



Film **L.A.** Inc.

2017

FEATURE FILM STUDY



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ABOUT THIS REPORT

For the last five years, FilmL.A. Research has tracked the feature films released theatrically in the U.S. to determine where they were filmed, why they filmed in the locations they did and how much was spent to produce them. We do this to help businesspeople and policymakers, particularly those with investments in California, better understand the state's place in the competitive business environment that is feature film production. And we also do it for the millions of movie lovers out there who want to know where their favorite films were made and what went into making them.

Our sample is based on the top 100 feature films at the domestic box office released theatrically within the U.S. during the 2017 calendar year. The 2018 Feature Film Study follows the same basic approach as prior reports and analyzes the following data for included films:

- Primary and secondary filming locations
- Primary and secondary locations for postproduction / visual effects (VFX) work
- The number of films that scored music within California
- Production spending and filming jobs created

In determining the primary production location of a given film, the overriding factor was where the production spent most of its reported budget. This is sometimes a more complex activity than it may seem.

Due to the heavy reliance on visual effects (VFX) common in most big-budget films, some projects may be primarily produced in a location where none of the live-action principal photography took place. For example, in last year's study, FilmL.A. credited the United Kingdom (U.K.) as the primary production location for Disney®'s *Jungle Book*, a live-action remake of the animated film that did all of its principal photography in Los Angeles. Because the film spent more money (on VFX) in the U.K., however, it was given credit as the primary production center rather than California.

Similarly, in this year's report, FilmL.A. designated New Zealand as the primary production center for *War for the Planet of the Apes* rather than Vancouver, British Columbia. While the film did the vast majority of its principal photography in British Columbia (where it spent more than \$81 million (CAD) while filming over 180 days),¹ the production spent more money — \$131.5 million (NZD) — on VFX in New Zealand.

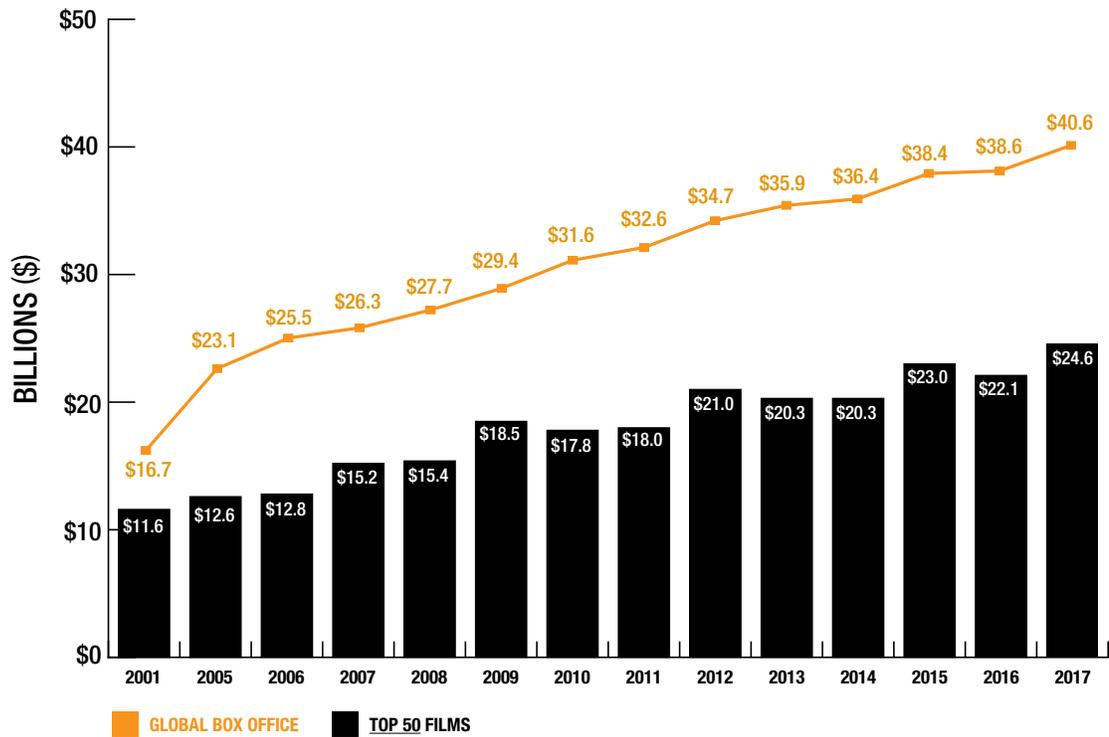
The 100 films in this year's sample set included 14 animated and 86 live-action projects. More than half (52) of the films completed production in 2016, 21 in 2017, 18 in 2015 and two completed production in 2014. The reported budgets of the 100 films (see **Appendix A** for complete list) ranged from \$4.5 million to \$300 million. The average production budget in the sample was \$74.3 million.

The films in this study also represent over \$7.55 billion in direct production spending and tens of thousands of high-wage jobs in a wide array of professions. The \$7.55 billion spent on the 2017 films is just over the \$7.5 billion spent on the top 100 films of 2016.

¹ MPA, Canada: <https://www.mpa-canada.org/wp-content/uploads/2017/07/Apes-Release-no-Watermark.pdf>



SHARE OF TOP 50 FILMS AT GLOBAL BOX OFFICE



Total box-office revenues reached a record high in 2017, with global box office ticket sales hitting \$40.6 billion.² Despite the release of hundreds of movies every year, a relative handful account for most of the global revenue. The top 50 films of 2017 pulled in \$24.6 billion worldwide; the top 25 films raked in \$18 billion and the top five films took in \$5 billion.³

For more than a decade, the top 50 films released each year have slowly been increasing their overall share of the worldwide box office. In 2006, the \$12.8 billion earned by the top 50 films represented 50 percent of the worldwide box office total of \$25.5 billion. By 2017, the share of the worldwide box office total (\$39.9 billion) held by the top 50 films (\$24.6 billion) increased to 62 percent.

² MPA, 2017 Theme Report, pg. 7: https://www.mpa.org/wp-content/uploads/2018/04/MPAA-THME-Report-2017_Final.pdf

³ 2017 Worldwide Grosses, Box Office Mojo: <http://www.boxofficemojo.com/yearly/chart/?view2=worldwide&yr=2017&p=htm>



FILMING LOCATIONS

While Southern California and Hollywood are widely regarded as the traditional home of moviemaking, today's film industry is a worldwide enterprise. Feature films produced by U.S. companies are filmed across the globe. For many films, principal photography occurs in more than one location. Accordingly, FilmL.A. works to identify both primary production locations and secondary production locations for films studied.

In the end, our research determined that 14 different U.S. states and 11 foreign countries were used as primary production locations among this study's 100 films.

Over the last five years, a handful of locations (California, Canada, Georgia, the U.K., New York and Louisiana) have traded spots for the top five filming locations each year. In 2017, Canada was the top location for 20 of the surveyed films, replacing Georgia, which ranked first in 2016. This marks Canada's first time in the top slot in FilmL.A.'s Feature Film Reports. Within Canada, the top provinces were British Columbia (11 films), Ontario (7), Quebec (1) and Manitoba (1).

TABLE 1:
NUMBER OF TOP 100 DOMESTIC FILMS PRODUCED BY LOCATION

PRODUCTION CENTER	2017	2016	2015	2014	2013
 Canada	20	13	11	7	16
 Georgia	15	17	13	8	9
 U.K.	15	16	15	12	9
 California	10	12	14	20	16
 New York	6	6	7	12	4
 Louisiana	5	6	9	6	15
 Australia	5	4	1	2	2
 France	3	2	1	3	2

Falling from the top spot in 2016, Georgia tied with the U.K. in 2017 with 15 films.

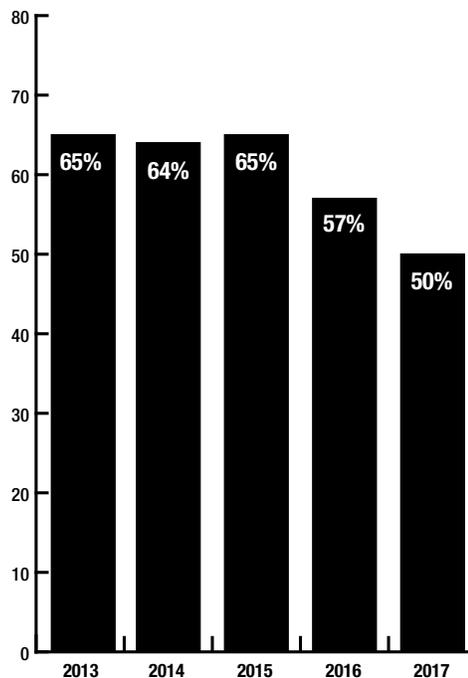
The U.K., which tied with Georgia in terms of project count, hosted 15 movies in 2017, one short of their previous high of 16 films in 2016. More importantly, the U.K. ranked first in total budget value and budget spend within its borders for the third year in a row.

California finished 2017 in fourth place, with ten films produced primarily in the state. As in previous FilmL.A. reports, California's project count and, more importantly, its total spend, was bolstered by four major animated films.

While New York remains the second largest production center in the U.S., it has not been able to capture a significant share of the top 100 films. However, with six of the top 100 films produced primarily within the state, New York edged out Louisiana (with five films) to rank fifth.

From a national perspective, the U.S. served as the primary production location for 50 percent of the top 100 films at the domestic box office in 2017. This is the lowest share for the U.S. since FilmL.A. began tracking in 2013.

U.S. SHARE OF TOP MOVIES



CANADA IN FOCUS

Over the last 20 years, film incentives offered by various state and national governments have become the predominant factor in determining where a given film or television project will be produced. The number one location in the world for the primary production of top 100 films released in 2017 is Canada, the nation that pioneered the creation of modern film tax credits in the late 1990s.

