to this degree). The state produces more feature films in the top 100 box office category than any other state, including California and New York. The film output from Georgia places the state in the same category with the production of entire countries.

There were 412 film and television productions shot in Georgia in fiscal year 2022. Recent film and television productions shot in the state include AMC's *The Walking Dead*, Netflix's *Ozark* and *Stranger Things*, and HBO's *Watchmen*. Feature films recently shot include *Avengers: Endgame*, *Jumanji: The Next Level*, *Spider-Man: No Way Home*, Dwayne Johnson's *Jungle Cruise*, *Coming 2 America*, and *Suicide Squad 2*.

According to the Georgia Department of Economic Development, as of June 2022, Georgia is home to 4,859 motion picture and television industry businesses, including 3,694 production-related companies.



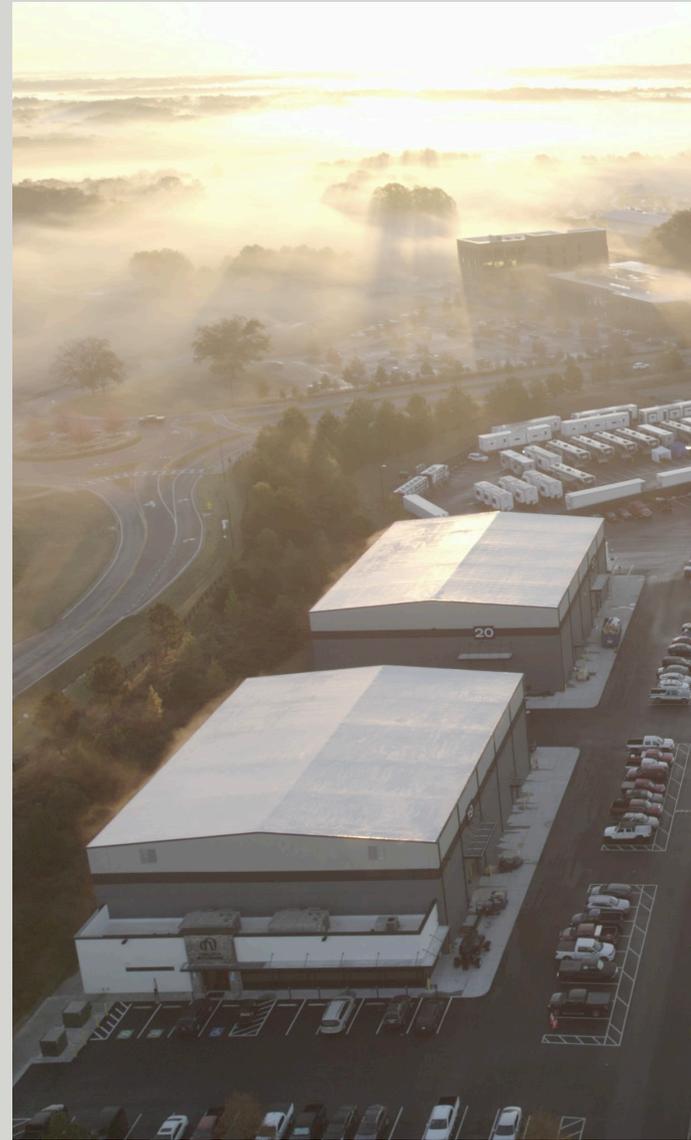
TRILITH STUDIOS

Trilith Studios is one of the largest purpose-built movie studios in North America and provides the film industry with world-class facilities, state-of-the-art technology, and premium content. It is home to blockbuster films like *Spider-Man: No Way Home*, *Avengers: Endgame*, *Black Adam*, *Zombieland: Double Tap*, and *The Suicide Squad*, live audience TV shows like *College Bowl*, *Family Feud*, *Judge Steve Harvey* and *Wild’N’Out*, and streaming shows like *WandaVision* and *The Falcon and The Winter Soldier*. Set across 700 acres, Trilith Studios has more than one million square feet of production facilities, including a first-of-its-kind virtual production stage that offers the highest quality interactive production values in the industry, 24 premium sound stages (with an additional 8 opening in summer 2023), construction workshops, costume shops, and an extensive 400-acre backlot. By summer of 2023, Trilith will have over 1.5 million square feet under roof.

With nearly 4,000 highly skilled workers on the Trilith Studios lot who support film and television productions, supply-chain vendors, and studio operations, Trilith has become the preferred partner for producers of some of the most popular entertainment content in the world. Key to Trilith’s success is the nearly 40 businesses located on the lot that provide producers with best-in-class goods and services, including Technicolor, SGPS/ShowRig, Herc Rentals, Smart Post, The Third Floor, and MBS Equipment Company.

Many of the onsite vendors, like MBS Equipment Company – the largest grip and lighting equipment provider in the nation - have grown with Trilith since the studio opened its stages in 2014 (as Pinewood Atlanta Studios). In 2022, MBS opened its purpose-built 100,000 square-foot East Coast Headquarters at Trilith.

After opening its first virtual production facility, the Prysm Stage, in spring of 2022,



the studio landed Francis Ford Coppola’s *Megalopolis* as the first production to use the new technology. The 18,000 sq ft immersive and interactive stage is the first of several leading technologies to be established in Trilith’s Creative Technologies District, a 10-acre secured site located between the Studios’ main lot and the Town at Trilith. The Creative Technologies District has five stages with office blocks committed to housing emerging technologies. The studio plans to break ground



on two Creative Office Centres, each with approximately 70,000 square feet of Class A creative office space, in 2023.

As part of its commitment to advancing the production of high quality content, the studio holds equity in and directs two content companies - Believe Entertainment Group, an Academy and Emmy-award winning studio best known for Kobe Bryant's animated film Dear Basketball and American Anthems, and 24 Watts, a children's ed-tech-tainment company

focused on powering the minds of children everywhere by building engaging 360-degree brands that connect multi-dimensional physical, digital and virtual experiences.

Trilith has recently announced the creation of the Trilith Institute, which is launching workforce and education opportunities in the creative industries for students of all ages, and in cooperation with schools, colleges, and universities.

CINELEASE

Cinelease opened Atlanta operations in 2007 with a vision, just 8,000 square feet of warehouse space in East Point, and only 1 employee. In just over a decade, Cinelease has become one of the most prominent employers in Georgia's film industry as it serves statewide productions from Clayton, Gwinnett, and Newton Counties, and has nearly 60 full-time lighting and grip staff operating out of 200,000 square feet of space – highlighting its commitment to creating job opportunities and long-term investments in the state.

In 2011, as Georgia's entertainment industry was emerging and attractive tax incentives repositioned the state, cities like Covington were poised to become key components to film and television. Cinelease was quick to respond, utilizing 45 years of industry experience to provide services to clients and, later, diversify into the Atlanta-based studio management division.

In partnership with Rahim Charania and Cary Goldman of Covington Media Holdings LLC, Cinelease took transformative steps in 2020, opening Cinelease Studios-Three Ring, a purpose-built film and television campus with 6 sound stages totaling 110,000 sq. ft., 60,000 sq.ft. of mill space, 12 office bungalows totaling 30,000

sq. ft., and an expansive wooded and developed backlot. The studio has been leased at 100% capacity since opening with clients including Lionsgate, Paramount Pictures, and Skydance Media.

With demand for content at an industry-wide high, Cinelease Studios-Three Ring is in phase 2 of development that will add 8 new sound stages totaling 144,000 sq. ft., 72,800 sq. ft. of additional mills, and 70,000 square feet of increased office space. Once completed in 2023, the campus will have 250,000 square feet of sound stages, 170,000 square of mill space, and 100,000 square feet of office support. "Cinelease has been a pioneer in Georgia's entertainment industry. Our senior leadership had the foresight to see the potential in the state, and we are proud to have acted as a catalyst for the regional expansion of our industry", said Gannon Murphy, General Manager of Cinelease Studios. "We can confidently say that investing in an expansion of this magnitude reinforces Cinelease's commitment to making an impactful contribution to the workforce, tax base, and client experience in Georgia".

The impact of Cinelease's physical presence in Georgia has created a ripple effect of organic growth, both for the company and the local economy. "Production crews range from a handful to several hundred, but regardless of size, the local spend fuels Georgia's economy", says Jessa Grazioplene, Director of Studio Client Relations. "As job creation for the state's entertainment industry continues, our vertical growth expansion of our 572,000 square foot, purpose-built studio reinforces our positive impact and ongoing commitment to calling Georgia our home."



DATA POINTS

GEORGIA'S **FILM PRODUCTION** SECTOR

According to the Motion Picture Association, the motion picture and television industry in Georgia is responsible for more than **137,510 jobs and nearly \$3.82 billion in total wages**, including indirect jobs and wages.



Business Facilities Magazine ranked **Georgia the number one Film Production Leader in July 2020.**

During fiscal year 2021, the film and television industry set a new record with **\$4 billion in direct spending** on productions in the state. The Georgia Film Office reported that these numbers are due to a variety of factors in addition to the state's overall attractiveness to the film industry, including an earlier safe return to production, pent-up demand from the COVID-19 hiatus, and the associated expenses to mitigate risk. New safety protocols also added to production costs and timelines.

In fiscal year 2021, **366 productions** filmed in the state, represented by **21 feature films**, 45 independent films, **222 television and episodic productions**, 57 commercials, and 21 music videos.

By the end of 2021, Georgia had built more than **3 million square feet in purpose-built stage space**, according to FilmLA research. Georgia now exceeds New York, Toronto, London and Vancouver, British Columbia, in soundstage space. Only Los Angeles remains larger. This makes Georgia **4th worldwide** in dedicated film production space. Another 1.2 million sf is expected to be added in 2023 and 2024. **New, repurposed, and projected studio expansion will create roughly 7 million sf of Georgia production space.**

A 2019 Woods & Poole Economics report notes that **local television broadcasting** in Georgia created more than **\$20 billion in economic impact.**

More than 44,000 Georgia jobs benefitted from that economic impact, according to the report.

In 2021, Georgia-lensed productions earned **62 Emmy® Award nominations** from the Television Academy.



Top-nominated shows include "WandaVision" (23 nominations) from Disney+ and Marvel Studios, HBO's "Lovecraft Country" (18), "The Underground Railroad" (7) from Amazon, and "The Falcon and the Winter Soldier" (5) from Disney+ and Marvel Studios.

Diversity progress, but more to be done: Women and people of color gained ground in 2020 in all film and television categories, including lead actors, total cast, writers and directors. People of color and women are still underrepresented as film writers and directors and typically helmed lower-budget films. Of the films that had a theatrical release in 2020, minority audiences accounted for the bulk of ticket purchases. Films with



casts that were at least 21% minority enjoyed the highest online viewing ratings among all racial groups in the all-important 18–49 age category. 2021

(UCLA) Hollywood Diversity Report

Electric Owl Studios, currently under construction, will be the first **LEED-certified film environment** in the southeast, and perhaps nationwide.

Film production work is ranging well beyond the Atlanta metropolitan area. Since 2019, for example, film productions have generated nearly \$5 Million in economic impact in **Augusta** and supported nearly 500 jobs held by local film crew personnel. Augusta Technical College has announced new film training options now underway; the college is partnering with the Georgia Film Academy to offer classes in Augusta. **Athens** will be home to its first soundstage now that Athena Studios has broken ground. Once completed, the 45-acre campus will feature more than 350,000 square feet of production and educational facilities and sound stages and will partner with University of Georgia's undergraduate film studies program and the Georgia Film Academy.

Production slumps caused by COVID shutdowns hit California the worst; they experienced the steepest year-over-year decline, and the state's total of 97 series in 2021 was down 39% from 2020. New York and British Columbia also dropped. But Georgia remained unchanged. One explanation was that

Georgia resumed filming earlier than many other states. The crisis shut down production here for only two months in spring 2020, versus three months for Los Angeles and most other film hubs. *Los Angeles Times*, reporting on FilmLA data, Dec 22, 2021

EAGLE ROCK

Eagle Rock Studios' three locations—two in Norcross and one in Stone Mountain—are owned by Eagle Rock Distributing Co., an Anheiser Busch distributor that in 2015 found itself with an abundance of warehouse space ready to convert and open as sound stages. It was an opportune time when numerous productions were looking for studio space in Georgia. The third-generation family-owned business transformed warehouses into state-of-the-art studio space specially designed to fit the needs of film and television productions.

Eagle Rock Studios has hosted numerous productions, and recent ones include the original musical drama *Queens, Dynasty*, and *The Wonder Years*. Other productions at its facilities include *Devious Maids*, *Genius*, *Greenleaf*, *Mother's Day*, *Ozark*, *The Passage*,

and *Underground Railroad*.

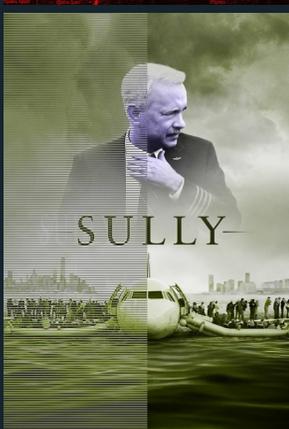
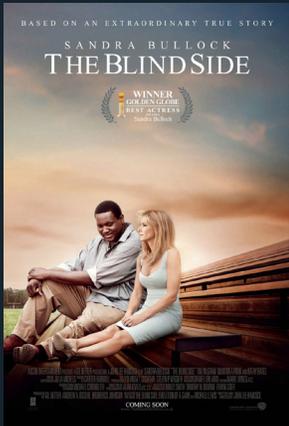
Its original Norcross location, with 470,000 square feet of space, is the largest stage complex under one roof in the United States. It includes three production office hubs and four 30,000-square-foot stages. Eagle Rock Studios features an expansive main breezeway, 40 loading docks surrounding the facility, and storage and support space that includes shops and areas for holding and catering.

Eagle Rock CEO Steve Economos runs the company with his three brothers, Nick, Andrew and Mike. The booming film industry and stellar tax incentives in Georgia led the family to pursue renovating the largest building on Eagle Rock's property at 6269 Best Friend Road in Norcross—formerly a dry foods storage facility for Kraft Foods—into studio space.



TOP GROSSING HOLLYWOOD FILMS

SHOT IN GEORGIA SINCE 2008



1. **Avengers: Endgame**, 2019, \$858,373,000
2. **Black Panther**, 2018, \$700,426,566
3. **Avengers: Infinity War**, 2018, \$678,815,482
4. **Spiderman: No Way Home**, 2021, \$609,892,000
5. **Hunger Games: Catching Fire**, 2013, \$424,668,047
6. **Captain America: Civil War**, 2016, \$408,084,349
7. **Jumanji: Welcome...**, 2017, \$404,515,480
8. **Fast & Furious 7**, 2015, \$353,007,020
9. **Hunger Games: Mockingjay 1**, 2014, \$337,135,885
10. **Spider-Man: Homecoming**, 2017, \$334,201,140
11. **Jumanji: Next Level**, 2019, \$320,314,960
12. **Thor: Ragnarok**, 2017, \$315,058,289
13. **Hunger Games: Mockingjay 2**, 2015, \$281,723,902
14. **The Blind Side**, 2009, \$255,959,475
15. **The Fate of the Furious**, 2017, \$226,008,385
16. **Ant-Man and the Wasp**, 2018, \$216,644,740
17. **Fast Five**, 2011, \$209,837,675
18. **Bad Boys for Life**, 2020, \$206,305,244
19. **Black Widow**, 2021, \$183,651,655
20. **Ant-Man**, 2015, \$180,202,163
21. **X-Men: First Class**, 2011, \$146,408,305
22. **Ride Along**, 2014, \$134,938,200
23. **Identity Thief**, 2013, \$134,506,920
24. **Divergent: Insurgent**, 2015, \$130,179,072
25. **Sully**, 2016, \$125,070,033

IATSE

The **International Alliance of Theatrical Stage Employees (IATSE)** provides skilled project workers to the film and television industry in Georgia, and given its certification, continuing education, and organizational work, has played a key role in the expansion of media work in the state since the creation of the production credit. The crews of Local 479 now work in state-of-the-art stages on big budget box office blockbusters like “Spider-Man: No Way Home.”

Local 479 has grown with the state of Georgia. It is now the largest Studio Mechanics local in the nation, with a jurisdiction spanning

most of Georgia and Alabama. Crafts covered by Local 479 include: art department, construction, grips, lighting technicians, greens, props, set dressing, special effects, sound, and wardrobe.

In the past decade the membership of Local 479 has more than tripled, surpassing 6,000 people during the last half of 2021. More Georgians than ever before now work in the film and television industry.



MBS

The **MBS Group** is a studio management and production services support company formed in 2013. Over the past eight years, the company and its subsidiary, MBS Equipment Company, have grown from providing lighting and grip rental services to just three North America studio facilities to currently servicing over forty partner studios globally, including 300+ stages.

Georgia serves as MBS Equipment Company's East Coast equipment hub and consistently competes with the UK as the MBS Group's second largest market outside of Los Angeles. Since setting up operations in Georgia in 2014, MBS Equipment Company has grown from operating out of 20,000 square feet

of space to now working out of 180,000 square feet between Atlanta and Savannah, servicing productions at over 70 Atlanta-area stages as well as supporting location work statewide.