Historically, the draw for foreign producers and studios to film in Canada “was once the favourable currency exchange rate,” which ranged from 60-70 cents against the U.S. dollar from the mid-1990s to the early 2000s.⁴ But the introduction of significant film tax credits, which began to have an effect in 1999/2000, is when foreign production spending crossed the \$1 billion (CAD) mark in Canada for the first time. According to the **Canadian Media Producers Association (CMPA)**, foreign producers now go to Canada “mainly for the competitive incentives, skilled crews, award-winning creative talent, state-of-the-art technical facilities, and exceptional locations.”⁵

Even as the value of the Canadian dollar reached parity with the U.S. dollar from 1998-2014, foreign production spending in Canada (which is dominated by U.S. production spending) climbed from under \$900 million (CAD) to \$2.6 billion in 2014.⁶ And then, beginning in 2015, the value of the Canadian dollar fell precipitously from over 90-cents on the U.S. dollar to 75-cents by 2016. At the time of this writing, the value of the Canadian dollar is 77-cents.

For U.S. producers, the impact of this large drop in the Canadian dollar, combined with the extremely large national and provincial film incentives cannot be understated. The low exchange rate effectively creates an additional 25 percent savings, on top of existing incentives. With base provincial incentives in places like British Columbia and Ontario at 21-33 percent of qualified costs or more, filmmaking in some parts of Canada today is very economical.

For specialty services like VFX, provincial incentives are even higher. In British Columbia, for example, the incentives for film production can be stacked with incentives for VFX and the Canadian federal film incentive to pay for 53 percent of qualified VFX labor costs. Put another way, if a U.S. based producer spends \$10 million on qualified VFX labor in British Columbia, the various incentives will cover \$5.3 million of their cost. Add in the low value of the Canadian dollar, and the producer could see potential savings of 70 percent.

For cost conscious filmmakers, the deals in Canada have been too good to ignore. As a result of the synergistic savings created by extremely competitive incentives and the beneficial exchange rate, foreign production spending in Canada has exploded to record highs, going from \$2.64 billion (CAD) in 2016 to \$3.75 billion in 2017.⁷

The favorable exchange rate came at an ideal time in Canada, specifically for the production hubs in British Columbia and Ontario. In recent years, both provinces trimmed their respective film incentive rates due to escalating cost concerns. The base labor production credit in British Columbia was reduced from 33 percent to 28⁸ and the all-spend production incentive in Ontario was reduced from 25 percent to 21.5 percent.⁹ While there were concerns the reductions would result in less production activity, the favorable exchange rate more than offset the relatively minor reductions to the programs and Canada has never been busier.

⁴ Canadian Media Producers Association (CMPA), Profile 2017 Report, pg. 7: <http://cmpawebsite.wpengine.com/wp-content/uploads/2018/04/Profile-2017.pdf>

⁵ Id.

⁶ CMPA, Profile 2017 Report, pg. 15.

⁷ Id.

⁸ CreativeBC, PSTC Overview: https://www.creativebc.com/database/files/library/Tax_credit_information_-_Foreign_October_201630.pdf

⁹ Eitan Vlesing, The Hollywood Reporter, “Ontario Cuts Foreign Film Tax Credit, Hollywood to take Hit,” April 23, 2015: <https://www.hollywoodreporter.com/news/ontario-cuts-foreign-film-tax-791058>

FOREIGN PRODUCTION SPENDING IN CANADA 🇨🇦



FILM TAX CREDITS OVERVIEW

If lower taxes were enough to lure Hollywood film and television productions outside of the state, then the U.S. film industry would have decamped California decades ago for other states with significantly lower tax burdens. Recognizing this fact, policymakers in Canada repurposed tax credits into an extremely effective business incentive.

The tax credits engineered in Canada and later copied and/or modified in many U.S. states and other nations do not function like a personal tax credit that most people are familiar with, in which a tax credit is used to offset any taxes owed. For individual income tax filers, when a taxpayer has more credits than they owe in taxes, the credits are generally forfeit or allowed to be carried forward for use in future years. But film tax credits work differently.

When a film is greenlit, it is common practice for a studio or the producers to form a temporary business entity like a limited liability company (LLC). These business entities are typically short-term operations that remain active only for the duration of the production. On paper, these production companies spend their relatively short operational period spending resources to complete the film. Profits, if any, will come much later when the project is finished and they will flow not to the temporary production entity, but to the parent studio or producers (who are often based in California).

Since the temporary production companies created to produce a film or television project rarely incur tax liabilities in states like Georgia or the Canadian provinces, standard tax credits that act only to reduce taxes owed would be worthless in jurisdictions outside of California. Tax credits for film and television productions are rarely used to reduce taxes for filmmakers. Instead, their main function is to finance a portion of the film.

The most common type of film incentives in the modern era come in the form of either transferable or fully refundable tax credits.¹⁰ Transferable tax credits allow the production to sell any credits it cannot utilize to a third-party business or individual(s) who do have tax liabilities in that jurisdiction. For example, a production with \$20 million in transferable tax credits may sell them for \$18 million (or 90-cents on the dollar), if a buyer can be found.

Refundable tax credits, on the other hand, allow the production to receive full cash value for the credits, even when the production company or studio has no local tax liability. In this case, the production with \$20 million in refundable tax credits will receive a check from the issuing jurisdiction for the full \$20 million value of the credits. This investment is usually justified with reference to jobs and economic output created during production.

A U.S. state or Canadian province offering a 25 percent tax credit does not mean the production's taxes will be reduced by 25 percent, which is a common misunderstanding. Instead, a 25 percent tax credit on qualified production spending in that location means 25 percent of the qualified cost incurred there will be covered by the tax credits when they are either sold to a third party (transferable tax credits) or fully refunded (refundable tax credits) by the issuing jurisdiction.

¹⁰ Thus far, only refundable tax credits have been implemented at the Federal and Provincial levels in Canada; in the U.S., nine states (including Louisiana, New Mexico and New York) use refundable tax credits, eight states (including Georgia, Illinois and Massachusetts) use transferable tax credits and 14 states (including Texas, North Carolina and South Carolina) use straight rebate/grants programs.
<https://www.epfinancialsolutions.com/home/production-incentives/united-states-incentives/>



CALIFORNIA IN FOCUS

California ranked fourth among all locations for feature films included in this survey. California hosted primary production for 10 (4 animated & 6 live-action) of the films surveyed.

Of the six live-action films produced in California, four (*The House*, *Home Again*, *Lady Bird*, *The Disaster Artist*) were made in the state despite not receiving tax credits. Only one of these non-incentivized films (*The House*, \$40 million) had a budget over \$20 million. The other three non-incentivized films had budgets of \$15 million or less (*Home Again*, \$15 million; *Lady Bird*, \$10 million; *The Disaster Artist*, \$10 million). As noted in previous FilmL.A. studies, incentives in other locations are often not lucrative enough to attract smaller projects with budgets of \$10 million or less. Such projects would incur additional travel, lodging and shipping costs if they left the state.

California also hosted four animated films, which are not eligible for the state's film incentive. The importance of these projects should not be overlooked. While these four animated films represent less than half of California's project count, they account for 83 percent (\$514 million) of the combined budgets (budget value) for all 10 California movies in this survey. By comparison, the five animated California films in last year's study accounted for 78 percent of the budget value for the 12 films produced in the state. Animated films and California's position in the industry is discussed in greater detail in the next section.

The impact of the improved California Film & Television Tax Credit 2.0 Program on the state's output of top 100 films has been limited over the last two years, but shows signs of picking up in the future. In 2016, three incentivized California films (*Ouija: Origin of Evil*, *Why Him?* and *The Conjuring 2*) were in the top 100 films. And in 2017, two incentivized California films (*How to Be a Latin Lover* and *Annabelle Creation*) made the list.

TABLE 2:
CALIFORNIA FILM & TELEVISION TAX CREDIT RECIPIENTS

CA TAX CREDIT PROJECT	CA Spend	Cast	Crew	Extras
<i>Annabelle Creation</i>	\$17,393,186	36	518	343
<i>How to Be a Latin Lover</i>	\$12,898,068	65	100	1,580

Of the 53 feature films that have qualified for the expanded incentive, almost half are independent films. Some of these may not reach a position as one of the top 100 box office films of the year upon release.

Generally speaking, California remains at a disadvantage in attracting the most expensive feature film projects. Most of the movies that rank in the top 25 at the domestic box office (a quarter of the surveyed films) have budgets over \$100 million; just four of the top 25 films in 2017 had budgets below \$100 million.

For the third year in a row, California did not benefit from a single major live-action film with a budget of \$100 million or more. In fact, the largest live-action movie budget spent in California was *The House* which had an estimated budget of \$40 million.

Thus far, just a few of the feature film recipients of the new film tax credit in California have reported a budget over \$100 million and only one, 2018's *A Wrinkle in Time* (which spent \$117 million in the state), has been released. Later this year, another California incentive project, the *Transformers* spinoff film *Bumblebee*, is set for release after spending an estimated \$128 million in the state. Looking ahead to 2019, Marvel® Studios' upcoming film *Captain Marvel* will be released and the project is expected to spend just north of \$118 million in California under the state's incentive program.

Finally, another factor impacting California's production of top 100 films under its incentive program is that major players like Amazon® and Netflix that both produce their own content and/or acquire it from other studios, tend to skip theatrical exhibition of many films—including medium to large budget projects—and make them available for their streaming services instead. Some recent examples of these films, which all received the California incentive, include *Sandy Wexler* (\$58 million CA spend), *Bright* (\$45 million CA spend) and *The Cloverfield Paradox* (\$26 million CA spend).

Online video subscription services and the streaming content created for them represent the largest area of growth for U.S. audiences. From 2013 to 2017, the number of online video subscriptions in the U.S. more than doubled, hitting 157 million last year.¹¹ That's more than the total number of cable television and satellite cable subscribers combined. Revenue for online video subscription services reached \$17.7 billion in 2017, which is substantially more than the \$11.1 billion spent at the box office in North America last year.