At its start, in 2014, the core staff included five full time employees and two day players. Today, 73 full time employees and 15 day players work in Georgia, and the company expects to significantly grow, as more than sixty percent of its day players have converted to full time employees over the past 7 years, with five employees relocating from other markets to Georgia. MBS payroll has seen an increase of nearly 1,500% since 2014, and many team members have bought their first homes as part of the MBS family.

Music. The central role played by live performance in the music industry means it was especially hard hit by the pandemic (Pollstar estimated that in 2020 music venues nationally lost \$9 billion in revenue, that out of a total ticket sale stream of just \$12.2 billion¹⁸), but music is rebounding with all the other creative industries, facilitated by the state’s exceptionally rich history as the source of musical innovation and performance excellence. Through COVID, live music sector employment dropped 42%, compared to March of 2020. But **Georgia’s music industry is an economic engine that supports approximately 70,000 jobs directly in live and recorded music**, and the pandemic actually boosted streaming consumption. At the height of the shutdowns in 2020, Spotify gained 27% in subscribers, and Apple grew by 32%. And even at the worst, Morgan Stanley estimated that global consumer spending on streaming grew 18%, to \$19 billion.¹⁹ Prior to the COVID-19 shutdown, 9,613 music establishments were operating statewide.

Additionally, music intersects and contributes to a wide variety of sectors, including film and TV, e-gaming, and technology services, all of which rely on music to support their product development. Music is equitable, open to all Georgians and the music workforce is the most diverse of any entertainment sector. In a special report on Atlanta’s emergence as a force for hip-hop women, *Atlanta Magazine* noted that “Artists looking for a taste of 80s and ad-libs flocked to the city, but it would remain, for the most part, a boys club.” But “today, the genre is seeing a new wave of women rise to the top—and Atlanta is the epicenter. In the last two years, most of the women who have been included on the coveted *XXL* Freshman list



have either been from Atlanta or have called it home at some point, including Latto, Flo Milli, Rubi Rose, and Lakeyah. Even artists who aren’t from the South, such as Nicki Minaj, Saweetie, and Cardi B, and making hits here.”²⁰

Eleven years ago (in 2011), the Georgia Music Partners estimated that Georgia’s music industry created an annual economic impact of \$3.7 billion, with music responsible for employing 19,955 people.²¹ Today, according to updated research from GMP, “Georgia’s musical legacy is an integral component of its past, present, and future. In 2021, Economists Inc. reported that recorded music contributed \$2.5

18 Qtd. in Jem Aswad, “Facing the music,” *Variety*, June 24, 2020, pg. 21.

19 Devin Leonard, “Making that money,” *Business Week*, April 26, 2021, pg. 50.

20 Kelundra Smith, “New flavor in your ear,” *Atlanta*, August 19, 2021, pg. 80.

21 Cited in Dave Williams, “Georgia lawmakers eyeing tax breaks to boost music industry,” *Atlanta Business Chronicle*, July 29–August 4, 2016, pg. 3A.

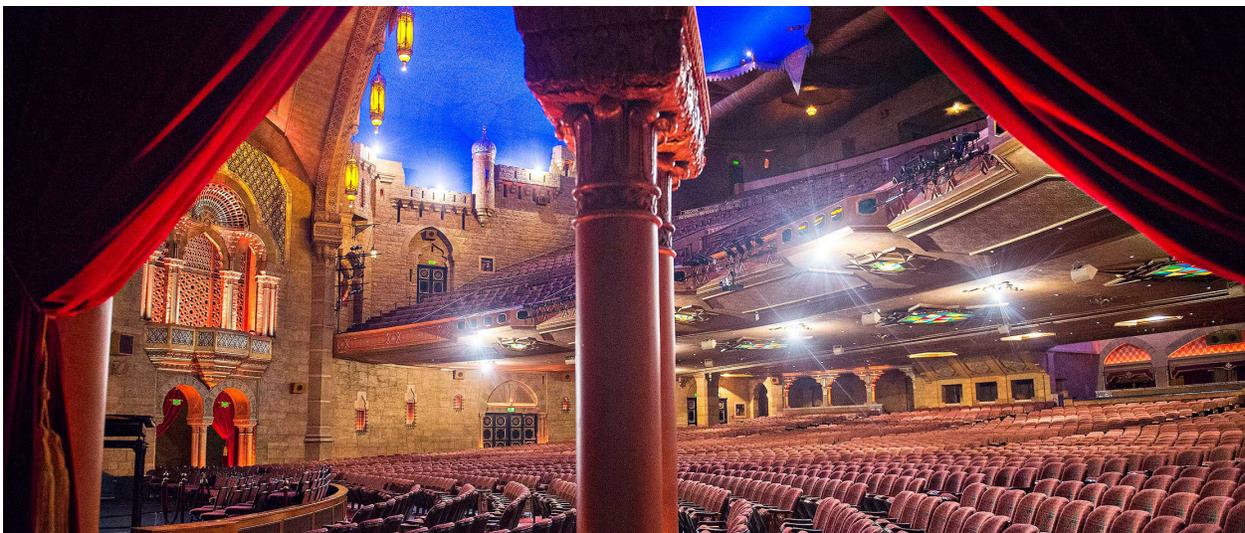
BLUESTAR STUDIOS

BlueStar Studios is an exciting venture that is constructing a state-of-the-art production campus in Forest Park, just 20 minutes south of downtown Atlanta. Spanning an impressive 53 acres, the campus will house purpose-built stages along with the renovation of National Register historic buildings and is set to be available from the summer of 2023. Located just 10 minutes from Hartsfield International Airport, the Forest Park campus is the first purpose-built studio facility in Clayton County.

BlueStar Studios will blend the history of Fort Gillem with newly built stages and offices, revitalizing the former Army base that has been abandoned for the past decade. With over 600,000 square feet of production and office space planned, the campus will feature 14 stages ranging in size from 20,000 to 30,000 square feet. At the heart of the campus stands the historic Fort Gillem headquarters building, spanning 108,000 square feet, which adds a touch of grandeur to the surroundings.

BlueStar Studios aims to provide production teams and studios with the finest stages, equipped with cutting-edge technology, all within a stunning, historic location just a short distance from Atlanta airport. The campus boasts exceptional technical capabilities, including two intersecting 100GB fiber lines, ensuring seamless support for various technical needs like cloud services and virtual production.

With development planned in phases until 2025 and an estimated investment of \$180 million, BlueStar Studios is poised to become a premier destination for film and television production.



billion to Georgia's GDP and Oxford Economics reported that live music contributes \$2.7 billion. There are 48 post-secondary programs in music and music business, and Georgia is home to 16 professional orchestras and over 100 music festivals all around the state. From Leesburg, Ga. population 3,000 home of Luke Bryan to Childish Gambino's home in Stone Mountain population 6,000. Georgia music is written, produced, recorded, distributed, manufactured, and sold every day across this state."

Among Georgia counties, Fulton ranks in the top 10 in the nation with highest percentage of registered recording facilities. Fulton County's music ecosystem was responsible for generating a total output of almost \$1.67 billion and a Value Added (GVA) of almost \$1.07 billion to the local economy. Dekalb County, the first municipality to have an Entertainment Commission that represents film, music and digital technology, has nearly completed action in a recent 5-year future forward strategic plan.

More than any other creative industry sector, the reach of the music industry in Georgia is geographically dispersed, and music often plays a role in urban revitalization. In Macon, for example, the renewal of downtown was accelerated by the rehabilitation of the old Capricorn Recording Studio on Cotton Avenue. A four-building cluster that had been first acquired by a group that included Otis Redding, the complex has fallen into disuse. But grant support from the Peyton Anderson Foundation and support from Mercer University resulted in the launch of Mercer Music at Capricorn—the complex includes a music museum and an incubator space. NewTown Macon also purchased the old Bibb Theater. While downtown development activity slowed on account of COVID, the anchoring role played by music and other entertainment venues will play a key role as Macon continues to grow and prosper.²² Today, Macon is

²² Randy Southerland, "The music is back in downtown Macon," *Atlanta Business Chronicle*, December 13, 2019.

updating its music strategy based on their most recent arts and culture study.

Statewide—from Columbus to Athens to Augusta and Savannah—music stakeholders are working with the city leaders, tourism, economic development, and arts councils to create and sustain jobs, investment, and music tourism. That work is culminating in efforts to create a GRAMMY Museum in Atlanta that will train students for music industry work while also commemorating Georgia's musical heritage. The plans were the result of a \$500,000 feasibility study undertaken by the GRAMMY Museum Foundation and the Georgia Music Accord.

The International Federation of the Phonograph Industry (IFPI) has argued that "a strong music community has been proven to attract other industrial investment, along with talented young workers who put a high value on quality of life, no matter their profession." Keith Perissi, who directs the Joel A. Katz Music and Entertainment Business Program at Kennesaw State University, has been quoted as noting that nearly two-thirds of KSU's graduates in the program stay in Georgia to start their careers.²³ And as the Georgia Music Partners point out, "a recognition among governments and other stakeholders worldwide is growing that music rich communities can deliver significant economic employment, cultural and social benefits. As immersive media is transforming the way content is consumed, the opportunity exists to holistically drive growth by educating and elevating the creative arts." As a part of a broader strategy "to strengthen and create a sustained entertainment economy, we need a holistic approach, to market and cultivate the entire entertainment industry in Georgia—and music can be the tipping point."

²³ Dave Williams, "Grammy Museum in Atlanta to highlight Georgia's musical heritage," *Atlanta Business Chronicle*, November 11, 2020.

Videogaming & Esports. The Georgia game design sector receives support from the statewide tax incentive, and this has led to growth in the state’s game design sector. According to Georgia Game Developers Association data, since 2005, **the number of game studios in Georgia has grown from eight to 141, a 2,000% increase.** In 2020, the most recent available data, gross revenue earned by Georgia studios exceeded \$577 million, with an economic impact of \$770 million. Game design and development work provides a promising pathway into middle and upper class careers. In 2019 the average game studio salary was \$72,000.²⁴

The games industry is in global transition and quickly expanding, and videogames are now the world’s largest entertainment industry. The competitive world of videogame competition, esports, has been focused mainly so far in Asia, and especially South Korea, “the most fiercely skilled gaming region on the planet.”²⁵ One explanation for Korea’s global dominance refers to the large demographic fact of underemployed working poor, raised in a hyper-competitive environment and well educated, who find tournament competitions attractive, at least until they begin mandatory national military service. But the country’s long-time infrastructural investments in the internet has also provided a situation where competitive excellence can flourish. Today most American esports franchises are built on the strength of Korean recruiting.

The Korean example suggests how

24 These figures were published in the *GGDA 2020 Annual Economic Impact Study*, organized by Prof. Jay O’Toole, on the business faculty at Elon College. Given the understandably close attention to economic impact multiplier calculations, it may be useful to know that the GGDA study employed standard RIMS II multipliers, connected to NAICS 51120 (that employment category is the one most commonly used to tally work in the videogame industry). The study uses a regional input-output model to estimate net economic impact.

25 Jonathan Lee, “Why so many esports pros come from South Korea,” *New York Times*, October 27, 2020.



international competitive interests in videogames are likely to grow elsewhere. As Tara Fickle, a University of Oregon professor, has put it, “Games involving chance, professionalization, or monetization are often aspirational discourses. They can provide alternatives for people for whom education or family inheritance isn’t an option, almost like a social trampoline... [I]t reinforces the idea that if you work really hard, you will succeed.”²⁶

26 Quoted in Lee, *NYT*, October 27, 2020.

SKILLSHOT MEDIA

Skillshot Media is an international turnkey esports solution provider based in Atlanta. The firm provides consulting, tournament & league operations, live-broadcast, branded video content, brand activation, and live esports events. To

date company events have paid out over \$10 million in esports prizeing and delivered over one billion esports video views.

Beyond production services, Skillshot connects leading brands with engaged esports fans, fostering positive social impact.

SKILLSHOT MEDIA

- ✓ Skillshot Media, initially created within Hi-Rez Studios (creators of SMITE), provides critical infrastructure & services for the growing esports and gaming industry.
- ✓ Beyond production services, Skillshot connects leading brands with engaged esports fans, fostering positive social impact.

100+ EVENTS 1 Billion VIEWS 10,000 COMPETITORS \$10 Million IN PRIZE MONEY PAID

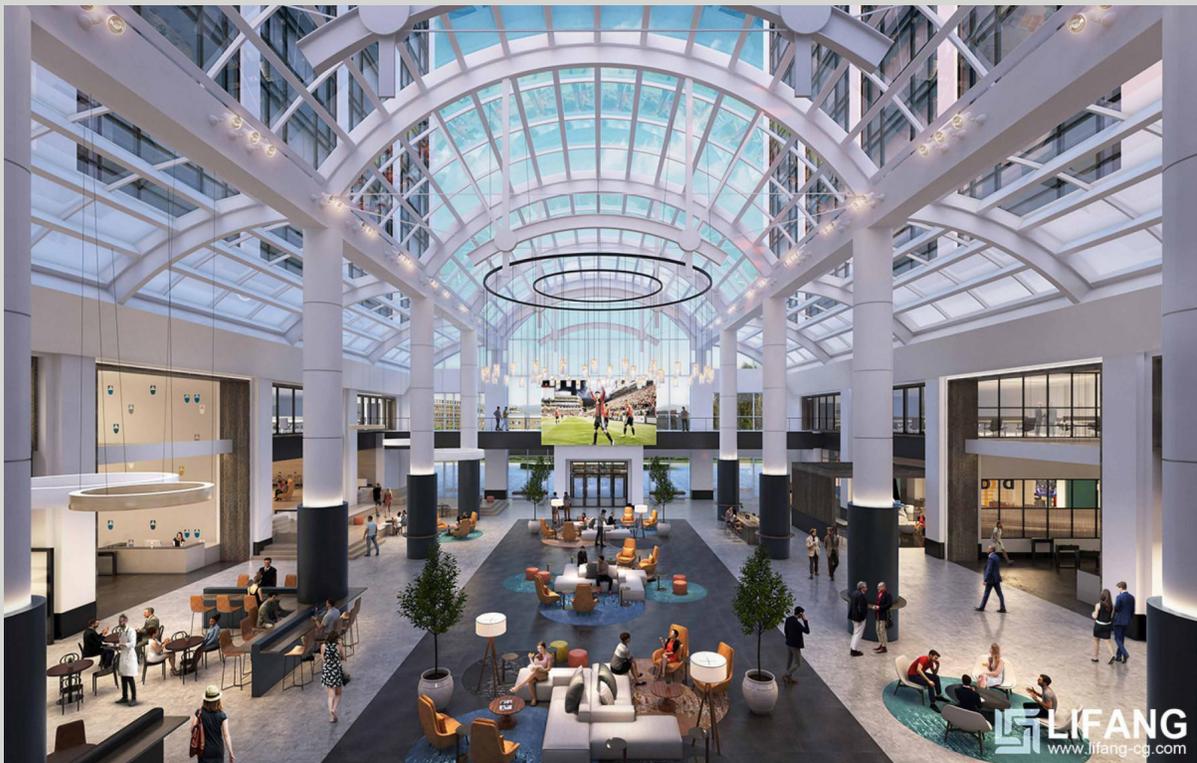
Entertainment tourism and festivals.

WHAT MAKES US GHOST GAMING

CULTURE
We are an Atlanta-based organization focused on cultivating the best talent in gaming, providing platforms to create unique partnerships in sports, music, lifestyle and entertainment.

COMMUNITY
We have grown a passionate gaming audience of over 20 MILLION followers focusing on authentic content that they find irresistible.

INCLUSIVITY
We are dedicated to finding and developing exceptional talent that represents the diverse gaming landscape.



AXR EDGE (formerly Axis Replay)

AXR Edge opened in 2019, and launched with \$1.8 million in investment capital that enabled the launch of Atlanta operations. Today its core studios, situated on Spring Street downtown, include roughly 12,000 square feet in production space. Its main mission: to create fun, social, welcoming experiences that strengthen connections in our community, and to become the most recognized brand in gaming and entertainment experiences. Since its founding, AXR Edge has grown to have generated \$400 million in revenue (\$100M contracted annual recurring revenue), and its project work has taken place at more than 50 locations globally, including at ten flagship locations. More than 750,000 players have been reached by its programs.

AXR Edge's notable trajectory has been frequently honored. It won the *Atlanta Business Chronicle's* 50 on Fire and Blaze Awards. *Atlanta Inno* voted it a Top 20 Startup to Watch in 2020, and *Atlanta Magazine* named it the Best New Gaming Destination of 2019. Twenty eight professional sports and esports teams have used the AXR Edge facility for practice space.

The company has significant plans for expansion. Its Universal Citywalk Hollywood location in Los Angeles will see an estimated 9.1 million visitors in 2023. Its global growth aspirations include plans to open two additional locations in 2022 in Atlanta, Los Angeles, and Manchester, UK that will focus on live + streamed hybrid experiences, including esports lounges in Atlanta Hartsfield Airport and Seattle International Airport.

AXR Edge has also partnered with the Georgia Film Academy, the GHSA, and United Negro College Fund to run summer camps that reached 13,000 Georgia high school students in 2021. The program partnered operationally with HyperX and Mamba Sports to create an esports summer camp program that builds well-rounded gamers interested in esports,

a unique program that includes gameplay coaching, health, wellness, and nutrition, production, content creation, and competition. With GYO Score, participating high school students can earn esports scholarships.

Other significant collaborations include the Atlanta Players Cup. Collaborating with MLB and the Atlanta Braves, AXR Edge created, produced, and promoted the event. Similar events are anticipated that will activate collaborations with the Atlanta Hawks, Atlanta Falcons, Atlanta United, and Atlanta Dream. And the Imagine Festival Esports Event organized, with a local music festival and its 63,000 attendees, an esports activation where pro-gamers played with DJs and artists to create content.

Working with Cxmmunity and Twitch, AXR Edge has played a key role in the launch of the HBCU Esports League, a collaboration that has raised \$5 million in esports scholarships and funding that will benefit 128 HBCU's nationwide.



DATA POINTS

GEORGIA'S VIDEOGAME / ESPORTS SECTOR

The latest data from the Georgia Game Developers Association reports that **141 game design studios are operating in Georgia**. They employ more than 4,000 Georgians and generate an **economic impact exceeding \$750 million**. The number of Georgia game studios has steadily increased, from 112 in 2015 to 141 in 2020.

Newzoo, the global gaming market generated an estimated \$159.3 billion in revenue in 2020, representing a 9.3% year-over-year growth rate over 2019. Newzoo projects **worldwide video game revenues to surpass \$200 billion by 2023**.

Worldwide there are an estimated **2.8 billion gamers**. The largest number live in Asia, where 1.5 billion gamers reside. The average gamer is 34 years old.



The **U.S. is the second largest video gaming market in the world** with an estimated 150 million gamers generating \$36.92 billion

in annual revenues during 2020. China, the largest video game market, has annual revenues of \$40.85 billion and claims 660 million gamers (Statista, Feb 2021).

According to the Pew Research Center, 72 percent of male Americans aged 18-29 play video games “often” or “sometimes,” as do 49 percent of female Americans in the same age range.

The largest and most popular digital game distribution platform is **Steam**. Its library includes more than 30,000 games, and the platform releases more than 20 new games every day.

The **global esports industry is growing at the rate of 30%**, year over year.



The *Animation Career Review 2021* game design university degree program rankings for Georgia illustrate the statewide opportunities available. Their list leads

with the Savannah College of Art and Design, based of course in Savannah, followed by Georgia Institute of Technology (Atlanta), Kennesaw State University (Kennesaw), Georgia State University (Atlanta), and Georgia Southern University (in Statesboro). In 2021, **Morris Brown College**

became the first Georgia university to offer an undergraduate degree program in Esports Performance.

As reported by AllOnGeorgia, a new study from the Entertainment Software Association (ESA), the video game industry in Georgia generates \$801.4 million in annual economic impact, either through direct industry output (\$370 million), or via other participants in the video game ecosystem, such as suppliers and other supported output (\$431 million). This ranks the state #13 nationally in economic output for video gaming. By ESA's calculations, the video game industry accounts for about 5,000 jobs in Georgia, either directly through industry jobs (about 2,200), or through supplier and other supported jobs (about 2,800). That ranks the state #11 nationally in terms of jobs supported by the industry.

Atlanta hosts the world's largest digital festival, **DreamHack**, which attracts over 39,000 players annually. The Atlanta Reign is an international esports team that participates in a league called the Overwatch League. The League is comprised of 20 city-based teams and offers 24 weeks of competition. Three other major professional esports franchises are also based in Atlanta: Ghost Gaming, Atlanta FaZE and the Hawks Talon.

According to a study by WalletHub, **Atlanta ranks 7th in the top 20 best cities for gamers when it comes to the best environment for gamer and developer opportunities**.

The context for Georgia videogame production also connects with plans to launch immersive entertainment venues. In 2021, Illuminarium Experiences announced its intention to open a Beltline Eastside Trail experience; the Atlanta venue is the first, with others to follow in Las Vegas and Miami, as well as other international sites (Mexico City, Japan, China, etc.). To pull off the effect that one is in the middle of an African safari, “Illuminarium is employing \$15 million of technology, including a best-in-class projection and sound system as well as ‘haptics’ that give visitors the sensation that the floor is vibrating.” The enterprise is a partnership between entertainment and IT companies: Illuminarium is collaborating with Rockwell Group, Legends, Radical Media, and Panasonic.²⁷



ATLANTA ESPORTS ALLIANCE

The **Atlanta Esports Alliance** was launched to drive esports and gaming events to the metro Atlanta area. The AEA brings “new opportunities for teams, tournaments, venues and esports service providers and partners” to the area. The Alliance was established in 2019 and is a collaborative effort between hardware manufacturers, game developers, media partners, and professional team owners with the backing of companies/institutions such as the Georgia Game Developers (GGDA), Skillshot Media, AXR Edge, Ghost Gaming, Atlanta Reign, and Creative Media Industries Institute (CMII) at GSU.

Georgia is the first state to have officially organized an Esports Alliance, and since its launch, many states have followed.



²⁷ Maria Saporta, “Illuminarium’s Alan Greenberg: Democratizing extraordinary experiences,” *Saporta Report*, May 24, 2021.

GEORGIA FILM FESTIVALS

Morehouse College Human Rights Film Festival
Urban Mediamakers Film Festival, Atlanta
Atlanta Asian Film Festival, Atlanta
Georgia Latino Film Festival, Atlanta and Duluth
Covey Film Festival, Thomasville
Peachtree Village International Film Festival
Atlanta Greek Film Expo
Savannah Film Festival
Atlanta International Documentary Film Festival
Rome International Film Festival
Buried Alive Film Festival, Atlanta
Atlanta Jewish Film Festival, Atlanta
SCAD aTVfest, Atlanta
South Georgia Film Festival, Valdosta
Atlanta Film Festival
The Milledgeville-Eatonton Film Festival
Cinema Italy Atlanta
American Youth Film Festival, Atlanta
RKDS Film Fest
48 Hour Film Project Screenings, Atlanta
Atlanta Shortsfest
Atlanta Underground Film Festival
Macon Film Festival
Coca-Cola Summer Film Festival
BronzeLens Film Festival Atlanta
Dragon*Con Independent Film Festival
Atlanta Horror Film Festival
Atlanta Sci-fi Film Festival
Georgia Film Festival, Dahlonega
Black Film Fest ATL
Out On Film, Atlanta
Kingdomwood International Film Festival, Atlanta

MOMOCON

MomoCon was founded in 2005 and is hosted on the Georgia Tech campus to celebrate Japanese animation and videogames. After all, the festival founders often note, “momo” means “peach” in Japanese. From humble beginnings of 700 people in year one, MomoCon has grown to nearly 42,000 unique attendance or over 120,000 total attendance over what is now a four day event. The festival now encompasses broader fandoms of animation, gaming, and comics as its three major tentpoles. MomoCon also hosts the most esport competitions of any event in Georgia, and esports has been one of the fastest growing aspects of the events they coordinate. In 2019, for instance, MomoCon hosted the third largest Smash Ultimate tournament anywhere in the world.

Since 2015, MomoCon has called the Georgia World Congress Center home, and for next running, May 25th–28th in 2023, will take up more than 750,000 sq ft of space in Hall B. MomoCon started in downtown Atlanta and thrived there. The setup and ecosystem of Atlanta has allowed MomoCon to grow into one of the largest fandom events in the United States.





Postproduction. Traditionally, the post production phase of creating a film encompassed the creative editorial of the footage, color correction and sound mixing. However, digital technologies have been replacing the traditional approach of post production so much that, in recent years, especially with the growing demand for digital content, the definition of what encompasses post includes (but is not limited to) animation, visual effects (VFX), motion and volumetric capture, and advances in sound design. Georgia-based companies such as Picture Shop Atlanta, Awesome, Inc., Moonshine Post, Company 3/ Method, Crafty Apes, Floyd County Productions, School of Humans, Primal Screen and Warner Media are increasingly investing in technology to improve post production processes.

The small portion of the production tax credit that supports postproduction work in Georgia is leveraging fast growth in the area. Georgia-based postproduction houses

are diversifying: from their earlier emphasis on digitizing dailies, improving audio and undertaking color correction, more Georgia companies are today at work in the virtual production space. In 2021, for example, the event company Music Matters Productions announced a partnership with the immersive studio TRICK 3D to open a virtual reality stage in Peachtree Corners, allowing virtual production pipelines to be enabled in Georgia from pre- to postproduction. The XR Stage has “large LED walls, similar to giant TV screens, in order to create 360-degree virtual backgrounds. The production crew films the scene with the background already in place, so they don’t have to add it in the editing process like they would for green screen” work.²⁸ An even larger installation at Trilith Studios opened in 2022, a Prysm Stage that encloses an 80-by-90-by-26 virtual production volume.

²⁸ Erin Schilling, “New virtual reality stage in Peachtree Corners provides limitless locations for filming,” *Atlanta Business Chronicle*, May 7, 2021.

COMPANY 3 & ENCORE

Company 3 & Encore Inc. combines the artistic talent, pioneering technology, and top-tier production and support teams of leading color and finishing house Company 3; the groundbreaking and talented visual effects supervisors and artists of Method Studios, Encore VFX, and Powerhouse VFX. Across their integrated companies, the firm's employees work with the most respected and talented film and entertainment professionals in the industry to tell incredible stories.

As a global company specializing in award-winning postproduction and visual effects services, Company 3 is a trusted partner for producing content across a wide variety of formats, including feature films, episodic television, commercials, animation, gaming, and more. Whether performing color correction to a commercial, finishing a television show, or adding creatures to a favorite film, Company 3 artists combine

The logo for Company 3, featuring the word "COMPANY" in a bold, teal, sans-serif font, followed by the number "3" in a larger, teal, sans-serif font. The letters are slightly overlapping and have a subtle shadow effect.

state-of-the-art technology with world-class creativity to shape the stories that move you.

According to Billy Gabor, President of Company 3:

Our operations in Georgia continue to expand. The state is a key strategic growth market as we chart the future of our business. With an established and growing infrastructure attracting all major content creators for both episodic and long form, Georgia has truly become the entertainment hub of the South. The economic incentives provided by post-production tax credit, business friendly environment, quality of life and expanding talent pool make investing in the Atlanta market the smart choice. Additionally, Georgia is one of the only locations around the globe that includes commercial work under its tax credit, which is a core business line for Company 3. Couple the demand and the economics with a growing talent base and ability to partner with key schools in the state such as GSU, Georgia Tech, Georgia Film Academy and SCAD and it's clear why Georgia is right at the center of our business strategy as we look to the future.

MOONSHINE POSTPRODUCTION

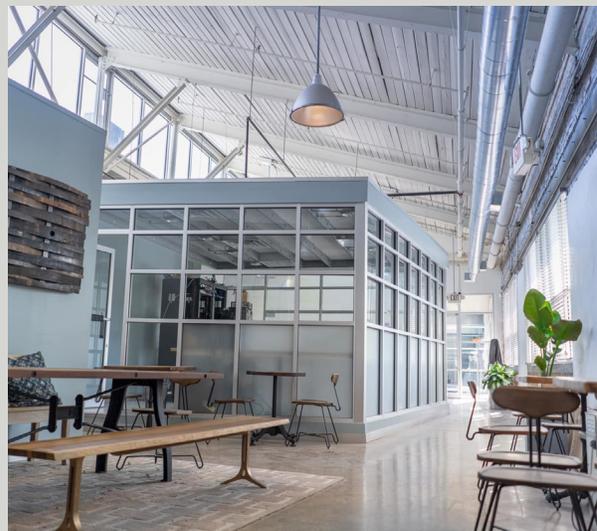
When asked to recall the last five years of Moonshine's growth, Drew Sawyer, founder, scrolls through a flood of photos—film festivals, cornhole tournaments, premiere parties—recollecting the highlight reel of his Atlanta-made post-production company, one that now has a resume including work with major networks and studios for internationally-recognized productions. From its inception, each year presented new opportunities for the growing band of misfits—editors, colorists, producers and engineers—bolstering their services and skills as they provided post for Georgia's blossoming film industry.

As an independent filmmaker, Drew laid the groundwork of Moonshine Post's early days with collaborations among other local filmmakers—many of whom continued on to become key members of productions being made in Georgia today. By 2016, Georgia's film scene was in full roar, attracting more studios and networks than ever to the opportunity of production in the state. At this point, Moonshine had already expanded its services well beyond the independent film scene and was tasked with creating original series content for Discovery, Red Bull Mediahouse, and A&E. These early adopters saw the benefits of bringing more than production to Georgia, and their success paved the way for a transformative year-to-follow.

In 2017, Moonshine initiated strategic partnerships with Crafty Apes VFX and Bare Knuckles Creative, cementing full service post capabilities in Georgia for film and television as the market grew around them. By 2019, Moonshine had doubled in size. That year alone, they worked on over 100 episodes of television, including shows like *Bigger* (BET+), *Moon and Me* (BBC), and the first of what would become three consecutive seasons of Greg Nicotero's *Creepshow* (AMC/Shudder). In 2020, despite

the upheavals caused by the pandemic, they managed to sustain momentum, mixing, coloring, and editing a variety of episodes and features, notably Netflix's *The Liberator*—Georgia's first “posted” Dolby Atmos + Dolby Vision HDR series—and Oscar-shortlisted documentary *76 Days*. In 2021, Moonshine expanded its studio and network resume, and worked alongside its partners to provide post services for Netflix, Warner Bros. TV, Sony Pictures, Paramount, HBO, Disney, VICE and AMC. They also provided full postproduction for projects such as *Saturday Morning All Star Hits!* (Kyle Mooney) and *The Waltons' Homecoming*.

The story of Moonshine's growth is a story of Georgia's growth. Their success has both contributed to and benefited from it; the relationship as symbiotic as it is provisional. Scrolling past photos from a recent hike in North Georgia, Drew Sawyer pauses to show a photo of his team today, in their office now located in the heart of the city, emphasizing the core of Moonshine's success as not merely the “stories they've distilled,” but the community they've built along the way.



FLOYD COUNTY PRODUCTIONS

Floyd County Productions (FCP) is the multiple Emmy award-winning animation studio located in Atlanta, Georgia. Founded in 2009 by writers and executive producers Adam Reed and Matt Thompson, FCP is a full-service animation studio that strives to create the highest quality in animation and digital entertainment.

In the late '90s, Reed and Thompson became renowned for their work on a number of Adult Swim television projects, chiefly *Sealab 2021* and their follow-up *Frisky Dingo*, which aired for several years. The duo formed 70/30 Productions to produce *Sealab 2021*, starting with a very modest crew of 8 artists, all working together in a small home on the East-side of Atlanta. In 2009, Reed and Thompson closed 70/30 Productions and founded FCP to produce Reed's new project, *Archer*. *Archer* has gone on to cement itself in the pop-culture zeitgeist, receiving positive critic reviews and winning many awards, including three Primetime Emmy Awards and four Critics Choice Awards.

The company not only develops exclusive programming for FX and other networks, but also creates short-form content for other media, including the television shows: *Atlanta*, *Legion*, *Fargo*, *Goliath*, *Cake* and *It's Always Sunny in Philadelphia*.

In 2021, FCP completed its first full-length feature film, *America: The Motion Picture*, starring Channing Tatum and produced in partnership with Lord and Miller. Along with this, FCP debuted its brand new critically acclaimed show *Marvel's Hit-Monkey* which is currently streaming on Hulu.

Floyd County Productions has since grown into one of the most competitive and sought-after animation houses in the industry. Keeping the studio in Atlanta, GA has played a huge role in their success.

The Georgia tax credit on qualifying work done in the state has allowed FCP to retain a healthy workforce and stay competitive with studios around the globe. Floyd County

Productions has grown from a small eight-person operation into a family of 200. The studio has become one of the top employers from Georgia schools, like Savannah College of Art and Design (SCAD), and in an industry that is largely transient, employees often tend to stay at Floyd.



Why invest in Georgia's entertainment industries?

Creative industries now leverage nearly 30% of all economic value

► Georgia's future is digital

The global economy is commonly described as having transitioned from modes of economic production focused on industrial and factory manufacturing and agriculture to a services and information economy. By some estimates the creative industries now leverage nearly 30% of all economic value—the estimate seems high but not when one considers the wide range of economic value generated by entertainment, design, strategic communication (advertising, PR, corporate communication), sports, broadcasting, games, fashion, music, and other creative sectors. The transition, often described as a Fourth Wave, entails the generation of wealth from information, Big Data, digitally centered financial services, AI, and application driven mechanisms for connecting consumers and producers. This social transformation everywhere transforms what it means to be literate in the 21st century.

While core competencies—writing, computational, scientific—are as important as ever, new digital literacies are now necessary for success in the new century's economy. Young workers who can collaborate across technology platforms, create a website, navigate social media and its possibilities for networking, edit music or video if only in a basic way, will have an economic edge in the global economy.