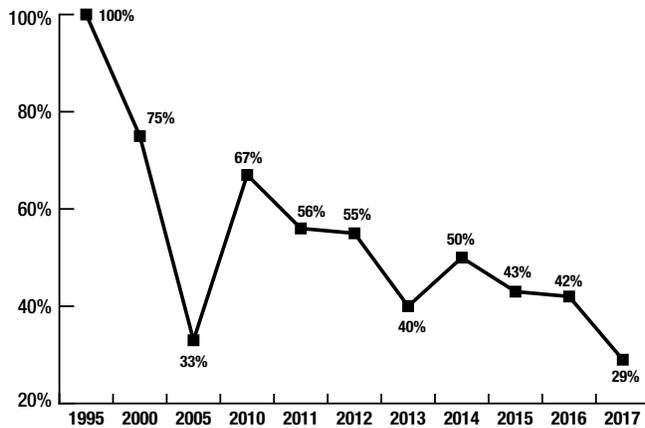
¹¹ MPAA, 2017 Theme Report, pg. 33:
https://www.mpa.org/wp-content/uploads/2018/04/MPAA-THEME-Report-2017_Final.pdf

THE THREAT TO ANIMATED FILMS IN CALIFORNIA

From 2010 to 2016, California captured 40 percent or more of the top 100 animated films at the domestic box office. Over that period, California's share was over 50 percent in four of the seven years, peaking at 67 percent in 2010.

For historical context, FilmL.A. looked at California's share of top 100 animated films in five year increments going back to 1995. In 1995, California captured 100 percent of the animated films that ranked in the top 100 movies released that year. In 2000, California's share slipped, but the state still retained a commanding 75 percent of the animated films in the top 100. In 2005, California's share was only 33 percent, but that year appears to be an anomaly. In the prior year (2004), for example, California's share was 83 percent.

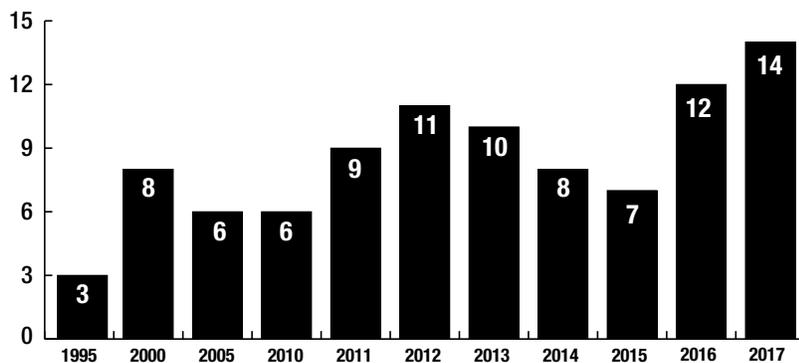
CALIFORNIA'S SHARE OF TOP 100 ANIMATED FILMS



Since the first FilmL.A. feature film study, FilmL.A. Research has cautioned policymakers to keep an eye on the health of California's animation industry and warned that its future dominance was far from guaranteed. In 2017, California's share of animated films in the top 100 dropped precipitously to just 29 percent, the lowest year on record.

Unfortunately, California's decline comes at a time when animated features are making up a larger share of the top 100 films released each year.

NUMBER OF ANIMATED PROJECTS IN THE TOP 100 FILMS RELEASED AT THE DOMESTIC BOX OFFICE



Competing locations, like Canada, Australia, France and the U.K. have all made significant strides in establishing themselves as animated feature film hubs that now challenge California's historically unrivaled animation industry. In 2017, Canada produced six animated films ranked in the top 100, which eclipsed not just California (with four animated films in the top 100), but the entire U.S., which produced five of the animated films in the top 100 (Blue Sky Studios® in Connecticut produced the fifth U.S. animated film, *Ferdinand*).

Canada's rapid ascent in the animation industry, along with growth in the other nations mentioned above, suggest that the health of the domestic animation industry is not just a California issue, but a national one as well.



FILM PRODUCTION: BUDGETS AND SPENDING

Determining where filmmakers spend their budgets is very difficult, given that full production budgets are rarely disclosed. Complicating matters further, most feature films produced today use multiple jurisdictions throughout every stage of development. One of the challenges when determining the total budget for a given movie (especially when shot in a location that does not provide project level detail in its incentive program) is that some budget estimates that are reported in the press reflect the net cost to the studio, and not necessarily the full amount spent to make the project.

For the dozens of films FilmL.A. has surveyed over the last four years where final confirmed budgets were available, the vast majority of reported budget estimates in industry trades and other news publications for these same films underestimated the actual cost of the film. The proliferation of film incentives across the world has given researchers some valuable tools to address budget data gaps. The quality and detail level of publicly available information among the top production locations varies.

For California, precise in-state spend amounts for the three films that received the California Film & Television Tax Credit were provided by **The California Film Commission** (CFC). In some instances, FilmL.A. was able to obtain the exact California spend for specific films from filmmakers and/or respective studios. For the remaining live-action films, a different approach was required.

According to the **Los Angeles Economic Development Corporation** (LAEDC), 90 percent of all production spending on live-action production in California is wholly sourced from within the state. For projects that were produced in California without an incentive or where the actual spend was not confirmed by the studio or filmmakers, FilmL.A. applied the LAEDC ratio to determine the California spend.

California was fortunate to have four of the major animated films released in 2017. The combined budget value of the four animated films was \$514 million, which is a majority (83 percent) of the total budget value for films shot in the state. California was the lucky beneficiary of virtually all money spent producing the four animated films.¹²

Louisiana maintains an online database with detailed project-level information on total budget, amount spent in the state, amount spent on payroll and total tax credits awarded. While Louisiana lists the total number of jobs supported by each production, they do not break the jobs out by categories like cast or crew as California does. Unlike California, Louisiana does list the total budget for each project, which allows for the exact share of Louisiana's budget spend to be calculated.

In Canada and the U.K., government agencies and film commissions that report on production activity do not typically disclose spending information for individual projects. However, aggregate spending totals for different production categories and country of origin are disclosed. Jurisdiction spend percentages versus total budget are reported in the U.K., but Canada, which once reported this information, no longer breaks out the share captured relative to the total budget. Spend information for many films produced in the U.K. are available from their company filings.¹³ Specific spend amounts for major films produced in Canada (*It* and *War for the Planet of the Apes*) were made available in press releases about economic impact from the Motion Picture Association in Canada. To estimate Canada's share of the total budgets for the films that were primarily produced there, FilmL.A. used the historical share reported in prior provincial reports and historical share for individual feature films included in FilmL.A.'s four prior feature film reports.

The **Georgia Department of Economic Development** (GDED—the agency that administers the state's film incentive program) releases one reliable data point each year—total aggregate production spending. Unlike Canada or the U.K., the total direct spend in Georgia is not broken out by specific production categories (i.e. feature films, commercials, television series, etc.). As a result, creating feature-specific spending estimates requires a greater reliance on media reports. Fortunately, many of the biggest features produced in Georgia in 2017 had their in-state spends reported by various news outlets (see footnote ¹⁴ on the next page).

¹² Based on information about the four animated films provided to FilmL.A., an estimated 90 percent of the total budgets for three of California's animated films was spent in the state. For the fourth animated film, 75 percent of the budget was spent in California.

¹³ Company filings in the U.K. show total production spending, regardless of where all production activity occurred. The spending does not reflect U.K. spending only.

So where was the most money spent on feature production among sampled films in 2017? In terms of total production value, Canada, Georgia and the U.K. all outperformed California.

On the more important metric of actual production spend in each location, California (\$554 million) ranked third behind Canada (\$564 million) and the U.K. (\$1.3 billion).

Finally, in terms of the share of total budget value spent in the location, California ranked first with 90 percent. Established production centers like California, New York and the U.K., as one might expect, capture a much higher percentage of the budget on hosted projects.

TABLE 3:
TOTAL MOVIE BUDGET VALUES VS. ACTUAL SPEND IN TOP LOCATIONS¹⁴ IN 2017

PRODUCTION CENTER	Movies	Budget Value ¹⁵ (millions)	Estimated Amount / Percent Spent in Location (millions) ¹⁶
California	10	\$617	\$554 (90%)
Canada	20	\$855	\$564 (66%)
Georgia	15	\$1,095	\$486 (44%)
Louisiana	5	\$293	\$185 (63%)
NY	6	\$230	\$190 (83%)
U.K.	15	\$1,685	\$1,348 (80%)

¹⁴ Percentage sources: 2017 British Film Institute Statistical Yearbook; CMPA Profile 2017 Report; MPA Canada press releases for *It & War for the Planet of the Apes*; UK Companies House filings for *Star Wars: The Last Jedi*, *47 Meters Down*, *Victoria & Abdul*, *Murder on the Orient Express*, *Kingsman: The Golden Circle*, *Beauty & the Beast*, and *The Mummy*. Georgia's spending estimate stems from a 2010 economic impact report commissioned by the MPAA and prepared by Meyer's Norris Penny (MNP) and exact spend information for *Logan Lucky*, *Baby Driver*, *Fate of the Furious*, *Spiderman: Homecoming*, *Guardians of the Galaxy Vol. 2*, and *Jumanji: Welcome to the Jungle* were obtained from press sources.

¹⁵ Total budget value is the value of the combined budgets for projects that shoot in a particular location. It is not the amount actually spent by those productions in that location.

¹⁶ The estimated amount spent in each location represents only the amount of money spent by films that FilmL.A. identified as being primarily produced in that location. It does not include spending by productions that were partially produced there. For example, the reported spend in British Columbia for *War for the Planet of the Apes* is not included in the estimated amount/percent spent for the province because the film was primarily produced in New Zealand, not British Columbia. Where available, spending by productions in secondary locations were included in the Appendix.



FILM PRODUCTION: JOBS

In the U.S., some jurisdictions seeking to attract film projects work to track the jobs they create in the process. Unfortunately, the number of different counting methods makes comparing job growth across jurisdictions a difficult challenge.