The COVID pandemic accelerated these changes. A 2021 BCG report on the new digital workforce concluded that “Workers in digital roles emerged from the COVID crisis relatively unscathed and are now entering an overheated talent market with many options. As companies across all sectors digitize, salaries for tech talent have skyrocketed to a level where few employers can compete.”²⁹

Investments in the entertainment industries that attract workforce and student interest, finding ways to connect artistically-inclined young people with advanced technology platforms even if they had

²⁹ BCG, *Decoding the Digital Talent Challenge* (December 2021).

not otherwise considered STEM careers, are thus essential steps as Georgia prepares its citizens to capitalize on the digital economy. As any parent who has home-schooled children during the pandemic can confirm, producing more entertaining online educational and information sources is the key to successful online learning and engagement.

Increasingly compelling data make the case that economic growth today is driven by the ideas and innovation economy, and that America's lead in the technology sector is jeopardized in ways that might be revitalized by interests in the creative economy. Federal investments in research and development have stagnated, and in ways that touch every sector. For several decades economists have investigated why expanded access to advanced technology has not been reflected in the national worker productivity statistics. But as recent work at the Brookings Institution argues, "the new technologies hold considerable potential to boost productivity and economic growth, create new and better jobs to replace old ones, and raise human welfare."³⁰

The direct and less direct connections between the entertainment industries and the broader IT, Big Technology social media, and data services sector synergistically combine to boost Georgia's place in the wider digital economy. New production facilities might best be understood as data centers given the needs for fast processing data connectivity and the integrated networks required of complex media production where editing can be simultaneous with shooting. The same infrastructural support provided by regional IT and electrical utilities often boosts movie studios as prepares larger data centers. Thanks to the fast growth and market dominance of MailChimp and the unicorn status recently acquired by FullStory,

³⁰ Zia Qureshi, "Democratizing innovation: Putting technology to work for inclusive growth," Brookings Institution, December 16, 2020.

a company that tracks what consumers do on a website to create better analytics insights for digital media companies, marketing technology also creates further synergies between IT and creative content development.³¹ In 2021, Mark Cuban, the Shark Tank billionaire, invested in an Atlanta start-up, Offbeat Media Group, to enable the further evolution of these technologies; Offbeat creates "virtual influencers" connected to AI data and able to create unique story lines for corporate clients and now has more than a billion followers online.³²

Because the internet and what used to be called the Information Superhighway provides the common infrastructure for this economic transformation, demand for workers who can align their entrepreneurial, advanced technology, and creative talents to this work will continue to scale sharply upward. Demand for high quality streaming content is nearly insatiable—a small measure of that is reflected in the large investments made in streaming content, in keeping content evergreen (such as by keeping old hits in television syndication), and in churning out new live event sports and reality content.³³ The Consumer Technology Association has estimated that **in 2021 consumers spent \$41 billion on streaming video, a 15% year-over-year jump.**

Of the Silicon Valley technology giants that

³¹ Erin Schilling, "FullStory 4th Atlanta unicorn 2021," *Atlanta Business Chronicle*, August 13–19, 2021, pg. 3A.

³² Erin Schilling, "Mark Cuban backs Atlanta media company creating 'virtual influencers,'" *Atlanta Business Chronicle*, April 15, 2021.

³³ A recent and emerging niche is in children's programming, since stay-at-home and remote schooling have likely forever created new markets for lively and interesting and educational content. All of the major production studios have made recent commitments to expand content for children, including Amazon Kids Plus, Disney Junior, Teennick, Discovery Family, Universal Kids, Baby First TV, and more lasting outlets such as PBS, the Disney Channel, and Nickelodeon. See Brian Steinberg and Elaine Low, "Playtime's over: Media giants are clawing over one another to capture kids' eyeballs," *Variety*, February 2021.



have announced major recent investments in Georgia, Google, Facebook and others illustrate the converged business model that started with major entertainment and streaming media platforms and has since diversified into cloud computing and other related computational technologies. And the reverse is true as well. As *Variety* put it last year, “legacy Hollywood players including Disney and WarnerMedia are suddenly acting like tech companies...”³⁴ Microsoft buys Activism Blizzard, Amazon buys MGM.

The state’s largest content creation firms also exemplify the role played by integrated data networks. In Fayette County, home to Trilith (formerly Pinewood) Studios, the original Pinewood complex was designed as an exceptionally robust data center. In September 2020, Oceanic Data Centers announced plans to build a 1.5 million square foot data campus on an envisioned 182 acres just south of Trilith, a potential \$2 billion investment. The new

34 Brent Lang and Cynthia Littleton, “Trading places,” *Variety*, February 2021.

plans complement the 400-acres, \$40 billion data campus under construction by Facebook. Fayetteville’s community development director, David Rast, explicitly connected the projects, expressing the aim that the Oceanic Data Center would provide services to Pinewood.³⁵

In Newton county, the 400-acre Facebook data center campus, which is being expanded again, is only a couple miles away from the main Cinelease-Three Ring complex. Facebook did not build its data centers near Covington because of the city’s film industry history, but the complexes share beefed up digital and physical (e.g., electrical) infrastructure, and have expanded apace.³⁶ As Georgia continues to attract interest in data center expansion—QTS Realty Trust, Stack Infrastructure, Switch, T5, and Stack have all expanded operations in the state—a synergy might be expanded which

35 “New Data Center Campus Planned for 122 Acres in Fayette County,” *Atlanta Business Chronicle*, September 25–October 1, 2020, pg. 10A.

36 Dyana Bagby, “New data center campus planned for 122 acres in Fayette County,” *Atlanta Business Chronicle*, September 25–October 1, 2020, pg. 10A.

co-locates data centers with live-work creative industry enterprises that make home regions more attractive to highly educated workers.

Microsoft's regional investments span the creative and IT sectors. The purchase of twenty acres for a new Westside Atlanta data campus added growth potential to their prior investments in Quarry Yards.³⁷ Microsoft made national news in announcing its plans to acquire Activision Blizzard, the game company that publishes *Call of Duty* and *Candy Crush Saga*, a \$68.7 billion purchase. As Microsoft CEO Satya Nadella noted, "As the digital and physical worlds come together, gaming will play a critical role in the development of metaverse platforms."³⁸ The acquisition, if approved by federal regulators, makes Microsoft a formidable metaverse-building aspirant given its investments in VR and augmented reality, and its hardware investments in the HoloLens headsets. In announcing the deal, Nadella noted the technology connectivity that might soon enable one to use the Microsoft Office suite in VR; in 2022 a launch if planned that will enable Teams as a metaverse application, and where avatars can give PowerPoint presentations to each other. All this will be enabled by expanded Georgia operations that build on workforce development strategies and a connection to the state's higher education sector.

While the presidential election evoked difficult controversies about the nation's future direction, the new Biden Administration has committed to build on bipartisan support for **investments in national infrastructure**, and the infrastructure package enacted in 2021 includes significant investments in rural broadband and in programs to close the lingering digital divide. Those, along with its advocacy for



expanded investments in education, whether fully realized by the ongoing national COVID recovery investments or not, connect to Georgia, and open opportunities to connect the content creation industries with statewide digital needs. The Biden presidential campaign proposed that \$300 billion in new investments be made to support research and development in advanced technology sectors, and to create a national network of free business incubators and innovation hubs to be co-located with existing Small Business Development Centers and colleges.³⁹ An 2021 ITIF report noted that the educational skills required of the digital age are wide ranging—a list that neatly dovetails with the workforce training programs for the entertainment industries: "Much more needs to be done in terms of training American citizens – at high schools and universities, at companies and in government agencies—about the techniques of innovation and entrepreneurship, because the tools and techniques available today, from design thinking to the business model/proposition canvas, can make innovation accessible to all."⁴⁰

37 Douglas Sams, "Microsoft buys another 20 acres for new Westside campus, could employ thousands," *Atlanta Business Chronicle*, January 4, 2021.

38 Sarah Frier and Dina Bass, "Microsoft's \$69 billion down payment on the metaverse," *Bloomberg Businessweek*, January 24, 2022, pg. 13.

39 Biden Administration plans for digital economy investments were summarized in a recent report by the Information Technology and Innovation Foundation. Robert Atkinson, Doug Brake, Daniel Castro, Nigel Cory, Stephen Ezell, David Hart, Joe Kennedy, and Robert Rozansky, "President-elect Biden's agenda on technology and innovation policy," a report of the Information Technology and Innovation Foundation, November 2020.

40 Stephen Ezell and John Kao, "Five bold steps toward a reimagined American innovation agenda," a report of the Information Technology and Innovation Foundation, February 2021, pg. 5.

► The industry can benefit all of Georgia

As film and television work has expanded in Georgia, a number of high-profile projects to expand production infrastructure have also been undertaken. By now, large studio complexes, which started first at large scale in the close Atlanta suburbs, are popping up across Georgia. A 2020 CBRE study estimated that more than 1.8 million purpose-built sf are under roof and doing sound stage production work in Georgia.⁴¹ Since then, the amount of new, repurposed, and projected Georgia square footage has grown to 7 million sf.

This trend connects to the broader expansion of art zones and districts aimed at promoting the wide range of artistic creativity. Anyone driving south from Atlanta has seen the huge billboard on I85 announcing Hapeville's commitment to the arts. Hapeville, East Point, College Park and the West End have all made commitments to foster artistic work by supporting exhibition spaces, studios, and new performance venues on Atlanta's southside. The MINT Gallery built out significant exhibition space in Adair Park, one of the roughly 140 tenants who now inhabit the growing MET mixed-use complex, its mission to foster creative, artistic, entrepreneurial, and digital communities. Westview Studios, the Hammonds House Museum, and the Spelman College Museum of Fine Art had already made the West End their home. In East Point, Murphy Rail Studios houses twelve artists, an addition to the Windmill Arts Center and ArtsXchange.

41 CBRE, *Coming Attraction: The Investment Appeal of Entertainment Production Facilities*, October 2020.



And in College Park, the relocated PushPush film and theatre company aims to build an ecosystem of recording studios, art-making classes, and film screenings.⁴²

Gwinnett County has launched a Creativity Fund, which aims to award up to \$200,000 in grants, to organizations including the Aurora Theater and the Hudgens Arts Center.⁴³ Lawrenceville is opening a new \$35 million performing arts center, an expansion of the Aurora Theater, on the main square. The expansion also involves a new School of the Arts, a \$13.2 million arts-focused expansion of Central Gwinnett High School.⁴⁴

Further south, in Hazelhurst, entrepreneurs

42 Felicia Feaster, "Art scene south of the city is booming," *Atlanta Journal Constitution*, December 16, 2019.

43 Doug Deloach, "Innovation for entrepreneurs, the arts and an old tennis center take root in Gwinnett," *Atlanta Business Chronicle*, December 3-9, 2021, pg. 27A.

44 Lori Johnston, "Connectivity and collaboration: New leadership, construction and healthcare [Focus on Gwinnett County]," *Georgia Trend*, September 2021, pgs. 69-81.

In the last two years, major new studio expansions have been announced in Georgia. These fully funded projects alone add nearly 5 million square feet of new production space to Georgia’s film and television studio capacity. These expansions were not paid for by the film tax incentive, but signify investor confidence in the future of the Georgia industry.

Between 2012 and 2022, these projects generated \$1.03 billion in direct capital development, with another \$1.27 billion projected for 2023 - 2025.

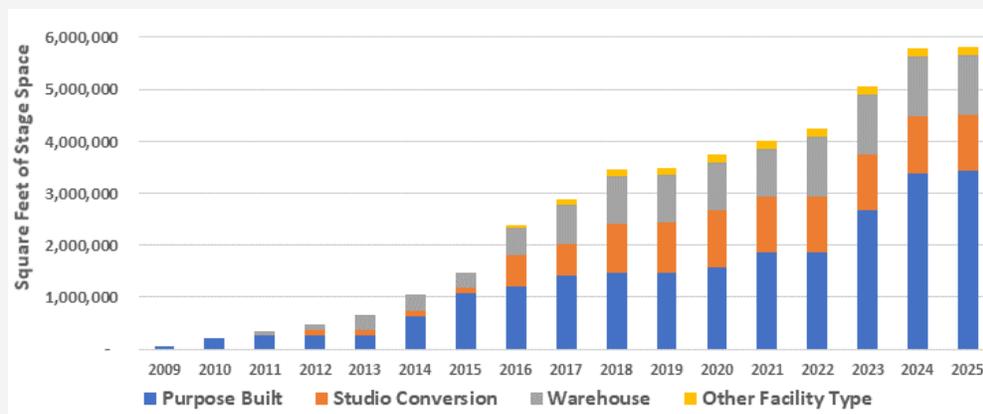
According to a 2023 data report assembled by Cinelease:

An upcoming 800,000 sf of purpose-built stage space is planned in 2023, with 700,000 more coming in 2024. The last time this happened in the Georgia Film market was 2014 & 2015, when 812,000 sf came online as a result of the openings of Trilith (then Pinewood) Studios, Eagle Rock Studios, Third Rail Studios, Blackhall Studios, Areu Brothers Studios, & Atlanta Filmworks and 2016, which saw an additional 900,000 sf added. In 2016, Georgia overtook California as the top location for production of feature films – 17 of the top 100 grossing movies were filmed in Georgia. This next iteration of growth is necessary to maintain Georgia’s place as a relevant production center on the world stage.

The specifics are impressive: Trilith Studios is adding 4.7 million square feet (sf) of film production, warehouse, office and retail space and 55 residential units to holdings. Gray TV’s Assembly Studios, located on 128 acres in Doraville, will include 20 sound stages. Former Third Rail developers are building Electric Owl, a gold LEED-certified soundstage, with 300,000 sf of stages. Reynolds Capital built 350,000 sf of sound stages in Athens (Athena Studios). SCAD is expanding Savannah operations. Cinelease in Newton County added 450,000 sf to its production center. Shadowbox Studios, which purchased Blackhall Studios, is adding 1.7 million sf (22 new stages). BlueStar Studios has announced plans to add 600,000 sf of production and office space at the decommissioned Fort Gillem site.

Georgia studio capacity by facility type and year

CINELEASE STUDIOS DATA



have invested to attempt a relaunch of The Theater of Hazelhurst as a cinema that will mainly screen family and religious films.

Studio builds tend to cluster around metropolitan areas, in part because of the necessary access required to national airports and transportation grids. A principal trend in the Atlanta metro area is that studios have extended their reach into the main suburbs and into counties that are not directly connected to the Atlanta metropolitan zone but offer close proximity to its resources. Some of the largest buildouts of production infrastructure include:

Revitalization of the former Doraville GM plant. Bought and refurbished by the Integral Group in 2014, and branded under the overall name **The Yards**, the former GM plant already includes **Third Rail Studios** (which opened in 2016 and has been recently acquired by Gray Television) and a 500-person headquarters for Serta Simmons Bedding. The plans are to create a full mixed-use complex on the property. The location benefits, of course, from its potential railway connections to the Doraville MARTA station and its proximity (three miles) to the DeKalb Peachtree Airport.

In Covington, Three Ring Studios has been building out studio space since they broke ground in 2017. In 2020 Three Ring announced a merger with Cinelease, the lighting and equipment company, which renamed the complex **Cinelease Studios—Three Ring**. As of late 2021, a quarter million square feet had been built out, with plans underway to undertake a major Phase 2 expansion.⁴⁵

Efforts to create a full entertainment and expanded production complex were given a huge boost by the announcement in March 2021 that **Gray Television** would be buying the remaining undeveloped 128 acres there to build at least ten film studios, as well as facilities enabling



45 Amy Bonesteel, “Charm and impact: Film production, high tech, and workforce training [Focus on Newton County],” *Georgia Trend*, May 2021, pgs. 65–75.

a focus on e-gaming and digital media production, a new “Studio City.” Andy Yeoman, who sits on the city’s downtown development authority, described the Gray announcement as transformational: “Over the next decade, we’re going from casting aluminum and casting steel to casting talent and content worldwide.”⁴⁶ Blending Third Rail Studios into the new Gray complex adds a longstanding production partner to the mix.⁴⁷

Expansion of **Shadowbox Studios** in DeKalb County. The Shadowbox campus is huge: 155



SHADOWBOX

acres expanding by double, with studios accountable for from \$500 to \$700 million in content annually. Completion of the expansion will make

Shadowbox the largest studio in Georgia. In April 2021, parts of Blackhall Studios not brought into Shadowbox were sold to a private equity firm for \$120 million with plans to continue its production work trajectory.⁴⁸

The largest studio complex in Georgia, **Trilith Studios** (formerly Pinewood Atlanta Studios), is located outside of Fayetteville. Trilith sits on more than 700 acres and encompasses 18 sound stages exceeding 360,000 square feet of indoor filming space, the largest purpose-built studio outside of Hollywood. More than 50 production related businesses have claimed space on the Trilith campus, including Technicolor, The Third Floor, and MBSI, the innovation arm of the MBS Group.⁴⁹ Mixed use developments surrounding the core studios will house nearly 5,000 new residents,

46 Zachary Hansen and Rodney Ho, “Former GM plant set to transform into massive film production site,” *Atlanta Journal Constitution*, March 31, 2021; Dyana Bagby, “From concrete to content: Behind Gray TV’s deal to buy a former GM plant and create one of Georgia’s largest film, TV production hubs,” *Atlanta Business Chronicle*, April 29, 2021.

47 Zachary Hansen, “Gray Television to purchase Third Rail Studios in Doraville,” *Atlanta Journal Constitution*, August 17, 2021.

48 Zachary Hansen, “Atlanta-based Blackhall Studios sold for \$120 million to California firm,” *Atlanta Journal Constitution*, April 28, 2021.

49 Grace Donnelly, “Atlanta film studio plans to expand with new creative center,” *Atlanta Business Chronicle*, March 12, 2020.

many of whom will work at Trilith connected enterprises. Brian Wismer, director of downtown Fayetteville economic development, has noted an uptick in granted business licenses on account of the growth in Trilith work: “We have definitely seen more ancillary service businesses such as makeup services, catering services, and equipment rentals.” Meanwhile, he added, “five or ten years ago, I don’t think developers would have given” downtown Fayetteville “much attention,” but “the film industry, without question, gave us a huge shot in the arm.”⁵⁰

In October 2021, Governor Kemp made the announcement that **MBS Equipment**, the largest studio-based equipment company in the world for film, television, and special events, will open an east coast headquarters on the Trilith Studios site.⁵¹



Near Stone Mountain, the developers who first launched Third Rail Studios have announced plans to build a 300,000 square foot film studio on 17 acres adjacent to the Indian Creek MARTA station. **Electric Owl Studios** plans to become the first LEED Gold-certified studio in the world.⁵²

In South Fulton, the former Shannon/Union Station Mall site now houses **Atlanta Metro Studios**, which includes 135,000 square feet of sound stages and 50,000 square feet of office space. Parts of *Jumanji: Welcome to the Jungle* were filmed there. Nearby, in Fairburn, a recently opened Global Impact Academy will train students in, among other subjects, game design and development.⁵³

EUE/Screen Gems, one of Georgia’s first full-service

50 Crystal Edmonson, “A look inside Trilith Studios and the nearby Fayetteville town that’s ‘come to life,’” *Atlanta Business Chronicle*, November 2, 2020.

51 Office of Governor Brian P. Kemp, “MBS Equipment company to unveil new east coast headquarters in Georgia,” October 28, 2021.

52 Savannah Sicurella, “Coming near Indian Creek MARTA station: 17-acre film studio from Third Rail Studios developers,” *Atlanta Business Chronicle*, November 17, 2021.

53 Haisten Willis, “Southern exposure: Mixed-use projects, fulfillment centers and filmmaking,” *Georgia Trend*, December 2020, pgs. 67–69.



production centers, developed and built over the years by CEO Chris Cooney, continues to expand its production work on its 11-soundstage campus at Lakewood in south Atlanta. *Stranger Things* and *Raising Dion* occupy much of the studio space; *Stranger Things* alone employs roughly 500 people.⁵⁴

Putnam County and others in the Lake Country have collaborated to attract film, gaming and music industry work to the Eatonton area, with the idea of expanding collaborations with small companies working in the area, including **Tytan Pictures** and **Freckled Face Productions**. After a major event in late 2019, Emily Holt, of the Eatonton-Putnam Chamber of Commerce said, “The participation of local businesses showing their commitment and collective engagement toward this growing segment of our economy is really exciting. We spoke with executives at the event that are considering productions in the area as well as companies looking to locate and service productions that come to Eatonton.”⁵⁵



In April 2021, the Pratt Pullman District, which includes a studio complex run by **Atomic Entertainment**, located in Atlanta’s Kirkwood

54 Rodney Ho, “Kris Bagwell, leaving for a new job, ran the studio for 11 years and built up its credibility: EUE Screen Gems Studios jumpstarted Georgia’s TV and film revolution,” *Atlanta Journal Constitution*, May 11, 2021.

55 “Eatonton shines, entertainment event draws producers, directors to showcase the Lake Country,” *Georgia Entertainment News*, December 19, 2019.



neighborhood, announced plans to add new film sound stages. Three new soundstages were approved by the Atlanta Urban Design Commission. Pratt Pullman has often featured as a backlot for film franchises

including the *Hunger Games* and *Fast & Furious*, and attracted recent audiences for *Van Gogh: The Immersive Experience*. When completed, the complex will be a live-work-play district geared to the creative class.⁵⁶

SCAD has announced significant studio expansion for a complex planned near its main Savannah campus. Once completed, the expanded **Savannah Film Studios** will be the largest and most comprehensive university film studio complex in the United States. Plans include development of a 10.9-acre tract, include the creation of a Hollywood-style backlot, a next generation XR stage for virtual productions, and new soundstages. The 2,000 square foot XR stage will soon open. SCAD also plans to expand its production footprint in Atlanta, bringing its total to more than 300,000 square feet on a late 2022 timetable.⁵⁷

The announcement followed coverage of a closely parallel announcement that **Georgia Tech's Savannah campus** was being explored for conversion into a major film studio site as well. If the Georgia Tech campus conversion comes to fruition, it would add more than 115,000 square feet to the state's production space totals and would be a collaboration to bring Georgia Film Academy programs to the region.⁵⁸

Of course, productions also fan out across the state of Georgia to take advantage of unique production locations:

Film and television productions using the old

56 Chris Fuhrmeister, "Pratt Pullman District adding new apartments surrounding sound stages," *Atlanta Business Chronicle*, April 28, 2021.

57 Graham Cawthon, "Major SCAD expansion: Film Studio will be largest, most comprehensive university complex in US," *WJCL 22 ABC*, April 16, 2021.

58 Erin Schilling, "Georgia Tech's Savannah campus may become film studio," *Atlanta Business Chronicle*, March 22, 2021.

Augusta jail as a location brought more than a million dollars to the city given the needs for food and lodging and local staff in 2019 alone. The city has long debated whether to tear down the jail—it's empty and cannot be continuously occupied because of environmental concerns, but the



positive buzz, especially generated when Clint Eastwood spent time there filming *The Mule*, led Augusta to launch its own film office to handle demand. In 2020 more than 20 location managers for film and

TV companies scheduled to tour the jail site.⁵⁹

Covington, long attractive for film location works (they hold the trademark on the phrase "Hollywood of the South"), continues to organize interest given its iconic downtown plaza. Netflix's *Sweet Magnolias* is only one of the most recent projects to film in the area. Meanwhile, the city's Welcome Center has been expanded to also contain a Film Museum that recounts Covington's long history of filming location prominence. The popular CW series *Vampire Diaries* attracts the most interest at the museum.

Films increasingly shoot in **Thomasville** and **Tifton**. In 2019 an adaptation of Kate DiCamillo's children's book *The Tiger Rising*, was filmed there; the project features Queen Latifah, Dennis Quaid, and a number of local actors and crew members, including a cluster who graduated from Bainbridge High School. Allen Cheney, who brought the project to his hometown, has started a production company given the *Tiger Rising* success, called Thomasville Pictures, and plans to bring more projects to the region.

Production work continues in **Ben Hill County** in southwest Georgia. Work on the sci-fi thriller *Anti-Life*, a Bruce Willis vehicle, was one of three major shoots to happen there in 2019, with more

59 Editorial Staff, "Growing pains hit state's film industry," *Augusta Chronicle*, January 11, 2020.

projected for 2022.

Thanks in part to the positive press from hosting location shoots for *Black Widow*, “it’s been a big year for film in **Rome** and Floyd County... Without counting for the last three months of” 2021, “the film industry has yielded \$325,000 in economic impact,” including “location costs, crew and cast members spending money in the region and other variables.” *Black Widow* showed viewers the South Broad Street bridge, Second Avenue, the Robert Redden Footbridge and Barron Stadium, and a glimpse of a real Rome Wolves football game. *Stranger Things* shooting also happened in Rome, especially featuring Rome’s Claremont House.⁶⁰

In **Lindale**, Christopher Lloyd and Rachel Leigh Cook were in town in November 2021 to shoot scenes for a yet unnamed Halloween movie.

Macon’s First Baptist Church of Christ and Grant’s Lounge on Poplar Street were the location in spring 2021 for work on a new Showtime drama, “First Ladies,” which stars Viola Davis as Michelle Obama. Later last year, Light of Life Films, a Missouri production company focused



60 Olivia Morley, “Film industry yields over \$300,000 in local economic impact with more expected in 2022,” *Rome News-Tribune*, December 24, 2021.

on Christian content, booked Luther Williams Field and Rosa Parks Square for filming. The film features Bradford Haynes, a Macon native and former professional baseball player turned actor. *Black Widow* also filmed major scenes in Macon, especially at the Terminal Station. The HBO superhero series *Watchman* had Macon standing in for 1930s New York, while other scenes were filmed at the historic Douglas Theater.⁶¹ And the TBS “Go-Big Show” used the empty Coliseum as a COVID-safe production environment in producing its first season. According to Aaron Buzza, vice president for development for Visit Macon, “If somebody was looking for a job right now, productions can’t hire enough crew at this point. It’s a good opportunity for someone to make a career change.”⁶²

The wider economic impact of this infrastructural buildout is significant. As the CBRE researchers put it: “Institutional investors have been increasingly attracted to the sound stage sector over the past decade, creating a burgeoning new asset class within commercial real estate. The entertainment industry is a major space occupier and employs more than 3 million people in the U.S. COVID-19 restrictions that have limited entertainment production caused a temporary decrease in industry employment but demand for production space is continuing to grow rapidly, largely due to a pandemic-related 74% year-over-year increase in streaming video demand.”⁶³ Beyond the formation of valuable light manufacturing assets, this commercial real estate class overperforms economically. CBRE:

These production spaces have long been overlooked as investment assets due to their ownership structure, limited inventory and intensive operating model. However, institutional investors have been

61 *Georgia Entertainment News*, “Macon celebrating a busy year on movie, TV screens,” January 8, 2020.
62 Liz Fabian, “Cost of COVID: Film crews return to Macon after pandemic pause,” *Channel 13 WMAZ.com* (Macon), February 20, 2021.
63 CBRE, *Coming Attraction*, 2020, pg. 3.



increasingly attracted to the sound stage sector over the past decade, catalyzing its rapid evolution as an asset class. The advent of streaming video has created seemingly insatiable demand for content that presents unique opportunities for real estate investors. The top five streaming companies invested a staggering \$25 billion in new productions in 2019 alone, resulting in intense competition for any available filming space as e-commerce and logistics companies jostle for the same industrial facilities as film and television studios. Occupancy rates for production space in most major markets have been well above 90% for several years.

Simultaneously, the large amount of capital entering the sound stage market has also helped to shift the competitive landscape. Over the past decade, well-heeled institutional investors and operators have sought to build portfolios and standardize operations of production space. Hudson Pacific Properties and Hackman Capital have been especially active in large transactions. For example, Hudson Pacific sold a 49% stake in three

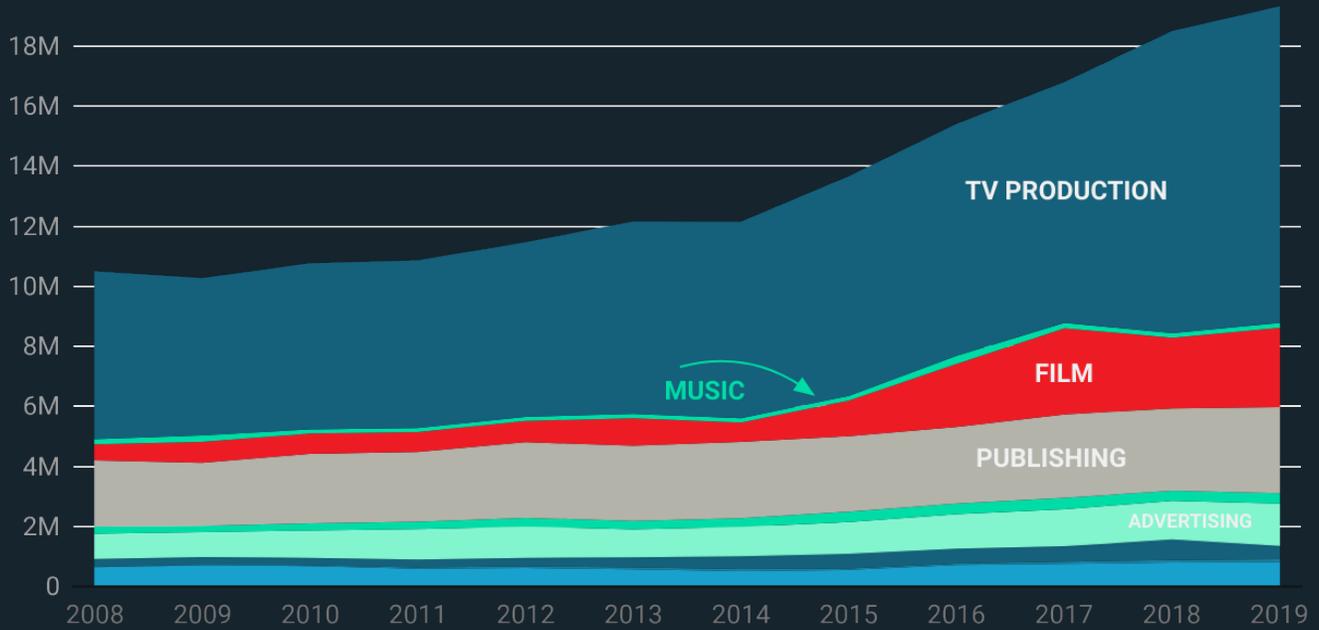
Hollywood studios and five on-lot or adjacent Class A office properties to Blackstone at a valuation of \$1.69 billion. And, Hackman Capital recently acquired New York's iconic Silvercup Studios.

Much as in other emerging commercial real estate asset classes over the past several decades, the influx of capital to production studios has driven standardization across the sector. As a result, production sector cap rates have begun to converge with those of other more liquid asset classes.⁶⁴

Recent Georgia-specific research has documented some of the beneficial spillover effects of studio expansion. Velma Zahirovic-Herbert and Karen Gibler, scholars at the University of Memphis and Georgia State University respectively, have documented that film studio expansion has beneficial impacts on local home property values and can thus serve

⁶⁴ CBRE, *Coming Attraction*, 2020, pg. 5–6.

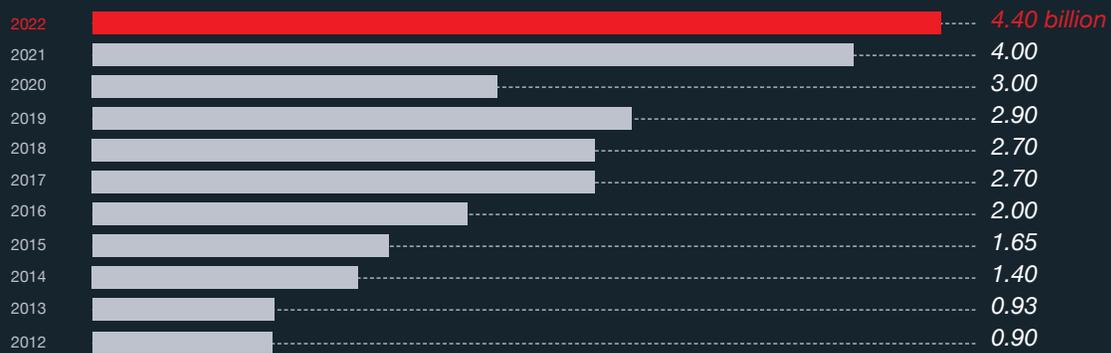
GEORGIA'S CREATIVE SECTOR IS GROWING



Created with Datawrapper

DATA PRESENTED IN THOUSANDS (and so the total economic impact of the creative sectors hovered at close to \$19 billion on the precipice of COVID). BEA data has recently been updated to include the first year of COVID's impact (2020). In that year, these numbers declined by 20%, consistent with the film industry direct spend numbers tallied below from state sources.

FILM INDUSTRY DIRECT SPENDING IN GEORGIA





as “possible drivers of redevelopment.” Using metro Atlanta as an example, they conclude that:

Industry participants have repurposed existing facilities in metro Atlanta, including fairgrounds and military posts, and spurred the construction of new studio buildings. They appear to be contributing to a rise in residential property values, which can help stabilize, revitalize and spur development in surrounding neighborhoods...

These benefits are economically complex—the authors also note that studio-enhanced property values can further local gentrification and could displace other industries. But the benefits were measurably clearcut, and “suggest that the siting of studios can be an important component of an urban redevelopment strategy.”⁶⁵

Although the direct economic benefits can be difficult to tally, both direct and indirect, there is growing evidence that **Georgia’s economy**

receives gains from entertainment tourism.

Among the state’s most well attended attractions are a number that deliver entertainment and informational content. In 2019 alone, 3,521,563 tourists visited the World of Coke, the Woodruff Arts Center, the Fox Theater, Fernbank, CNN Studio Tours, and the College Football Hall of Fame, to name only some of the most prominent venues in the capital.⁶⁶ Such attractions are not, of course, limited to the capital city. In Roswell, a new Computer Museum of America includes exhibitions showcasing the history of videogames.⁶⁷ And one must not forget where it all started, with the Whistle Stop Café.