For example, some states report the total number of people who work on film projects in their state, regardless of how long those jobs last. A background actor who worked a single day on a film would be counted as holding one job, the same as the director, who worked on the film every day and was paid substantially more. Nevertheless, from a total job count perspective, many jurisdictions would count this as two jobs.

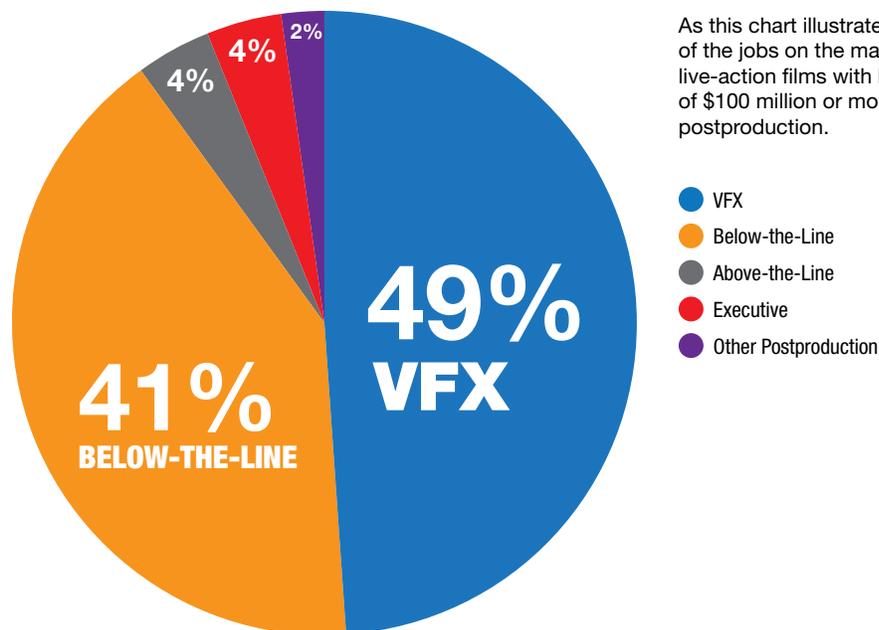
Officials in some states prefer to calculate the number of Full Time Equivalent (FTE) jobs created by local filming. A head count of 1,000 workers may result in 300 FTE jobs, for example.

New Mexico and Georgia use a different approach altogether and report the number of film “work days.” Both states report this number in the aggregate, making it impossible to know how many worker days a given movie generates. Providing the total number of worker days also allows for an estimate of the number of FTE jobs.

FilmL.A. uses “credited job count” estimates to standardize its jobs analysis. While not a perfect method, the estimated job counts based on credited positions tends to be more conservative than many headcount estimates employed in different states. Because most films (including pre-production, principal photography and postproduction) are made in more than one location, determining which location gets a share of the credited job count is virtually impossible. Given this difficulty, it may be more informative to look how credited film jobs are allocated within the various departments of a film project at all phases of the production.

Looking at big live-action films with budgets of \$100 million or more and condensing the various departments, which include Above-the-Line (actors, directors, producers, writers), Executive (accounting, executive), Other Postproduction (music, editing, publicity), VFX (visual effects and animation) and Below-the-Line (wardrobe, hair & makeup, props, engineering, electrical & grips, craft services, camera, film & tape, animals, art department), an even clearer picture emerges for the breakdown of where most of the jobs are held for the most expensive films released in 2017.

MAIN JOB CATEGORY BREAKDOWNS OF \$100 MILLION+ BUDGET FILMS



As this chart illustrates, over half of the jobs on the major top 100 live-action films with budgets of \$100 million or more are in postproduction.

- VFX
- Below-the-Line
- Above-the-Line
- Executive
- Other Postproduction

FILM PRODUCTION: VISUAL EFFECTS

As FilmL.A. reported in last year's study, the U.S. has been surpassed by both Canada and the U.K. in VFX industry output. If competing for high-wage, high-tech jobs is a priority, this is a concern for both California and the U.S. as a whole, as big-budget films are now frequently spending more than half of their total budgets on VFX, which also accounts for a majority of the jobs on these films.

In the leading Canadian provinces of British Columbia, Ontario and Quebec, separate incentives for VFX are offered to lure postproduction work. These VFX incentives can be stacked with other provincial and federal film incentives, which makes these regions especially attractive.

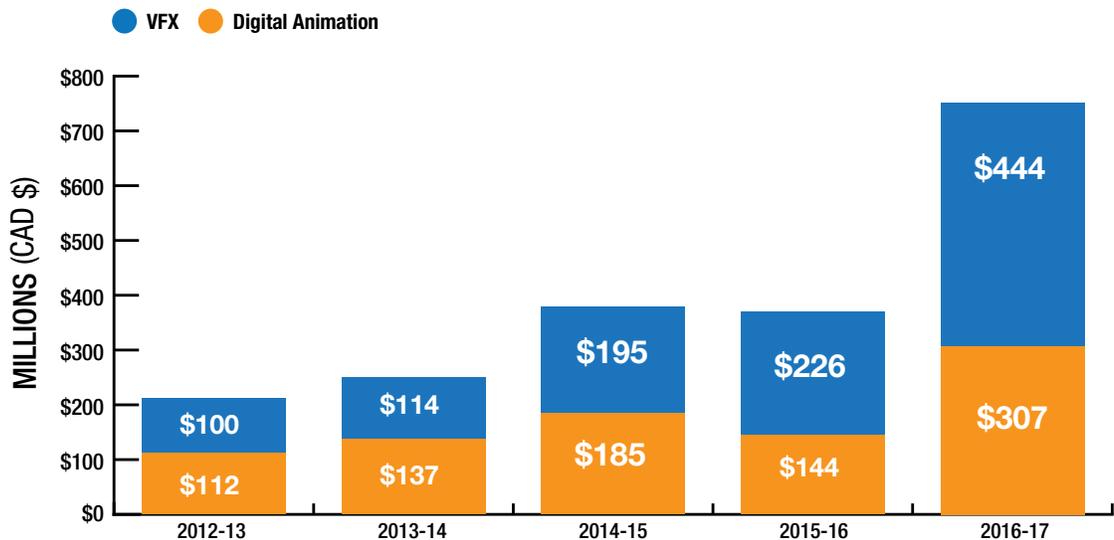
For example, in British Columbia, once the stand-alone VFX credit is stacked with the regular provincial and federal film incentives, a total of 53 percent of the VFX spend can be offset. Predictably, VFX and digital animation (which qualifies under the VFX incentive) has taken off in British Columbia at breakneck speed. CreativeBC, the agency in British Columbia that administers the film incentives, began reporting "VFX Only" and digital animation spending separate from live-action filming in 2012.

By 2017, in just five years, VFX Only spending by foreign productions (primarily from the U.S.¹⁷) increased 344 percent and digital animation spending increased by 174 percent.¹⁸ Finally, it's important to note that VFX Only spending does not reflect all of the VFX spending in the province, as projects doing live-action work there may also do some or all of their VFX work in British Columbia as well.

¹⁷ In 2017, 73 percent of all foreign productions that spent money in Canada were from the U.S.; since 2008, the U.S. share has ranged from 71-87 percent of all foreign production activity. CMPA, Profile 2017 Report, pg. 82.

¹⁸ CreativeBC, Film & Television Statistics: <https://www.creativebc.com/about-us/research-and-reports/film-and-television-statistics>

FOREIGN VFX ONLY & DIGITAL ANIMATION SPENDING IN BRITISH COLUMBIA



FILM PRODUCTION: VISUAL EFFECTS (CONTINUED)

But not all jurisdictions are, or have needed to be, as generous as British Columbia to attract and/or retain VFX work. With a comparatively modest 20 percent incentive, New Zealand has been able to lure extremely large VFX projects.

Thanks to government disclosure in New Zealand,¹⁹ home of Weta Digital™, which is one of the largest VFX companies in the world, it's possible to get a close look at spending dedicated solely to VFX. Below is a sample of VFX spending by films in recent years that did all of their live-action principal photography outside of New Zealand, but some or all of their VFX and other postproduction work in the nation.

TABLE 4:
NEW ZEALAND / WETA VFX SPENDING

MOVIE	Amount Spent in New Zealand	Incentive Amount
<i>War for the Planet of the Apes</i>	\$131 million (\$95M U.S.)	\$26 million (\$19M U.S.)
<i>Valerian</i>	\$74 million (\$54M U.S.)	\$15 million (\$11M U.S.)
<i>Guardians of the Galaxy Vol. 2</i>	\$39 million (\$28M U.S.)	\$8 million (\$6M U.S.)
<i>The BFG</i>	\$89 million (\$64M U.S.)	\$18 million (\$13M U.S.)
<i>Alvin & the Chipmunks 4</i>	\$60 million (\$43M U.S.)	\$12 million (\$9M U.S.)
<i>Fast & Furious. 7</i>	\$29 million (\$21M U.S.)	\$6 million (\$4M U.S.)
<i>Dawn of the Planet of the Apes</i>	\$101 million (\$73M U.S.)	\$17 million (\$12M U.S.)

On a film in the *Planet of the Apes* franchise, a single VFX house like Weta will employ hundreds of people. On *War for the Planet of the Apes*, roughly 800 VFX artists, producers and managers worked on the film and an additional 200 people provided support and information technology services. Moreover, VFX jobs tend to last much longer than on-set jobs tied to physical production. For example, principal photography for the live-action filming on *War for the Planet of the Apes* lasted for six months; the VFX work for the film, on the other hand, took “a year and a half,” according to Dan Lemmon, the film’s VFX Supervisor.²⁰

New Zealand’s 20 percent incentive for VFX translated into an efficient tool for job creation and local economic impact. For \$18 million in tax credits awarded to *War for the Planet of the Apes*, New Zealand benefited from over 800 jobs in VFX and \$95 million in direct spending in the economy. By way of comparison, the \$18 million in tax credits awarded by California to *A Wrinkle in Time* yielded a total of 378 jobs for cast & crew, plus a large number of indirect support jobs with \$85 million in qualified spending.