⁶⁶ Data reported by the *Atlanta Business Chronicle*: “Atlanta’s 25 largest attractions,” *Atlanta Business Chronicle*, October 30–November 5, 2020, pg. 37A.

⁶⁷ Haisten Willis, “Bits and bytes of history,” *Georgia Trend*, October 2020, pg. 67.

⁶⁵ Velma Zahirovic-Herbert and Karen M. Gibler, “The effect of film production studios on housing prices in Atlanta, the Hollywood of the South,” *Urban Studies* (2021) preprint (DOI: 10.1177/00420980211024156): 1–18.

REGIONAL MEDIA ECOSYSTEMS: COLUMBUS

Columbus, Georgia has long aspired to build entertainment industry work. Site of one of the first Camera Ready programs in Georgia, **Columbus** has also partnered with the Georgia Film Academy to leverage the region's educational institutions to train workforce. Columbus State University thus became one of the state's first to offer GFA courses on its campus, and more than 100 CSU students have undertaken GFA training. In 2018, a Columbus Film Fund was seeded with five million dollars, the goal to compensate studios for the extra costs of locating work in Columbus. An outgrowth of these efforts has been a public/private partnership that joins WC Bradley and Flat Rock Studios into collaboration. A recent highlight was the production of *Still*, a film produced as a collaboration between the Georgia Film Academy and Craig Miller

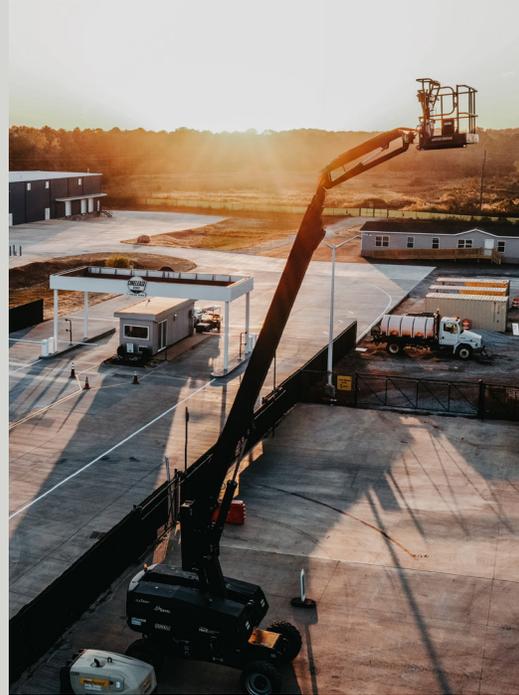
Productions. Since the film fund launch, several other films have done work in Columbus—*Survive the Night*, *Electric Jesus*, and *The Inheritance* (shot in 2020 during COVID-19). A Columbus specific website aims to direct projects to the region and connect productions to local vendors (event spaces, hotels, construction companies, etc.). Peter Bowden, President and CEO of Visit Columbus GA and the Columbus Film Commission: “Columbus is on the radar of many producers and directors looking at Georgia. Our team has worked closely with numerous productions and secured films with total budgets in the millions of dollars.”

SOURCE: Interview with Peter Bowden, President/CEO of VisitColumbusGA, February 16, 2021; “Focus Film Columbus GA event provides update to community leaders, local business owners and entertainment professionals,” *Georgia Entertainment News*, December 17, 2019.



REGIONAL MEDIA ECOSYSTEMS: COVINGTON

Covington, Georgia was among the first locales to attract production work to the state, starting with site location recruitment that lured film projects like *The Cannonball Run*, *In the Heat of the Night*, *My Cousin Vinny*, *Selma*, *The Vampire Diaries*, *Sweet Magnolias*, *Doctor Sleep* and many more to the historic town center—several iconic scenes in film and tv history were filmed there. In the years since, a coordinated strategy to attract large enterprises to Newton County has leveraged significant new investments from companies like Meta. One of the state’s largest new studio complexes is under expansion immediately outside Covington, only ten minutes from Covington’s charming square. Cinelease Studios–Three Ring has been conceptualized to support production work across multiple sectors, including traditional episodic television series, live audience shows, and feature films. The sprawling complex has over 100 acres in use and under active development. The initial phase has 50 acres which includes over 100,000 square feet of purpose-built sound stages, 30,000 square feet of office bungalow space, and 30,000 square feet of mill space. Phase II and it’s 55 acres



will feature an additional 144,000 square feet of stage space, 100,000 square feet of office space, 72,000 square feet of mill space, and 50,000 square feet of vendor support space.

The potential contribution of the creative industries to statewide economic development occurs against a troubling backdrop of clustered innovation. The national innovation economy is surprisingly limited in its geographical reach. A recent study by the Information Technology and Innovation Foundation and the Brookings Institution found that “fully one-third of the nation’s innovation jobs now reside in just 16 U.S. counties, and more than half are concentrated in 41 counties.”⁶⁸ While Atlanta is on that list, it is telling that of the

smaller cities judged to be currently well poised for digital innovation investments, none in the Brookings/ITIF research are Georgia-located. A comprehensive strategy that takes advantage of educational interest in the media and entertainment industries, and is more broadly connected to STEM education, regional infrastructure developments to narrow the digital divide, and other strategies for rural economic development, is already a significant legislative priority.

⁶⁸ Robert Atkinson, Mark Muro, and Jacob Whiton, “The case for growth centers: How to spread tech innovation across America,” A report by ITIF and the Brookings Institution (December 2019).

REGIONAL MEDIA ECOSYSTEMS: SAVANNAH

Led by the Savannah Regional Film Commission and building on local assets including the home campus for the Savannah College of Art and Design, Savannah is building an impressive ecosystem for film production. In 2019, eight feature films, 18 television projects, and 12 commercials were filmed across the city, generating a 2019 direct spend of \$125.6 million.

The quality of Savannah-lensed projects is strong. *Ford v. Ferrari*, which used Savannah for location work, was a Best Picture Academy Award nominee. Critically acclaimed television projects shot in Savannah include *Ozark* (Netflix), *The Underground Railroad* (Amazon) and *Council of Dads* (NBC).

The Savannah Regional Film Commission continued to raise Savannah’s profile as an emerging production hub, increasing the number of productions shot in the region and attracting qualified crew members to the area. The expansion of film production, the development of support services, and retention of film workforce paid off in an increase of direct film dollars to the local economy. This growth and continued success of the incentive led to its renewal through 2024.

The record setting growth has helped place Savannah as one of MovieMaker Magazine’s *Best Place to Live and Work as a Moviemaker: Small Cities and Towns*. Savannah has consistently been ranked in the top four since 2015, taking the #1 spot in 2020, 2019, 2017, and 2016. The Savannah Regional Film Commission was also named “Outstanding Film Commission” by the



Location Managers Guild International (LMGI) at the 8th annual LMGI Awards for their work on *The Underground Railroad*. This honor recognized the work done by SRFC and also the incredible effort made by local crew, businesses, and government agencies in the creation of the limited series.

The growth of the film and television industry in Savannah reached \$207 million in 2022 direct spending, with several major studio TV series and feature films in production. The combination of the Georgia Tax Credit, Savannah Entertainment Production Incentive, skilled crew base, and diverse locations make Savannah an ideal place for the industry to flourish for years to come.

| film savannah | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|--------------------|--------------|--------------|---------------|---------------|--------------|---------------|
| Direct Local Spend | \$61,432,424 | \$65,059,288 | \$120,103,500 | \$125,652,306 | \$21,390,207 | \$113,712,348 |

SOURCE: Katie Nussbaum, “Film industry gives \$266 million boost to local economy in 2019,” *Savannah Morning News*, January 18, 2020.

► Digital careers empower new and diverse voices, and inclusive innovation

Despite decades of verbalized commitments to diversity, the entertainment industries continue to face a diversity crisis. While the talent most often retained for creative industries programming is more publicly diverse—actors, anchors, musicians—and some industries are more responsive to their diverse audiences than others, corporate media decision making is still heavily dominated by white men.

Unfortunately, the data documenting significant underrepresentation is both dramatic and persistent, despite recent activism aimed at transforming media industry inclusivity. A UCLA research group found that, in 2021, despite gains, people of color remain significantly underrepresented among film directors and film writers.⁶⁹ According to research done at the University of Southern California, in tallying top grossing films made from 2007–2019, only 13.5% were directed by people of color, and only 4.8% by women.⁷⁰

The research also documents problematic underrepresentation for Latino talent. The same UCLA report found that while Latinos represent 20 percent of the U.S. population and are a driving force behind the country's economic growth, they account for only three percent of Hollywood roles in front of and behind the scenes. Apart from actors of color, actors in all other minority categories remain significantly underrepresented.

Recent attention to these racial disparities has generated some progress, but the picture remains uneven. A report done by the Directors Guild of America, covering the

2019–2020 television season, found that “while the shares of episodes directed by women and African Americans reached new highs, Latinos and women of color continued to be severely underrepresented despite their sizable and growing presence in the population, and employment of Asian Americans remained flat.”⁷¹ Meanwhile, in the technology sector, early promises made to invest in significant diversity initiatives often remain ambiguous works in progress.⁷² Venture capital flows have not significantly shifted.⁷³

Access to capital in the creative industries remains a challenge as well. A study done by Women in Film and completed at Pepperdine University found that “women-owned production companies are in the minority when it comes to receiving studio subsidized deals, as well as independent financing from private investors, banks or venture capital... Moreover, the women-owned businesses that acquired non-studio-subsidized funding raised \$3.3 million on average, compared with the \$24.4 million their male counterparts received.”⁷⁴ WIF has undertaken significant programs to remedy the situation—financial literacy training for young producers, advocacy campaigns with the main studios among them.

The national conversations prompted by racial injustice are not specific to the entertainment industries, of course, and content creation is not the only sector where the absence of diversity is a challenge. It is thus reasonable to

69 UCLA College of Social Sciences, *Hollywood diversity report 2022: A new post-pandemic normal?*.

70 Stacy Smith, et al., “Inclusion in the director's chair: Analysis of director gender and race/ethnicity across 1,300 top films from 2007 to 2019,” A report by the Annenberg Foundation and the USC Annenberg Inclusion Initiative, January 2020.

71 Directors Guild of America, *DGA 2019–20 episodic TV director inclusion report*, February 2021.

72 Victor Luckerson, “Weighing Big Tech's promise to Black America,” *Wired*, October 5, 2021.

73 Arielle Pardes, “VC pledged to ‘do better’ on diversity. It's barely changed,” *Wired*, October 11, 2021.

74 Angelique Jackson, “Mind the gap: Why Hollywood fails to invest in women-led companies,” *Variety*, January 19, 2022.

ask why policymakers should prioritize diversity initiatives on the creative industries, as opposed to other sectors. Why film, one might ask, and not financial services?

The key is that diversity investments in the creative industries yield disproportionately positive social dividends. Because the cultural industries shape society's perspectives about race and gender, a concentrated focus on diversifying entertainment, by expanding the range of stories we encounter and consume,

the creative industries can empower healthy racial transformations. When minority voices are absent from the entertainment marketplace, when audiences from minority communities do not see mentors or role models who look like them, further polarization and alienation is the inevitable outcome. When the media industries do not reflect diversity, given their very public role in shaping the public and informational narratives we consume, the impact disproportionately scars racialized minorities.

TYLER PERRY

Actor, director, screenwriter, producer and author Tyler Perry became the first African American to own a movie and TV studio in 2008 (the current studio opened in 2019). By 2020 a Tyler Perry cover on *Forbes Magazine* announced he was now a billionaire. Perry controls the rights to all of his film and TV work and he is the first African American to become the outright owner of one of the largest studio lots in the nation, Tyler Perry Studios. Due to his content and business acumen, Perry's films had grossed over \$1 billion worldwide by 2019.

Last year a passion project 27-years-in-the-making, *A Jazzman's Blues*, premiered at the Toronto International Film Festival and on Netflix.

Tyler Perry Studios was acquired by Perry in 2015. The 330-acre lot is located in the heart of Atlanta on the historic grounds of the former Fort McPherson army base. The major motion picture studio, one of the largest production facilities in the country, showcases 40 buildings on the National Register of Historic Places, twelve purpose-built sound stages, 200 acres of greenspace



and multiple backlots. Tyler Perry Studios Fort McPherson is the fourth expansion in the lineage of the writer, actor, producer, director, and philanthropist's creative empire.

TPS has played a key role in providing economic opportunity, and in ways that go well beyond the easily identifiable franchise talent appearing in Tyler Perry's main productions. All this was recently recognized when Perry was named the recipient of the 2021 Jean Hersholt Humanitarian Award.

For industries reliant on audience interest, of course, **diversity also makes economic sense.** As the newspaper industry has faced collapsing subscriber counts, for example, industry leaders have noted the absurdity of failing to connect with huge potential markets, at the very moment when the nation is demographically evolving and minority communities are growing.⁷⁵ The fact is that entertainment audiences seek diverse content. A survey of arts patrons done by SloverLinett Audience Research in December 2020 identified broad categories of change that would make arts and culture organizations better for Americans. One of those trends is an expressed desire for “more reflective and dynamic content [that] includes ‘stories or content that connect to my life’ and ‘more frequent new works or exhibits.’ Over a quarter of Americans (29%) want one or both of these changes.”⁷⁶

The flip side is also true: when the media commit to better reflect the true range of social diversity—racial, political, orientational, gender, ethnic—the educational benefits are also disproportionately helpful. Stories reflecting the American people in all their diversity can help counter the human tendency to caricature and stereotype those who are different, and lure audiences outside their instinct to associate only with people like themselves. Entertainment stories humanize people we don’t know or only infrequently encounter and can spark empathy by helping us see the world through the eyes of another.

75 Cf., Amy Joe Coffee, “Representing ourselves: Ethnic representation in America’s television newsrooms,” *Howard Journal of Communications* 24.2 (2013): 154–177; Anne Johnston and Dolores Flamiano, “Diversity in mainstream newspapers from the standpoint of journalists of color,” *Howard Journal of Communications* 18.2 (2007): 111–131.

76 Jen Benoit-Bryan, Madeline Smith, Natthew Jenetopulos, and Peter Linett, “Centering the picture: The role of race and ethnicity in cultural engagement in the U.S.,” A SloverLinett analysis of survey data from the first wave of Culture + Community in a Time of Crisis, December 15, 2020, pg. 2.

WILL PACKER

Will Packer Productions has achieved unprecedented success with nine consecutive films rated number one at the box office. Packer’s unique understanding of the New American mainstream audience continues to result in success that outpaces the industry by record margins.

To date, Will Packer’s films have earned more than \$1 billion, with nine opening at number one at the box office and 2017’s *Girls Trip* breaking box office records for an R rated comedy. Will Packer Production company is behind hits like *Me Time*, *Beast*, *Straight Outta Compton*, *Think Like a Man Too*, *Ride Along*, *The Wedding Ringer* and *No Good Deed*.

Packer produced the 94th Annual Academy Awards on March 27, 2022.



ATHENA STUDIOS

Athena Studios is Georgia's newest movie studio, offering productions world-class facilities and state-of-the-art technology. Athena Studios currently provides 200,000 square feet of purpose-built space including 4 premium sound stages along with office, mill, and flex spaces, creating a true 360° filming environment.

Set on 110 acres, Athena Studios offers several expansive backlots and additional land for expansion. Once all phases are complete, Athena Studios will boast 26 sound stages and over 350,000 square feet of support space, making it one of the largest purpose-built production facilities in Georgia.

In November 2022, Athena Studios made a significant investment

in education and workforce creation by donating a 14,000 square foot learning center to train film industry professionals in Georgia. The partnership between Athena Studios, the University of Georgia, and the Georgia Film Academy, provides a home for students to develop their skills and gain real world experience alongside industry leading film productions.



Black communities will, it has been argued, disproportionately benefit from technology-related investments. Nicol Turner Lee, Director of the Center for Technology Innovation and a senior fellow at the Brookings Institution, has called for a Tech New Deal for Black Americans. Such an initiative would “accelerate Blacks’ access to broadband infrastructure and related jobs, establishing formal credentialing and apprenticeships for underrepresented Black workers in 5G and other technology jobs, advancing a new national digital service corps, and investing tech resources into community-based organizations and start-up enterprises within Black communities.” While these recommendations are more expansive than targeted investments in entertainment

production and content creation, every one of her recommendations is pertinent to the sector: workforce training in media content creation is itself a high technology digital skillset, and the associated infrastructure requires and thus invests in digital broadband and other assets key to minority economic empowerment.⁷⁷

Tax incentives can lower access-to-entry barriers that otherwise stymie minority participation in media content creation. The costs of high-quality entertainment are high, while distribution channels and the costs of creating DIY pilots and web series are often more accessible to passionate artists early in career.

⁷⁷ Nicol Lee Turner, “Create a ‘tech new deal’ for Black America,” Brookings Institution, February 11, 2021.

Georgia's creative workforce is diverse, a counterweight to these national trends, and the state's corporate leadership has committed to initiatives to improve diversity across industries. Census data ranks Atlanta as "number two among large metros for its share of Black workers employed in management occupations. And the metro ranks third for the number of Black-owned employer firms."⁷⁸ Responding to these facts, the Metro Atlanta Chamber has announced a program, ATL Action for Racial Equity, for example, that has been joined by 150 Atlanta-based companies (the Atlanta Hawks, Cox Enterprises, and other creative industry enterprises among them).

The state is also acquiring a well-earned reputation for the diversity of its entrepreneurial class. According to data from Crunchbase, the percentage of venture capital in Atlanta going to minority founders exceeds the national average, with further room to grow.⁷⁹ And the prospects for minority entrepreneurship are not contained only in Atlanta. **Data reported by the Brookings Institution found that the percentage of Black business in Albany, Georgia is only exceeded (percentage-wise) by two other American cities (St. Louis and Fayetteville, NC).**⁸⁰ It's an important counter to the national underrepresentation of people of color among the entrepreneurial class; Census Bureau data shows that Black businesses comprise only 2.2% of the nation's 5.7 million employer businesses.⁸¹

As Black Lives Matter protests galvanized the nation in 2020, Georgia's corporate leadership were among those making commitments to increase C-suite DEI efforts more tangible, and these included commitments from the state's

main media companies. Cox Enterprises, for example, which has won 2022 recognition from *Forbes* as a best employer for diversity, recommitted itself to DEI initiatives.⁸² Minority enrollments in Georgia Film Academy cohorts are high; in the first two cohorts, roughly half of all students enrolled came from minority groups.⁸³

All this is especially true in the media industries. A news report on Georgia's industry diversity quoted Chris Escobar, executive director of the Atlanta Film Festival: "The people calling the shots here are more likely to look like you and more likely to welcome you at the table. They are more likely to take you seriously." (The Atlanta Film Festival is itself reflective of these diversity commitments; in 2019, 76% of the films screened at AFF were produced by a person of color or a woman.) The authors cited Atlanta as a key example: "It has a booming middle class, temperate climate, affordable quality of life and an endless talent pool of producers, writers, directors and stage crews born largely from Tyler Perry's empire."⁸⁴

When it comes to diversity successes, Georgia's music industry leads the way: "The Georgia Council of the Arts said the state's creative industry had a \$62.5 billion economic impact, generated \$37 billion in revenue and employed an estimated 200,000 people statewide in 2015. It's inarguable that black artists play a huge driving role in those statistics. 'We are the epicenter of black culture,' said Bem Joiner, co-owner and creator of Atlanta Influences Everything, a civic-minded creative consulting firm. 'The Grady Babies, the natives, tilled the soil and helped build the foundation.

78 Crystal Edmonson, "Metro Atlanta Chamber launches 'action plan' to address racial equity," *Atlanta Business Chronicle*, February 9, 2021.

79 Erin Schilling, "Pulling the curtain back," *Atlanta Business Chronicle*, January 22, 2022.

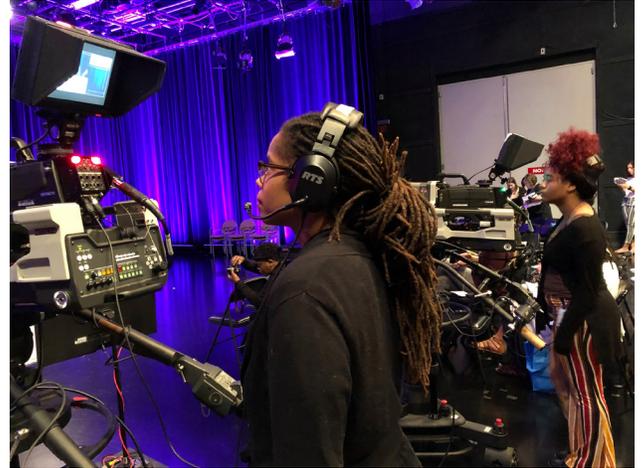
80 Andre Perry and Carl Romer, "To expand the economy, invest in Black businesses," *Brookings Institution*, December 31, 2020.

81 Quoted in Perry and Romer, "Invest in Black businesses," *Brookings*, 2020.

82 Kenna Simmons, "Culture change: The state's business leaders are committed to increasing diversity and inclusion," *Georgia Trend*, February 2021, pgs. 27–31.

83 Jeffrey Stepakoff (GFA Executive Director) quoted in Dave Williams and Ellie Hensley, "Lawmakers look at incentives to increase minorities in film industry," *Atlanta Business Chronicle*, September 30, 2016.

84 Nicquel Terry Ellis, "'Hollywood of the South': After a decade, industry leaders succeed in making Atlanta a hub for filmmakers of color," *USA Today*, March 1, 2020.



Then black people came from St. Louis, Queens, Florida, Mississippi, and they brought their culture here it mixed in.’ Even the Metro Atlanta Chamber of Commerce is selling black culture—the city’s irrefutable influence on the country’s hip hop scene, but also its reach in other arts arenas — as a reason to move to or visit here, telling consumers, ‘Come for the Hustle—Stay for the Culture.’⁸⁵ Dozens of Atlanta-based musicians have charted, ranging from hip hop to trap music, pioneered in Georgia by Outkast, Ludacris, T.I., Migos, Lil Yachty, and Young Jeezy among others.

The financial rewards for content creators able to connect with minority audiences is significant. The Selig Center for Economic Growth at the University of Georgia notes that in 2020, “the combined buying power of blacks, Asians, and Native Americans” was “\$3 trillion—80 percent higher than its 2010 level of \$1.7 trillion.”⁸⁶ Black purchasing power alone will soar to \$2 trillion by 2025, the report estimates. Research by SloverLinett Audience Research documents surging interest in

minority communities in the arts, with rates of participation increasing during COVID.⁸⁷

When creative content production is linked to support entrepreneurial start-ups, the benefits are likely to disproportionately benefit minority producers. As Humphreys noted, “of the many diverse supporting forces, one of the most important and enduring is the increasing number of blacks who are starting and expanding their own businesses. The 2012 Survey of Business Owners (released by the U.S. Census Bureau) shows that the number of black-owned firms was 34 percent higher in 2012 than in 2007, which is more than eleven times the 3 percent gain in the number of all U.S. firms.”⁸⁸

Of the \$491 billion total spending power of Georgia residents, African American consumers account for \$118.4 billion, making Georgia the nation’s third largest consumer market for black consumers.

Minority set-asides were briefly advocated and considered in the legislature as a way to further diversify the industry. Because the industry was scaling up so quickly, and with indicators that the emerging workforce in the

85 Ernie Suggs and Najja Parker, “Atlanta influences everything: How Atlanta’s black music, TV and movies are shaping global culture,” *Atlanta Business Chronicle*, January 31, 2020.

86 Jeffrey M. Humphreys, “The multicultural economy 2021,” Report of the Selig Center for Economic Growth, Terry College of Business, University of Georgia, pg. 5.

87 “Centering the picture: The role of race and ethnicity in cultural engagement in the United States,” An analysis of national survey data from the first wave of *Culture + Community in a Time of Crisis*, a special edition of *Culture Track*, December 15, 2020. Produced by SloverLinett Audience Research.

88 Humphreys, pg. 5.



film industry would be increasingly diverse, the Assembly declined to adopt those proposed modifications to the film tax credit. A key challenge today is the lack of data that would help document the true extent of workforce diversity in the Georgia creative industries. While the broader willingness among companies to release diversity statistics has been welcome,⁸⁹ the main film, gaming, and music studios are not so far among those releasing workforce data. In the same way broader pressures in the corporate world to disclose have provoked conversations about the

adequacy of diversity gains,⁹⁰ even modest changes to project reporting (companies claiming the credit might be required to report demographic data, for instance) would lay the foundation for a more detailed analysis of the credit's impact on minority businesses and workforce.

89 Grace Donnelly, "A new age of corporate transparency," *Atlanta Business Chronicle*, April 8, 2021. For a less optimistic account, see Ishika Mookerjee, "Diversity is hard to put on an index: More investors want to know if companies are making progress on race, but data are lacking," *Bloomberg Businessweek*, August 31, 2020, pg. 29.

90 Matt Kempner, "Georgia's corporate giants reveal little management diversity," *Atlanta Journal Constitution*, October 10, 2021, pg. A1.



Building Georgia's Next Generation Workforce

► Projecting entertainment industry workforce demand in Georgia

The film industry is predicted to remain a leading producer of jobs in Georgia in the future. **CareerBuilder recently cited the film industry as the fastest growing source of higher-paying jobs in the state.** The number of film editors will grow by 49 percent, according to CareerBuilder, and the demand for producers and directors will expand by 37 percent. There are routinely 30 to 40 productions ongoing at any given time in the state.

The visual special effects (VFX), virtual production, and postproduction industries are expanding worldwide. The most comprehensive examination of the sector was the result of a collaboration between Unreal Engine and Burning Glass Technologies, the findings of which were circulated in a May 2019 report, "Visualizing the Future: Demand for 3D Graphics and Real-Time 3D Across the Economy." These are among the report's key findings, quoting:

Demand for 3D graphics is robust, and demand for real-time 3D skills is growing quickly. Between October 2017 and October 2018, more than 315,000 job postings requested 3D graphics skills. The demand for 3D graphics skills during this time was over 55,000 openings greater than the demand for data science-related skills. Demand for 3D graphics skills has grown 42% faster than the market overall. Demand for real-time 3D skills, which are at the technological frontier of 3D graphics, has grown 601% faster than the market overall and now accounts for 10% of all openings calling for 3D graphics, up from 4% in 2013. In total there were 31,339 openings calling for real-time 3D skills between October 2017 and October 2018.

Real-time 3D is creating "hybrid jobs." ...In addition to expected occupations such as video game artists and programmers, occupations with the greatest demand for real-time 3D include software developers and mobile app developers, highlighting the diversity of use cases for these skills. Further, demand for these skills is present in business fields such as sales, marketing, and business management, demonstrating the push to commercialize the associated products and underscoring the need for workers in these fields to gain familiarity with real-time 3D...

Real-time 3D skills are undersupplied, and that is unlikely to change

any time soon. Real-time 3D is associated with a large salary premium: 57% above the average advertised salary and 18% above the average advertised salary for jobs requesting 3D graphics skills in general. In the career fields where these skills are in highest demand, filling a position can often take over 40 days. Real-time 3D skills are also among the fastest growing in the market, which carries the risk of exacerbating the gap between supply and demand.

Mastering 3D graphics or real-time 3D skills can lead to strong entry-level opportunities and provide a boost to early-career professionals. Nearly a quarter (23%) of job openings for 3D graphics skills and a fifth (19%) of job openings calling for real-time 3D skills are entry-level positions. The vast majority of job openings require a bachelor's level education (77% for 3D graphics and 81% for real-time 3D). For students or new entrants to the job market, mastering 3D graphics skills can lead to a salary premium of 24% over other entry-level jobs—and mastering real-time 3D can lead to a salary premium of 45% above other entry-level jobs. Becoming proficient with these skills can also benefit early-career professionals who are already in the workforce. Most job openings calling for 3D graphics skills require 3–5 years of experience. On average, these postings advertise a salary 13% higher than other job postings requiring similar levels of experience—and 38% higher for jobs requesting real-time 3D skills.

Employment in the **game design and development sector** is driven by fast-growing consumer demand for game and immersive play experiences. According to Nielsen, in the United States alone, more than 64% of the general population are gamers. More than 30% of the world's population actively play video games (Newzoo). In 2018, the gaming industry generated roughly \$135 billion in revenue. The largest games company, Sony Interactive, is market valued at \$123 billion (Microsoft is, of course, valued higher, at roughly \$2 trillion). To put this in context, quoting a 2018 analysis posted at LPESPORTS.COM: “The video games’ industry has earned more revenue than the movie and music industries combined, every year for the past eight years.” Another, perhaps



more accurate way, to put it would be to note that videogame revenue now exceeds film industry box office; according to IDC data, 2020 global videogame revenue reached nearly \$180 billion with sports and film totally \$175 billion.

As the industry diversifies, revenues are projected to rise; for example, the ubiquity of smart phones helped revenue from mobile games grow between 2015 and 2020 by 44% (VentureBeat). New mechanisms for game distribution (such as Microsoft's Project xCloud and Google Stadia) have been launched, and this is likely to expand video gaming's global marketing reach. Walmart is considering a video game streaming service. All told, the global streaming market is expected to grow by 27% a year in the next decade, according to Zion Market Research, reaching \$6.9 billion by 2026. Esports today attract a global audience of more than 450 million on platforms such as Twitch.

This demand does not entirely center on the entertainment space, nor on games that have received criticism for their apparent promotion of violence. So-called “serious games,” which often connect to real world problems where gamification can trigger creative collaborative solutions, are increasingly prominent, as are games that serve as entertainment ancillaries to other creative projects (such as blockbuster action films). Game design often connects professionals to immersive training activity (such as the increasing use of virtual surgical suites, pilot training, equipment training, and virtual real estate development). A 2019 research report produced by Metaari has noted: “The worldwide five-year compound annual growth rate (CAGR) for Game-based Learning products and services

is a healthy 33.2% and revenues will more than quadruple to reach well over \$24 billion by 2024. Global, regional, and country market conditions are now extremely favorable for serious game suppliers. *The worldwide educational game market is now in a boom phase; Game-based Learning is now mainstream.*

The Bureau of Labor Statistics (BLS) has estimated that demand for multimedia artists and animators will modestly grow in the next decade (from a 2016 estimate of 73,700 nationally to a 2026 projected number of 79,900; 8% growth). Other sources project more significant growth; CareerExplorer estimates that, taking into account closely associated allied fields, an estimated 287,200 video game designers work in the United States, and they project that number to grow by 9.3% in the next decade.

Small firms that used to produce content under contract to larger companies are now working to develop their own games for the market. New technologies, such as augmented reality and the demand for content on mobile platforms, are opening the employment prospects for these small and mid-sized companies, and what had been a discouraging market for new employees five years ago has now, by many accounts, turned the corner in a more positive direction (AR/VR jobs have experienced 400% growth since 2014, and postings for esports jobs since 2014 have grown 40%, according to *Indeed*).

Through all this, the most commonly offered new positions call for new employees with programming experience. While the Bureau of Labor Statistics predicts demand for computer programmers will slump between now and 2028 (from total 2018 employment of 250,300 to 232,300 in 2028), they also predict that demand for software developers will grow between now and 2028 by 21%, adding nearly 300,000 new positions between now and then. Because of projected shortages, the Entertainment Software Association is among the leading professional associations calling for immigration changes so that the nation can import more professionals from other countries.

The main work done by game developers is not typically focused on programming or coding entirely new game experiences. More often, game developers work to translate a game from one platform to another or to add more elaborate levels and functionality or to add player analytics components. Competition for these positions can be strong, and as a result, broad-based training in the core games-related programming languages (C#, C++, Python) is valuable on the market.

Employment trends are also driven in part by growing demand for programmers skilled in 3D technology, and job growth is especially strong in the emerging field of so-called “real time 3D,” which work focuses on the creation of immersive experiences. While 3D graphics employs many more American workers (between October 2017 and October 2018, 315,000 positions posted, versus only 30,000 in real-time 3D jobs), the latter is explosively growing—at a rate 601% faster than the market overall (Burning Glass data). The highest projected growth in demand for workers with 3D graphics skills is for workers able to work with augmented reality, VR, Oculus, Unreal Engine, Unity, and HoloLens systems, and these are precisely the ones in which Georgia State University’s Creative Media Industries Institute has organized its curricular and facilities focus. And the fastest growing job category requiring real-time 3D skills is video game development (10 year projected growth rate of 21%).

Several factors argue in favor of Georgia game design sectoral expansion against this backdrop. The sector is geographically diversifying, away from its traditional centers in California, Texas, and New York (where projected sector growth lags the national 8% average). This means that nationally modest growth projections are likely masking more significant regional prospects for employment growth. Meanwhile, game design offers promising career pathways for workers early in career. This is so in part because of growth in smaller indie studio and start-up space, which continues to connect (as careers advance) to work in the more established game design studios (e.g., Ubisoft, Electronic Arts). Early

game design experience can also open paths in related IT and computing fields, or, for college graduates more interested in career swerves back into the arts, into the film industry.

Demand for this work is regionally robust. Beyond projected growth in Georgia, a recent study notes that Charlotte, NC will lead the nation in hiring workers for the augmented and virtual reality sectors. As an *Indeed* analysis recently noted,

As the industry has expanded, new hotspots are emerging, particularly in the South. For example, gaming opportunities are so plentiful in Austin, Texas—which is now home to over 6% of all jobs for game designers and developers nationwide—that the University of Texas is launching a formal video game curriculum. North Carolina is another emerging tech hub, and both Raleigh and Charlotte are key sites for AR/VR jobs. And Huntsville, Alabama, has the largest share of local game developer job postings on our list, joining nearby Birmingham as a growing hub for tech jobs in the region. Not only is Huntsville vastly more affordable than Silicon Valley, helping to draw job seekers looking to cut costs, but the city also boasts a highly educated workforce and has long been a mecca for science and technology jobs, which is good news for employers.