¹⁹ New Zealand Film Commission, Large Budget Screen Production Grants and New Zealand Screen Production Grants paid between 2010 and 2018: <https://www.nzfilm.co.nz/resources/lbsp-g-nzspg-international-grants-approved-1-jan-2010-1-jan-2018>

²⁰ Verhoeven, Beatrice. “War for the Planet of the Apes’: How the VFX Team Created the Most Realistic Apes Yet.” TheWrap. July 17, 2017. Accessed May 01, 2018. <https://www.thewrap.com/war-for-the-planet-of-the-apes-vfx-team-more-real/>



Photo: 20th Century Fox ©

As the following table illustrates, California and the U.S. has ceded its position as a world leader in creating cutting edge VFX to other locations, namely Canada and the U.K.

TABLE 5:
VFX LOCATIONS FOR TOP 25 \$100M+ LIVE ACTION FILMS IN 2017

MOVIE	Budget (millions)	Primary VFX Location(s)	Secondary VFX Location(s)
<i>Star Wars: The Last Jedi</i>	\$317,000,000	ILM (U.K., CA)	StereoD (Canada, CA)
<i>Justice League</i>	\$300,000,000	Scanline (Canada) MPC (UK), RodeoFX (Canada)	Weta Digital (NZ), Pixomondo (Canada, Germany), Dneg (UK, Canada)
<i>Transformers: The Last Knight</i>	\$260,000,000	ILM (CA, UK)	MPC (UK), Scanline (Canada), Prime Focus (India)
<i>The Fate of the Furious.</i>	\$250,000,000	Digital Domain (Canada, CA)	Dneg (UK, Canada), Pixomondo (Canada, Germany)
<i>Pirates of the Caribbean: Dead Men Tell No Tales</i>	\$230,000,000	MPC (Canada, UK)	Atomic Fiction (Canada), Rodeo FX (Canada), Lola VFX (UK, CA)
<i>Guardians of the Galaxy Vol. 2</i>	\$200,000,000	Weta (NZ), Framestore (U.K.), Method (California, Canada)	Third Floor, Trixter (Germany), Animal Logic (Australia), Scanline, Lola, Luma (Australia, CA), Stereo D (Canada)
<i>The Mummy</i>	\$195,000,000	MPC (UK, Canada)	Dneg (UK, Canada), ILM (UK, CA), StereoD
<i>Kong: Skull Island</i>	\$185,000,000	ILM (Canada, CA)	Hybride (Canada), Rodeo FX (Canada, CA), Prime Focus (Canada, India)
<i>Blade Runner 2049</i>	\$185,000,000	Dneg (Canada, UK), Framestore (Canada, UK)	MPC (UK, Canada), StereoD (Canada)
<i>Thor: Ragnarok</i>	\$180,000,000	ILM (CA, Canada), Framestore (UK, Canada)	The Third Floor (Canada, CA), Method Studios (Canada, UK) Digital Domain (Canada, CA), Rising Sun Pictures (Australia), Luma (Australia, CA), Iloura (Australia), Trixter, Whiskytree (CA), Dneg (UK, Canada)
<i>Valerian and the City of a Thousand Planets</i>	\$180,000,000	Weta (NZ)	ILM, Hybride (Canada), Rodeo FX (Canada, CA), Mikros Image (France, Canada), Southbay (CA)
<i>Spider-Man: Homecoming</i>	\$175,000,000	Sony Imageworks (Canada), Digital Domain (Canada, CA)	Luma (Australia, CA), Method (CA), Trixter, Lloura (Australia), Cantina Creative (CA), The Third Floor (CA, UK), StereoD (Canada)
<i>King Arthur: Legend of the Sword</i>	\$175,000,000	Framestore (UK, Canada), MPC (Canada, UK)	Prime Focus (India), Nvisible (UK), Method Studios (CA), One of Us (UK)
<i>Beauty and the Beast</i>	\$244,000,000	Framestore (UK, Canada), Digital Domain (Canada)	Lola VFX (UK, CA)
<i>The Great Wall</i>	\$150,000,000	ILM (Singapore), Weta (New Zealand)	Hybride (Canada), Third Floor (CA, UK)
<i>Dunkirk</i>	\$116,000,000 - \$135,000,000	Dneg (UK, Canada)	
<i>War for the Planet of the Apes</i>	\$150,000,000	Weta (New Zealand)	Exceptional Minds (CA), Halon (CA)
<i>Wonder Woman</i>	\$150,000,000	MPC (Canada, UK), Dneg (Canada, UK)	Pixomondo (Canada, Germany), Weta (New Zealand) Third Floor (CA)
<i>Logan</i>	\$127,000,000	Rising Sun Pictures (Australia), Image Engine (UK, Canada)	Soho VFX (Canada), Lola VFX (CA)
<i>Monster Trucks</i>	\$125,000,000	MPC (Canada, UK)	Lola VFX (CA), Industrial Pixel VFX (CA), Prime Focus (India)
<i>Geostorm</i>	\$120,000,000	Framestore (Canada, UK), Dneg (Canada, UK)	Hydraulx (CA), Electric Effects, Stereo D (Canada), Scanline, Soho VFX (Canada) Third Floor (CA)

Based on a review of the top 25 live-action films with the largest budgets over the last five years, the situation for the California VFX industry was strongest in 2013 and, with the exception of 2015, has steadily declined. In 2017, California VFX houses saw only a marginal improvement over the prior year, with primary VFX work on six films in 2017 compared to just five in 2016.

TABLE 6:
PROJECT COUNT FOR PRIMARY VFX WORK ON TOP 25 LIVE-ACTION FILMS, 2013-2017

PRODUCTION CENTER	Primary VFX Location 2013 Movies	Primary VFX Location 2014 Movies	Primary VFX Location 2015 Movies	Primary VFX Location 2016 Movies	Primary VFX Location 2017 Movies
California 	10	7	9	5	6
Canada 	7	10	14	17	16
UK 	7	11	15	9	15

FILM PRODUCTION: MUSIC SCORING

As for music scoring, California was the primary location for musical work for 37 of the 100 films in this year’s study, a 37 percent share. This is a slight improvement over last year, when the state’s share was just 35 percent. California captured scoring work for 39 percent of the surveyed films in 2015, 41 percent in 2014 and 40 percent in 2013.

The average film employs 75 musicians and spends from \$1.2 million for a \$65 million film to over \$3 million on large-budget film with a budget of \$150 or more.²¹

FILM INCENTIVE PROGRAMS

With the exception of New York and Louisiana²², all of California’s top five competitors offer substantial uncapped film incentive programs. Full or partial film incentive award amounts to individual productions were available for 46 of the films in this study (see Appendix A for complete list of incentive award amounts). In all, these 46 films received at least \$702 million from various state/provincial and national governments.

The emergence of Australia as a production center for U.S. producers in 2017 provides a good example of what foreign governments—at both the national and local level—offer in order to attract major U.S. productions. Until 2018, Australia offered a 16.5 percent incentive for live-action location filming done by foreign productions from the U.S. and elsewhere. Because the rate of this incentive was not as competitive as many foreign jurisdictions, the federal government would supplement the incentive with grants awarded on an individual basis to raise the 16.5 percent incentive rate to a more competitive 30 percent.

In 2017, three big-budget films (*Thor: Ragnarok*, *Pirates of the Caribbean: Dead Men Tell No Tales* and *Alien: Covenant*) filmed in Australia and did a significant amount of their VFX there as well. For *Alien: Covenant*, the Australian Federal Government approved a \$14 million grant (A\$19.3 million) to compliment an estimated tax credit of \$17 million, for a combined total of \$31 million in incentives at the federal level. The \$31 million awarded to *Alien: Covenant* represents 30 percent of the \$105 million the film is estimated to have spent in Australia.

For *Thor: Ragnarok* and *Pirates of the Caribbean: Dead Men Tell No Tales*, company financial filings in Australia provide even greater detail about incentives awarded to the two films at both the Australian federal and state levels.

TABLE 7:
COMPARING AUSTRALIAN INCENTIVES

AUSTRALIAN INCENTIVE	<i>Thor: Ragnarok</i>	<i>Pirates of the Caribbean: Dead Men Tell No Tales</i>
Federal Tax Incentive	\$22 million (A\$30.3M)	\$26 million (A\$36.7M)
Federal Grant	\$18 million (A\$24.76M)	\$15.4 million (A\$21.6M)
Queensland State Payroll Tax Rebate	\$2.8 million (A\$3.87M)	\$2.5 million (A\$3.48M)
Screen Queensland Production Incentive	\$8.4 million (A\$11.62M)	\$2.8 million (A\$4M)
Gold Coast (Queensland) Grant	\$145,000 (A\$200,000)	N/A
TOTAL	\$52 million (A\$71M)	\$48 million (A\$66M)

The \$52 million (A\$71M) in combined Australian federal and state incentives given to *Thor: Ragnarok* represents 38.5 percent of the \$135 million (A\$185M) spent by the film while shooting there. The \$48 million (A\$66M) in combined Australia federal and state incentives given to *Pirates of the Caribbean: Dead Men Tell No Tales* represents 30 percent of the \$160 million spent by the film while shooting there.

²¹ Laane, “Keeping the Score” pg. 3: http://www.laane.org/wp-content/uploads/2014/12/Keeping_the_Score-Full_Report.pdf
²² In 2015, Louisiana capped the amount of film tax credits that can be redeemed in a single year at \$180 million. Previously, the state’s incentive was uncapped.

TABLE 8:
COMPARISON OF FILM INCENTIVE PROGRAMS IN TOP LOCATIONS

LOCATION	FILM INCENTIVE
California	20-25% on qualifying Below-the-Line costs on first \$100 million of qualified spend. Additional 5% uplift for music, visual effects and filming outside of the Los Angeles zone. Above-the-line costs are excluded. Annual cap of \$330 million.
Canada	16% of Canadian labor expenditures. Can be combined with Provincial incentives. No annual cap.
Canada (British Columbia)	28% of qualifying British Columbia (BC) labor expenditures; Digital Animation or Visual Effects (DAVE) Credit bonus: 16% additional credit on qualifying DAVE labor. No annual cap.
Canada (Ontario)	21.5% of qualifying Ontario expenditures (not limited to ON labor); Bonuses: Computer Animation and Special Effects- 20% of qualifying labor related to digital animation and special effects work. No annual cap.
Canada (Quebec)	25% of qualifying Quebec (QC) expenditures (not limited to QC labor); Bonuses: QC Computer Animation and Special Effects Tax Credit = 20% additional credit on qualifying animation and special effects QC labor. No annual cap.
Georgia	20% of the base investment in the state, plus, 10% if the qualified production activities include a Georgia promotional logo in credits. ATL and BTL costs are covered. No annual cap.
Louisiana	30% (45% maximum with bonus) on qualifying local spend for BTL and Above-the-Line (ATL) costs. Bonus: 10% for each individual LA resident (m.U.S.t have residency form and backup for each LA resident). Bonus: 15% of base investment for qualifying Louisiana screenplay Bonus: 15% of music expenditures for qualifying Louisiana music. Annual cap of \$180 million until 2018.
New York	30% on qualifying local spend for Below-the-Line (BTL) costs. Extra 10% for shooting upstate. Above-the-Line costs are excluded from the incentive. Annual cap of \$420 million.
U.K.	20-25% of all qualifying local U.K. spend. ATL and BTL costs are covered, as well as back-end profit participation payments. No annual cap.

Among the world's top production centers, there is clearly a willingness to invest in attracting film & television production. However, since the ability of most locations to lure productions depends on a stable incentive program, and the current trend in many jurisdictions has been to limit or eliminate programs like film tax credits, the biggest factor keeping top production centers in the game will be their ability to sustain these investments.

Louisiana, which was once the number one location in the world in the first FilmL.A. feature film study, serves as a cautionary tale. After spending over \$1 billion over the course of a decade and faced with budget shortfalls, Louisiana reduced the rate of its incentive, limited the types of costs that could qualify under the program and placed a \$180 million annual cap on the incentive in 2015, which had previously been uncapped. As a result of the changes, production activity in Louisiana fell dramatically.

With Georgia's film incentive investment now exceeding \$800 million (the most expensive program in North America) and the U.K.'s investment exceeding \$820 million (the most expensive in the world), the ability and willingness to keep these programs in place will be a critical factor affecting a given location's future ranking in FilmL.A. reports.

TABLE 9:
COST OF FILM INCENTIVE IN TOP PRODUCTION CENTERS

PRODUCTION CENTER	INCENTIVE AMOUNT (MOST RECENT YEAR)	ANNUAL COST FIVE YEARS AGO
California	\$330 million	\$100 million
British Columbia	\$557 million (CAD) ²³	\$280 million (CAD)
Georgia	\$800 million ²⁴	\$232 million
New York	\$420 million	\$420 million
Ontario	\$428 million (CAD) ²⁵	\$267 million (CAD)
U.K.	£578 million ²⁶ (\$822M U.S. Dollars)	£203 million (\$289M U.S. Dollars)

²³ Creative BC, Impact Report 2016-2017, pg. 33

²⁴ Georgia Performance Measures Report, pg. 34 http://bcbudget.gov.bc.ca/2018/bfp/2018_Budget_and_Fiscal_Plan.pdf

²⁵ OMDC, Tax Credit Statistics for 2016/17: http://www.omdc.on.ca/Assets/Tax+Credits/English/Tax+Credit+Statistics/Tax+Credit+Applications+Received+and+Certificates+Issued+in+2016-17_en.jpg

²⁶ HM Revenue & Customs, Creative Industries Statistics, July 2017:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/630501/July_2017_Commentary_Creative_Industries_Statistics2.pdf



Photo: Philip Pilosian / Shutterstock.com

CONCLUSION

With the underlying economics of the U.S. motion picture industry unchanged since our previous report, a look at last year's top-performing films yields few surprises. Feature films – particularly the most expensive, VFX-heavy tent pole projects, continue to be made in areas offering competitive film production incentives.

Despite California's ranking in this report, the state is better positioned to remain competitive under the state's improved film & television tax credit program than it was with the original program, which excluded films with budgets over \$75 million. Over the next two years, *A Wrinkle in Time*, *Bumblebee*, *Captain Marvel* and other key projects that qualified for the California Film & Television Tax Credit Program 2.0 will help increase California's share of top 100 films.

Moreover, California's position in creating major projects for online streaming services like Netflix and Amazon with films like *Bright* and *The Cloverfield Paradox* (which also received the state's film incentive) is also likely to remain competitive. While these streaming films will not have an impact on the future FilmL.A. reports about the top 100 theatrical films, they have a major impact on the local economy in terms of jobs and spending.

While California finished fourth in overall project count in this year's study, the Golden State is still the world's top film & television production center. Thanks to the continued support of the California Film & Television Tax Credit Program, the state's status as the entertainment capital of the world should be secure for the foreseeable future.

STUDY OVERSIGHT

Creation and approval of FilmL.A. Research reports is overseen by a Research Taskforce organized by the FilmL.A. Board of Directors, which includes executives from major studios, industry unions and guilds, staff from the California Film Commission, the Motion Picture Association of America, the Independent Film & Television Alliance, and the Los Angeles Economic Development Corporation. The arguments and conclusions advanced in this study are wholly FilmL.A.'s and do not reflect the opinions or positions of individual board or review committee members or of their respective employers.

IDENTIFYING SOURCES

There are now several robust, credible and valuable online databases that offer employment information, budget estimates, shooting locations, studio involvement and box-office performance for major feature films.

In addition, various spending amounts, budget information and film incentive award amounts for several of the movies in this study are reported by credible media outlets and/or disclosed by filmmakers themselves.

When compiling information about surveyed films in this report, FilmL.A. initially relies on widely reported budget figures compiled in news reports and public sources like Box Office Mojo. Often, these amounts are budget estimates, which tend to understate the actual cost of the production.

After the initial data is compiled, FilmL.A. adjusts the reported budgets for films where complete budget information is available from other sources, typically transparency reports from various state film offices and company filings in international locations like the U.K. and New Zealand. Since public reports and/or company financial filings from many jurisdictions may not report needed information by the time of publication, FilmL.A. reports the information available at the time and will update amounts in this and older reports periodically as new information becomes available.

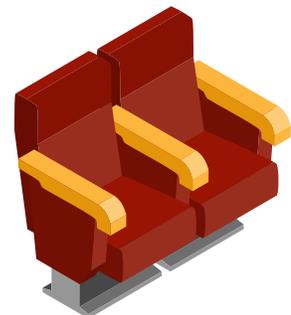
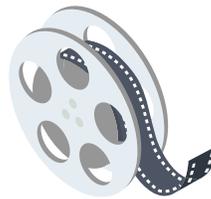
ANALYZING BUDGETS

Determining where filmmakers spend their budgets is very difficult, as full production budgets are rarely disclosed. Complicating matters, most feature films produced today use multiple locations throughout every stage of development. One of the challenges when determining the total budget for a given movie (especially for locations that do not provide project level detail in their incentive programs) is that some budget estimates that are reported in the press reflect the net cost to the studio, and not necessarily the full amount spent to make the project.

A good example of this is the 2015 film, *Daddy's Home*,²⁷ which was reported in industry trade publications as having a \$50 million budget. For the studio, this amount is fairly precise, as the out of pocket cost for the studio itself was \$53 million. However, the gross (i.e. actual) cost of the film was \$69 million. The other \$16 million of the actual cost was financed by Louisiana's film incentive.

For the dozens of films FilmL.A. has surveyed over the last four years where final confirmed budgets were available, the vast majority of reported budget estimates in industry trades and other news publications for these same films underestimate the actual cost of the film.

²⁷ Final audited production budget information was provided by the Louisiana Economic Development Department.



SOURCES

ANNUAL FILM TAX CREDIT/TRANSPARENCY REPORTS:

British Columbia
Connecticut
Florida
Hawaii
Louisiana
Massachusetts
Michigan
New York
New Zealand
North Carolina
Ontario
Pennsylvania
Quebec
Texas
United Kingdom
Utah

ONLINE DATABASES:

Baseline Studio System
Box Office Mojo
Development Leads
IMDbPro
Variety Insight

OTHER:

Amber Kling
The Animation Guild, I.A.T.S.E. Local 839
American Federation of Musicians, Local 47
CreativeBC
British Film Institute
California Film Commission
Canadian Media Production Association
Connecticut Department of Economic Development
DreamWorks Animation
Industrial Light & Magic
Los Angeles Economic Development Corporation
Louisiana Department of Economic Development
Luma Pictures
Major news & media outlets
Motion Picture Association of America
Screen Australia
Steve Kaplan, The Animation Guild
Walt Disney Pictures
Warner Bros.