Georgia is a likely site for this growth, given rapid expansion in related sectors (such as film and television production). **The state already employs more game designers than all but California, Texas, and the District of Columbia** (Illinois is virtually tied with Georgia). The state is home to several large studios, including HiRez Studios (based in Alpharetta, and physically located across the street from the GSU Alpharetta campus), TripWire, Kaneva, Primal Screen, and Pulseworks. More than 140 game studios operate in Georgia, and these studios have a net \$770 million statewide economic impact (2021 GGDA data). Against the national projected 2016–2026 employment growth rate of 8%, BLS projects that Georgia's rate of growth will be much higher, with 240 projected annual game design position openings, and a 20.6% growth rate in that

ten-year period. Other southeastern states will also benefit from growth rates in excess of the national projection, meaning that enhanced Georgia attention to the sector can be understood as also preparing workers for regional sectoral expansion (e.g., Florida game design employment is projected by 2026 to grow by 17.3%; North Carolina by 15.8%; South Carolina by 12.2%). These jobs are worthy of educational training investments, since median pay is high (2018 = \$72,520 nationally and \$62,000 in Georgia). And the projected growth rate for game design jobs is higher than for other related careers, so that game design may increasingly become a career of first resort for young professionals who formerly would have anticipated jobs in graphic design (only projected to grow by 4% by 2026), architecture (4%), computer programmers (minus 7%), art directors (5%), desktop publication (-14%), fashion design (3%), and photography (-6%).

Over the course of an individual career, salaries for game designers steadily build. According to data gathered by the International Game Design Association, while a starting designer can expect (median) pay of \$60,131, ten year's experience increases that to \$70,217, and 15 years to \$81,474.

The game design industry continues to suffer from a workforce diversity crisis. While women play games at rates roughly comparable to men (72% of women play games on their smartphones, a proportion similar to men), for example, diversity (gendered, racial, and ethnic) lags. IGDA 2017 data, from developer surveys, found fewer than half (42%) believe progress had been made in the prior two years. The same survey found only 21% of developers are women, and just 1% self-identified as black or African American. Pew surveys found that 19% of Hispanics self-identify as a gamer (a higher percentage than reported by either blacks—11%, or whites—7%), and yet the IGDA data show only 5% of game developers self-identify as Hispanic or Latinx. Georgia's demographic diversity is a natural and essential corrective.

► Creative industry training in Georgia’s higher education sector

Roughly half of the University System of Georgia’s higher educational institutions are either expanding their existing media production programs to train for the growth in film industry work, or have added new degree proposal requests now under consideration in the Board of Regents. A key example is the new Master of Fine Arts degree, authorized as a collaboration between the University of Georgia and the **Georgia Film Academy**. That three-year program aims to train advanced above-the-line (that is, individuals who have creative control) workers who will benefit both from the strong academic preparation of UGA film faculty, along with the opportunity for in-person, in-studio training at the GFA’s advanced content production complex. Students will produce major final projects in the GFA studios under the supervision of University of Georgia faculty—both institutions are expecting that graduates will help populate the state’s workforce, so that state-produced projects can be launched and produced from start to finish.

The Georgia Film Academy plays an essential role in workforce training. Authorized by the state legislature and headed until 2022 by Jeff Stepakoff, an industry professional attracted to Georgia by the fast growth in television production work, the GFA partners with more than two dozen state universities and technical and community colleges in Georgia to provide hands-on industry training. The initial, and now most popular, program is an 18-credit hour certificate in film production. Students enroll from across the state in a first course that teaches students the various crew positions on a live film stage. Later, GFA matches the most promising students with internships (in 2020, GFA launched an internship partnership with Disney), while the certificate is completed by taking other elective industry-focused classes. In 2019, GFA formed a partnership with AVID, the producer of key digital film and sound editing software. Today students can enroll in a two course sequence that prepares them to be AVID-certified.



In February 2021, the Georgia Film Academy announced two new certificate programs that reflect the core case made here: that **the state investments in the film industry can be leveraged to build a broader content creation ecosystem**. Both launched in fall 2021. One program trains students for work in post-production, digital editing, and special effects—beyond the AVID course sequence, students will have access to new classes in sound editing. The other new certificate prepares students for work in the emerging esports industry. In partnership with SkillShot and other key games industries studios at work in Georgia, the esports certificate will train students to organize videogame competitions, to produce those at professional levels of production quality for live broadcast over online platforms such as Twitch, and to develop broadcasting skills. Georgia State University partnered with GFA to offer the first course in the esports curriculum in 2020; like the other GFA programs, students across the state will have full access to the training.

GFA has also begun programs to train high school teachers connected to school media centers and media training classes, so that students can be taught starting in high school by teachers knowledgeable of statewide opportunities. On a limited basis, students can



enroll in the first film production certificate course given access through dual enrollment.

The range of training programs offered by the state's higher

educational institutions now offer multiple pathways to career success. Some of the oldest degree programs (such as those offered in film at the University of Georgia and Georgia State University) are film-focused, providing students with the contextualizing background

knowledge in film history and theory necessary to build a maturing artistic vision suitable to the most advanced studio work. Many others contextualize media production skills in mass communication majors, where students blend training in social media, public relations, strategic communication, and television production, all preparing them for work in corporate media (those programs include the generalist communication majors at Georgia Southern, Kennesaw State University, Georgia State University, Georgia Gwinnett College, and others). Still others focus almost entirely in hands-on production coursework (such as a new undergraduate major at Clark Atlanta University) or utilize the state's new commitment to vocationally-grounded Nexus degrees (e.g., Columbus State University). At Georgia Tech, students can undertake a videogame development sequence contextualized by classes offered in a new media major. And at Georgia State University, a media entrepreneurship major educates students desiring to combine core production specializations (e.g., in film, games, music, and social media) with integrated instruction in media entrepreneurship and advanced technology production pipelines.

The statewide enrollment growth in these programs of study is significant and has helped to provide the core workforce necessary to support multiple simultaneous productions. While some program graduates migrate to California and New York to pursue professional opportunities there, the largest majorities remain in Georgia. The GFA training pipeline is one of the factors that has led to fast growth in Georgia membership in the main production unions, especially the International Alliance of Theatrical Stage Employees, Moving Picture Technicians, Artists and Allied Crafts (IATSE). The Georgia IATSE chapter (Local 479) now includes more than 6,000 certified professionals.

► Future forward workforce training in content creation technology and entrepreneurship

A recent Brookings Institution report clearly identifies the workforce challenges that may soon impede America's digital leadership:

Education and training have been losing the race with technology. In the United States, growth in the years of education completed slowed considerably around the 1980's. So just when demand for higher-level skills picked up as the digital revolution gained steam, the attainment of those skills slowed. Almost two-thirds of workers do not have a college degree. While pre-college education gaps by family income level have narrowed, gaps in college and higher-level education have widened. The capacity of the systems for continuing education has been far exceeded by the growing need for worker upskilling and reskilling.⁹¹

A number of international models illustrate how innovation and entrepreneurship training programs can be connected to STEM initiatives to enhance advanced technology workforce development. The United Kingdom has invested 80 million pounds to support partnerships that apply advanced technologies to the creative industries. And in Australia, because creative companies have been singled out as the focus of industrial policy, the Government of South Australia (the region where Adelaide is located) has explicitly focused on a workforce training strategy that connected “complementary” or allied industries. Training in game design, for instance, simultaneously prepares workers for wider work in the IT sector. The logic is to support the creation of local placemaking “precincts” where computational and creative enterprises co-locate. Citing recent successes with this approach, a recent report concludes that “if the precincts ecology continues to

enhance practical creative entrepreneurship, act as a conduit for the movement of talent as it seeks greater challenge and opportunity, disrupt existing norms in innovation practice, and facilitate access to new markets, it will provide a model for rearticulating the creative industries-STEM relationship.”⁹²

In Georgia, several models exist that aim to accomplish similar goals. The Georgia State University Creative Media Industries Institute has created degree and industry collaborative efforts to supplement traditional arts and media degree training with advanced technology and entrepreneurial coursework; that effort received a \$22.8 million facilities renovation boost from the Woodruff Foundation. And a recently announced \$10 million gift from the Arthur M. Blank Family Foundation aims to create a center for innovation and the arts at Spelman College.⁹³

The Georgia Film Academy is playing a vital and coordinative role in organizing new certificate programs that simultaneously build skills useful to new creative careers and connected to new technologies. Two certificates launched in 2021, one that trains students for work in the esports and videogame industry and another focused on digital postproduction, connect closely with the state's leading content creation firms. In the postproduction certificate, for example, students can acquire AVID certification (AVID is a digital editing software platform heavily utilized in the film and

91 Qureshi, “Democratizing innovation,” Brookings Institution, December 16, 2020.

92 The Australia example is described more fully in (and the quotation is from) Stuart Cunningham and Marion McCutcheon, “Rearticulating the creative industries-STEM relationship: The case of innovation precincts in South Australia,” *Creative Industries Journal* (2021; <https://doi.org/10.1080/17510694.2021.1959087>).

93 Allison Joyner, “Spelman College receives \$10 million grant from the Arthur M. Blank Family Foundation to support innovation, entrepreneurship,” *Saporta Report*, February 3, 2022.

television industries).

As the COVID pandemic revealed, the wider need for digital literacy and a deeper knowledge of digital content creation tools are more vital than ever to meaningful participation in the 21st century workforce. As a growing number of

workers plan careers around project based (so-called gig) work, one's ability to create digital marketing, apps, and creatively impressive digital packaging will only grow.



Recommendations for Georgia's Digital Future

The case for continuing the tax incentive system unchanged

As the cost of content creation tax credits expands, a common reaction in states committed to build their creative sectors has been to rein incentive programs in by imposing a budgetary cap on potential outlays. But a simple cap on tax credit outlays suffers major drawbacks. Because it reduces the assurance of studio access to the incentive (after all, a given company cannot count on a tax benefit if a cap ends up reached early in a fiscal year cycle), a cap when applied in other states has tended to result in a major exodus—this was the experience in New Mexico and Florida, to take two recent examples. If an incentive or regulatory system is structured around uncertainty in this way, investors end up lacking the confidence they need to commit to Georgia projects, and even if the cap does not enact huge cuts, project work may flee the state because investors lack confidence in their ability to access the incentive mechanism.

Modifications of the tax incentive program

Some reforms of the tax incentive mechanism might facilitate Georgia's further creative industries growth without scaring away producers and investors eager to work in Georgia. A better path is to raise access thresholds, implement more specific requirements so that the incentive remains open to all while not foisting ever growing costs on Georgia taxpayers.

For example:

The total project spend threshold could be raised to nudge higher the amount of Georgia spending in a qualifying project's budget.

The credit could be modified to more fully reward projects that originated in Georgia, are post-produced in the state, or which employ a fully diverse workforce.

The top off 10% eligibility granted to qualifying projects that commit to Georgia branding could be reconfigured, so that benefitting studios could also commit to support Georgia workforce development programs or

receive benefits by extending their work into rural areas.

The credit mechanism could be adjusted to more fully favor episodic television work. If a television series secures a distribution deal, the benefits of the production's location in Georgia are more significant, since a successful television show might employ Georgians for five or ten years (as opposed to the much shorter timelines for film projects).

Tightening eligibility is not a risk-free approach to entertainment industry expansion. As tax credit qualifying thresholds are raised, smaller independent projects can be squeezed out, and these smaller projects may be the very thing Georgia would want to encourage (independent projects tending to engage more diverse voices, potentially linked to a wider narrative range than more predictable big budget fare). The current qualifying threshold implemented a compromise—it was set high enough to limit the incentive to serious and ambitiously budgeted project, but not so high as to be always out of reach for smaller companies (and the incentive enables studios to bundle projects together to reach the threshold). But if there is a strong political desire to limit the incentive's costs, modifying qualifying thresholds might be

worthy of consideration.

Other potential strategies to boost Georgia's digital economy

Georgia should consider a tax incentive for entertainment production that is not content or project based, but which encourages the build-out of further studio and technology infrastructure that will benefit all creative projects, regardless of platforms. Media production is digitally intensive, requiring the ability to move and process large data files. An incentive that encourages Georgia-based studios or subsidiaries to expand digital and computational processing capabilities or that offsets initial studio construction is essentially a broad-based investment in Georgia light manufacturing. The logic of the current incentive is that support for specific projects will indirectly lure the expansion of production facilities, and that has happened. But the trend could be encouraged by directly supporting studio buildouts.

FOUR GEORGIA MODELS FOR THE NATION'S ENTERTAINMENT INDUSTRIES



The Georgia Film Academy trained 2,000 filmmaking professionals from across the United States in 2021, at the height of the pandemic, on best production practices.



Tyler Perry Studios modeled a production system that enabled full throttle work to continue even under conditions of total quarantine.



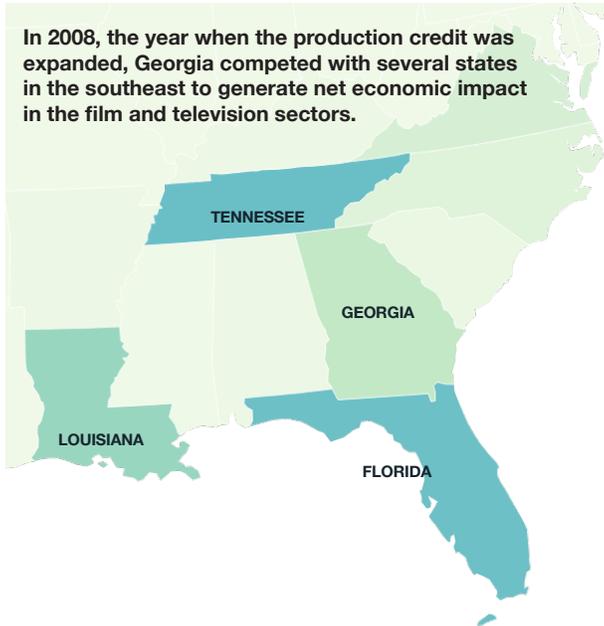
The Legislature enacted reforms to better track production credit expenditures and expand oversight, making Georgia's auditing standards now among the nation's most rigorous.



The USG and TCSG phased in innovative degree programs, including a new NEXUS credential at Columbus State University, to meet market demand for highly trained content creators.

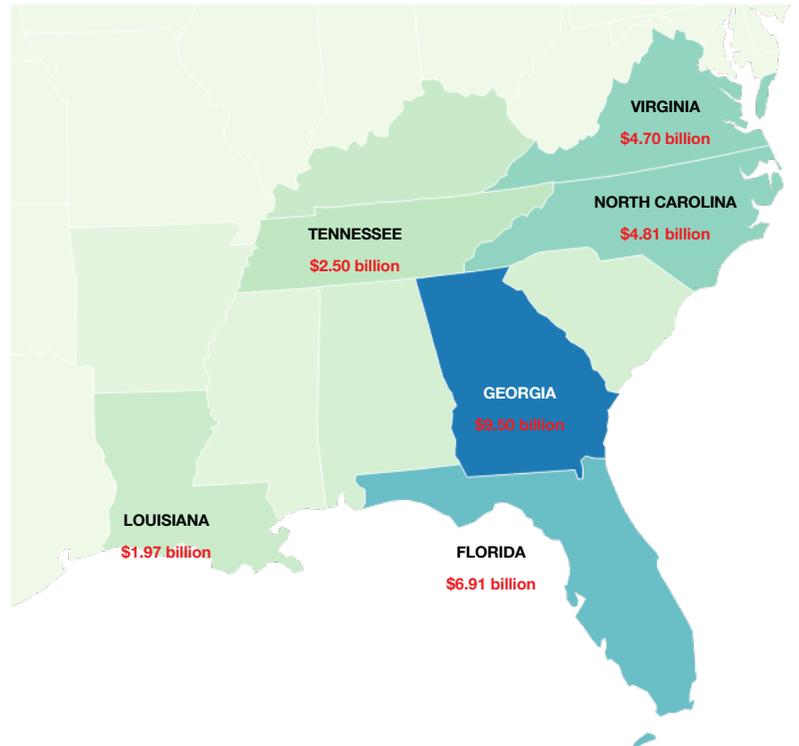
Georgia has surged ahead of the rest of the southeast in boosting film and television sectoral economic impact

In 2008, the year when the production credit was expanded, Georgia competed with several states in the southeast to generate net economic impact in the film and television sectors.



DATA SOURCE: Bureau of Economic Analysis.
Visualization created in Datawrapper.

By 2020, even given the impact of the first and worst impact year of COVID, Georgia had established a regionally predominating position regarding the net economic contribution made by the film and TV industries, thanks mainly to film sector growth.



CREATIVE MEDIA INDUSTRIES INSTITUTE

25 Park Place NE
Georgia State University
Atlanta / GA / 30303

**Brennen Dicker
Executive Director**

bdicker@gsu.edu
(404) 413-6492

[HTTP://CMII.GSU.EDU](http://cmii.gsu.edu)