MOVIES OF 2017 (APPENDIX A): LOCATION, SPENDING, AND INCENTIVE LIST

FILM TITLE	Budget Est. (millions)	Shoot Start	Shoot Wrap	Primary Location	Secondary Location(s)	Location Spending (millions)	Incentive Amount (millions)	Scored in California
<i>47 Meters Down</i>	\$5,270,000	06/15/2015	08/15/2015	UK	Dominican Republic	\$5 (UK)	\$720k (UK)	
<i>A Bad Moms Christmas</i>	\$28,000,000	05/01/2017	06/17/2017	Georgia				
<i>A Dog's Purpose</i>	\$22,000,000	08/17/2015	11/2015	Canada, Winnipeg				
<i>Alien: Covenant</i>	\$111,000,000	04/04/2016	07/19/2016	Australia		\$104 (Australia), \$9.6 (NZ)	\$31 (Australia), \$2 (NZ)	
<i>All Eyez on Me</i>	\$40,000,000	12/17/2015	03/01/2016	Georgia	New York, California			
<i>All the Money in the World</i>	\$40,000,000	05/29/2017	08/01/2017	Italy	Jordan, UK			
<i>American Assassin</i>	\$63,000,000	09/12/2016	12/16/2016	UK	Italy, Hungary, Turkey, Malta	\$63.4 (UK)	\$11.4 (UK)	
<i>American Made</i>	\$50,000,000	05/18/2015	09/2015	Georgia	Colombia			
<i>Annabelle: Creation</i>	\$17,400,000	06/27/2016	08/15/2016	California		\$17.4	\$2.4	✓
<i>Atomic Blonde</i>	\$30,000,000	11/22/2015	02/13/2016	Hungary	Germany	\$16.7 (Hungary)	\$4.1 (Hungary)	
<i>Baby Driver</i>	\$34,000,000	02/20/2016	05/08/2016	Georgia		\$30	\$10	
<i>Baywatch</i>	\$65,000,000	02/25/2016	05/18/2016	Georgia	Florida			✓
<i>Beauty and the Beast</i>	\$244,000,000	05/18/2015	08/21/2015	UK	NY (VFX)	\$231.5 (UK), \$12.5 (NY)	\$45.46 (UK), \$3 (NY)	
<i>Blade Runner 2049</i>	\$185,000,000	07/04/2016	11/10/2016	Hungary	UK	\$97 (Hungary)	\$24 (Hungary)	
<i>Captain Underpants: The First Epic Movie</i>	\$39,000,000	04/04/2016	03/2017	California				
<i>Cars 3</i>	\$175,000,000	2016	03/2017	California				✓
<i>Coco</i>	\$175,000,000	08/2016	08/2017	California				✓
<i>Daddy's Home 2</i>	\$70,000,000	03/20/2017	05/24/2017	Massachusetts				✓
<i>Darkest Hour</i>	\$30,000,000	10/30/2016	01/06/2017	UK		\$30	\$6	
<i>Despicable Me 3</i>	\$80,000,000	04/2016	03/2017	France				✓
<i>Downsizing</i>	\$76,000,000	04/04/2016	08/05/2016	Canada, Ontario	Nebraska, California			✓
<i>Dunkirk</i>	\$116,000,000-\$135,000,000	05/23/2016	09/07/2016	France	UK, Netherlands, California		\$1.08 (NL)	✓
<i>Everything, Everything</i>	\$10,000,000	08/29/2016	10/10/2016	Canada, Vancouver	Mexico			✓
<i>Ferdinand</i>	\$111,000,000	07/2016	09/2017	Connecticut				✓
<i>Fifty Shades Darker</i>	\$55,000,000	02/19/2016	07/19/2016	Canada, Vancouver	France			✓
<i>Fist Fight</i>	\$22,000,000	09/28/2015	11/13/2015	Georgia				✓
<i>Geostorm</i>	\$120,000,000	10/22/2014	02/10/2015	Louisiana		\$88	\$27	✓
<i>Get Out</i>	\$4,500,000	02/16/2016	03/10/2016	Alabama	New York			
<i>Ghost in the Shell</i>	\$110,000,000	02/2016	06/26/2016	New Zealand	California, China	\$83 (New Zealand)	\$21 (New Zealand)	
<i>Gifted</i>	\$7,000,000	10/07/2015	11/20/2015	Georgia		\$2.1 in NY	\$500k (NY)	
<i>Girls Trip</i>	\$20,000,000	06/27/2016	07/22/2016	Louisiana		\$18	\$6	✓
<i>Going in Style</i>	\$25,000,000	08/03/2015	10/01/2015	NY		\$26	\$6	✓
<i>Guardians of the Galaxy Vol. 2</i>	\$200,000,000	02/17/2016	06/17/2016	Georgia	New Zealand (VFX)	\$75 (GA), \$28 (New Zealand)	\$23 (GA), \$6 (New Zealand)	
<i>Happy Death Day</i>	\$5,000,000	11/07/2016	12/13/2016	Louisiana		\$6		
<i>Home Again</i>	\$15,000,000	10/24/2016	12/07/2016	California				
<i>Hostiles</i>	\$39,000,000			New Mexico				

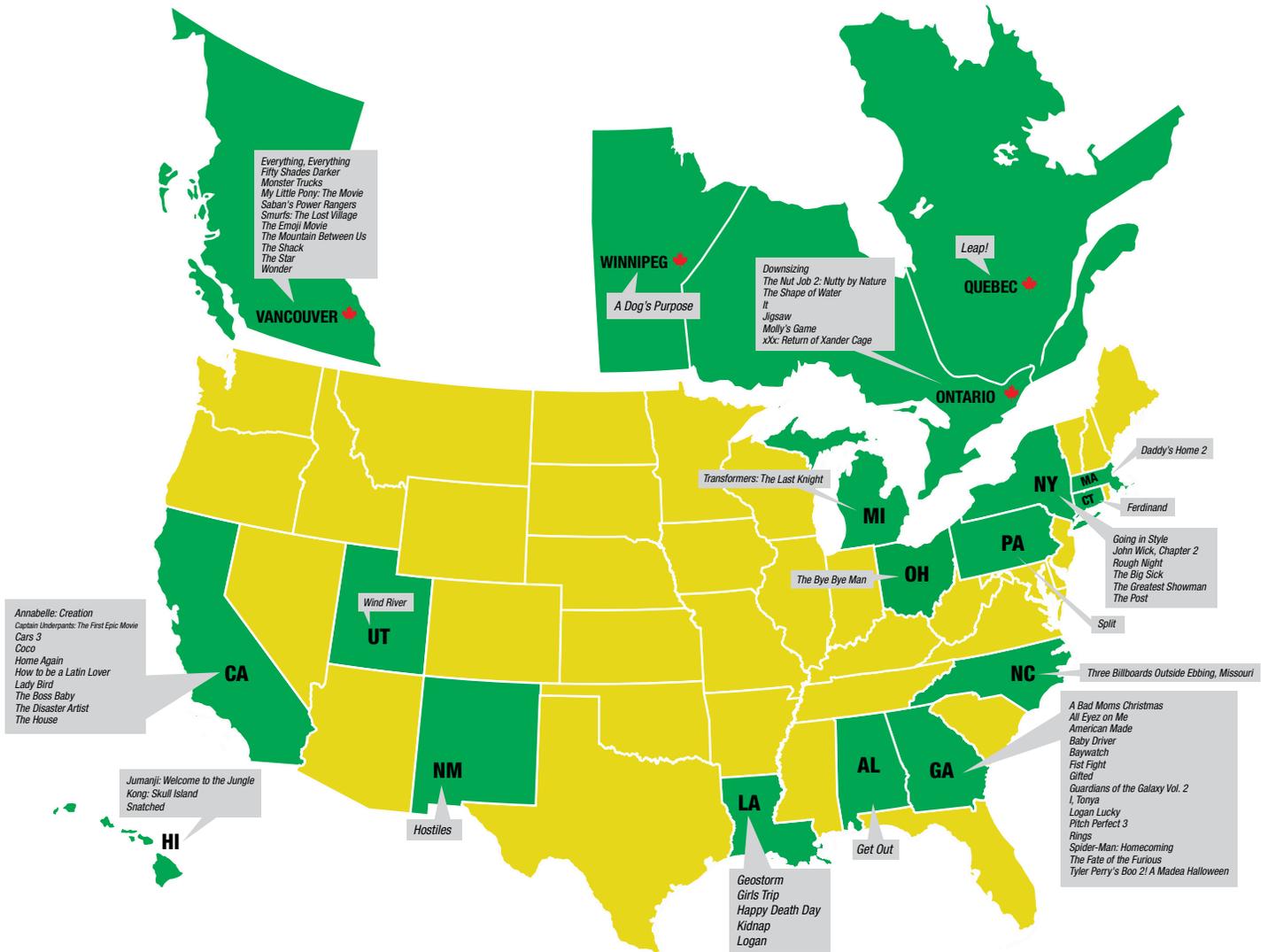
LOCATION, SPENDING, AND INCENTIVE LIST (CONTINUED)

FILM TITLE	Budget Est. (millions)	Shoot Start	Shoot Wrap	Primary Location	Secondary Location(s)	Location Spending (millions)	Incentive Amount (millions)	Scored in California
<i>How to be a Latin Lover</i>	\$13,000,000	04/29/2016	07/01/2016	California		\$13	\$2	
<i>I, Tonya</i>	\$11,000,000			Georgia				
<i>It</i>	\$35,000,000	06/27/2016	09/06/2016	Canada, Ontario	New York	\$29 (Ontario)	\$7 est. (Ontario)	✓
<i>Jigsaw</i>	\$10,000,000	09/12/2016	11/11/2016	Canada, Ontario				
<i>John Wick, Chapter 2</i>	\$40,000,000	10/26/2015	02/12/2016	NY	Italy	\$33 (NY)	\$7 (NY)	
<i>Jumanji: Welcome to the Jungle</i>	\$110,000,000-\$150,000,000	09/05/2016	12/19/2016	Hawaii	Georgia	\$62.5 (HI) \$35 (GA)	\$12.6 (HI) \$11 (GA)	✓
<i>Justice League</i>	\$300,000,000	04/11/2016	10/14/2016	UK	Iceland, California			
<i>Kidnap</i>	\$21,000,000	10/21/2014	11/23/2014	Louisiana		\$13	\$4	
<i>King Arthur: Legend of the Sword</i>	\$175,000,000	03/02/2015	06/2015	UK				
<i>Kingsman: The Golden Circle</i>	\$105,000,000	05/03/2016	07/22/2016	UK		\$105	\$18	
<i>Kong: Skull Island</i>	\$185,000,000	10/19/2015	03/25/2016	Hawaii	Vietnam, California, Australia	\$70.5 (HI), \$15 (Aus.)	\$12.3 (HI)	
<i>Lady Bird</i>	\$10,000,000	08/30/2016	10/08/2016	California				✓
<i>Leap!</i>	\$30,000,000	04/2015	10/2015	Canada, Quebec				
<i>Life</i>	\$62,000,000	07/11/2016	10/11/2016	UK		\$61.7 (UK)	12.5 (UK)	
<i>Logan</i>	\$127,000,000	05/02/2016	08/11/2016	Louisiana	New Mexico, California	\$60 (La.)	\$19 (La.)	✓
<i>Logan Lucky</i>	\$29,000,000	08/24/2016	10/14/2016	Georgia	North Carolina	\$18 (GA)	\$5.4 (GA)	
<i>Molly's Game</i>	\$30,000,000	11/12/2016	01/20/2017	Canada, Toronto				
<i>Monster Trucks</i>	\$125,000,000	04/07/2014	07/09/2014	Canada, Vancouver				
<i>Murder on the Orient Express</i>	\$55,000,000	11/21/2016	03/24/2017	UK	Malta			
<i>My Little Pony: The Movie</i>	\$6,500,000	2015	07/2017	Canada, Vancouver				
<i>Pirates of the Caribbean: Dead Men Tell No Tales</i>	\$230,000,000-\$320,000,000	02/18/2015	07/16/2015	Australia		\$160	\$47	✓
<i>Pitch Perfect 3</i>	\$45,000,000	01/30/2017	04/01/2017	Georgia		\$19.9	\$6	✓
<i>Resident Evil: The Final Chapter</i>	\$40,000,000	09/07/2015	12/2015	South Africa				
<i>Rings</i>	\$25,000,000	03/23/2015	05/31/2015	Georgia				✓
<i>Rough Night</i>	\$26,000,000	08/17/2016	10/07/2016	NY		\$26	\$6	✓
<i>Saban's Power Rangers</i>	\$105,000,000	02/29/2016	05/25/2016	Canada, Vancouver				
<i>Smurfs: The Lost Village</i>	\$60,000,000	2016	N/A	Canada, Vancouver				
<i>Snatched</i>	\$42,000,000	05/30/2016	07/01/2016	Hawaii	Puerto Rico	\$17 (HI)	\$6.7 (HI)	✓
<i>Spider-Man: Homecoming</i>	\$175,000,000	06/20/2016	10/01/2016	Georgia	New York	\$66 (GA)	\$20 (GA)	✓
<i>Split</i>	\$9,000,000	11/2015	2016	Pennsylvania		\$8.64 (PA) \$261k (NY)	\$2.6 (PA) \$78k (NY)	
<i>Star Wars: The Last Jedi</i>	\$317,000,000	02/15/2016	07/15/2016	UK	Iceland, Croatia	\$211 (UK)	\$54.7 (UK)	✓
<i>The Big Sick</i>	\$5,000,000	05/11/2016	06/17/2016	NY		\$5	\$1	
<i>The Boss Baby</i>	\$125,000,000	2014	N/A	California				
<i>The Bye Bye Man</i>	\$6,209,083	11/02/2015	12/11/2015	Ohio		\$6	\$2	
<i>The Dark Tower</i>	\$66,000,000	04/13/2016	07/18/2016	South Africa	New York, California			✓
<i>The Disaster Artist</i>	\$10,000,000	12/07/2015	02/2016	California				

FILM TITLE	Budget Est. (millions)	Shoot Start	Shoot Wrap	Primary Location	Secondary Location(s)	Location Spending (millions)	Incentive Amount (millions)	Scored in California	
<i>The Emoji Movie</i>	\$50,000,000	08/2016	05/2017	Canada, Vancouver					
<i>The Fate of the Furious</i>	\$250,000,000	03/07/2016	08/21/2016	Georgia	New York, Cuba, Iceland	\$65 (GA)	\$20 (GA)	✓	
<i>The Foreigner</i>	\$35,000,000	11/2015	03/2016	UK		\$31	\$6		
<i>The Great Wall</i>	\$150,000,000	03/30/2015	08/2015	China					
<i>The Greatest Showman</i>	\$84,000,000	11/28/2016	02/28/2017	NY		\$70		✓	
<i>The Hitman's Bodyguard</i>	\$69,000,000	04/25/2016	06/02/2016	UK	Netherlands, Bulgaria	\$59 (UK) \$2.7 (NL)	\$7.27 (UK) \$950k (NL)		
<i>The House</i>	\$40,000,000	09/14/2015	11/2015	California					
<i>The Lego Batman Movie</i>	\$80,000,000	07/31/2014	No Shoot Wrap (Feature) Available.	Australia				✓	
<i>The Lego Ninjago Movie</i>	\$70,000,000	03/2016	06/2017	Australia					
<i>The Mountain Between Us</i>	\$35,000,000	12/05/2016	03/05/2017	Canada, Vancouver	New Zealand			✓	
<i>The Mummy</i>	\$195,000,000	04/04/2016	08/26/2016	UK	Namibia	\$172 (UK)	\$33 (UK)		
<i>The Nut Job 2: Nutty by Nature</i>	\$40,000,000	No Shoot Start (Feature) Available.	No Shoot Wrap (Feature) Available.	Canada, Ontario					
<i>The Post</i>	\$50,000,000	05/30/2017	08/04/2017	NY		\$39		✓	
<i>The Shack</i>	\$20,000,000	06/08/2015	08/03/2015	Canada, Vancouver					
<i>The Shape of Water</i>	\$20,000,000	08/15/2016	11/11/2016	Canada, Ontario					
<i>The Star</i>	\$20,000,000	2015	08/2017	Canada, Vancouver					
<i>Thor: Ragnarok</i>	\$180,000,000	07/04/2016	10/28/2016	Australia	Georgia	\$136 (Australia)	\$52 (Australia)		
<i>Three Billboards Outside Ebbing, Missouri</i>	\$15,000,000	04/25/2016	06/10/2016	North Carolina			\$13	\$3.1	
<i>Transformers: The Last Knight</i>	\$260,000,000	06/06/2016	10/15/2016	Michigan	UK, Iceland	\$95 (Michigan)	\$21 (MI)	✓	
<i>Tyler Perry's Boo 2! A Madea Halloween</i>	\$20,000,000	03/20/2017	03/31/2017	Georgia					
<i>Underworld: Blood Wars</i>	\$35,000,000	10/06/2015	12/17/2015	Czech Republic					
<i>Valerian and the City of a Thousand Planets</i>	\$210,000,000	01/05/2016	06/03/2016	France	New Zealand (VFX)	\$92 (France) \$54 (New Zealand)	\$34 (France) \$11 (New Zealand)		
<i>Victoria & Abdul</i>	\$21,000,000	09/05/2016	10/08/2016	UK	India	\$21 (UK)	\$4 (UK)		
<i>War for the Planet of the Apes</i>	\$150,000,000	10/14/2015	02/25/2016	New Zealand (VFX)	Canada, British Columbia	\$95 (New Zealand) \$59 (Canada)	\$19 (New Zealand)	✓	
<i>Wind River</i>	\$11,000,000	03/12/2016	04/25/2016	Utah					
<i>Wonder</i>	\$20,000,000	07/18/2016	09/13/2016	Canada, Vancouver					
<i>Wonder Woman</i>	\$150,000,000	11/23/2015	05/09/2016	UK	Italy, France				
<i>xXx: Return of Xander Cage</i>	\$85,000,000	02/01/2016	05/20/2016	Canada, Ontario	Dominican Republic				

MOVIES OF 2016 (APPENDIX B): VISUAL MAP OF FILM LOCATIONS

NORTH AMERICA



MISC. INTERNATIONAL LOCATIONS



UK

- 47 Meters Down
- American Assassin
- Beauty and the Beast
- Darkest Hour
- Justice League
- King Arthur: Legend of the Sword
- Kingsman: The Golden Circle
- Life
- Murder on the Orient Express
- Star Wars: The Last Jedi
- The Foreigner
- The Hitman's Bodyguard

- The Mummy
- Victoria & Abdul
- Wonder Woman



CHINA

- The Great Wall



CZECH REPUBLIC

- Underworld: Blood Wars



AUSTRALIA

- Alien: Covenant
- Pirates of the Caribbean: Dead Men Tell No Tales
- The Lego Batman Movie
- The Lego Ninjago Movie
- Thor: Ragnarok



FRANCE

- Despicable Me 3
- Dunkirk
- Valerian and the City of a Thousand Planets



HUNGARY

- Atomic Blonde
- Blade Runner 2049



ITALY

- All the Money in the World



NEW ZEALAND

- Ghost in the Shell
- War for the Planet of the Apes (VF)



SOUTH AFRICA

- Resident Evil: The Final Chapter
- The Dark Tower

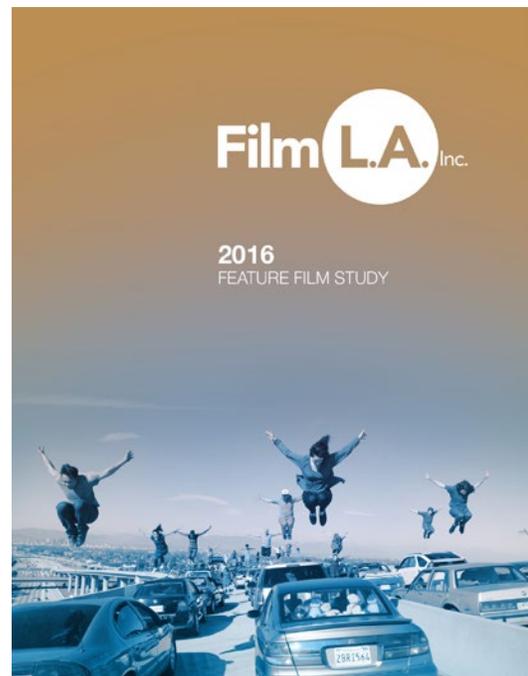
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SOUND STAGE PRODUCTION REPORT



2016 FEATURE FILM STUDY





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