



# **ECONOMIC IMPACTS OF *SUPERMAN & LOIS* SEASON ONE IN BRITISH COLUMBIA**

**A REPORT FOR THE MOTION  
PICTURE ASSOCIATION - CANADA**

**DECEMBER 2021**

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# EXECUTIVE SUMMARY

*“Superman & Lois”* is a superhero drama TV series based on the DC Comics characters Superman and Lois Lane. The production of Season One employed hundreds of people across British Columbia, generating considerable economic activity locally. The show’s production also supported activity in a wide range of industries through its procurement, and as those employed by the production itself and in its supply chain spend money in the wider economy.

This study, commissioned by the Motion Picture Association - Canada, analyzes the production’s total economic impacts in BC during 2020/21. The study also considers the wider impact on BC by boosting film-induced tourism and temporarily attracting workers from other parts of the world.

In 2020/21, **production of Season One of “Superman & Lois” resulted in total spending in BC of over C\$95.1 million.**<sup>1</sup> Spending on wages and salaries for local production crew and other labour was the main expenditure item, making up 58% of the total expenditure. The remaining **C\$39.7 million was spent with 1,280 BC-based suppliers of goods and services**, with Burnaby and Vancouver being the areas that received the largest amounts in business spending.

We calculate that expenditure by **the production of Season One of “Superman & Lois” stimulated a C\$137 million contribution to BC’s GDP in 2020/21.** This result equates to 2% of Prince Edward Island’s GDP in that same period. We find that for every C\$1 million that the production’s own activities contributed to the economy, its expenditure supported a further C\$1.5 million along its supply chain and through the payment of wages.

We find that the expenditure undertaken by **the show’s production stimulated a total of 1,220 full-time equivalent (FTE) jobs in BC in 2020/21.** This is equivalent to 6% of all FTE employment in the agriculture sector in BC. For every 100 people it directly employed in the production,, its expenditure stimulated another 90 jobs across the province.

C\$137m

Total contribution to BC GDP supported by Season One of “Superman & Lois”

1,220 FTE

Jobs supported across BC as a result of Season One of “Superman & Lois”

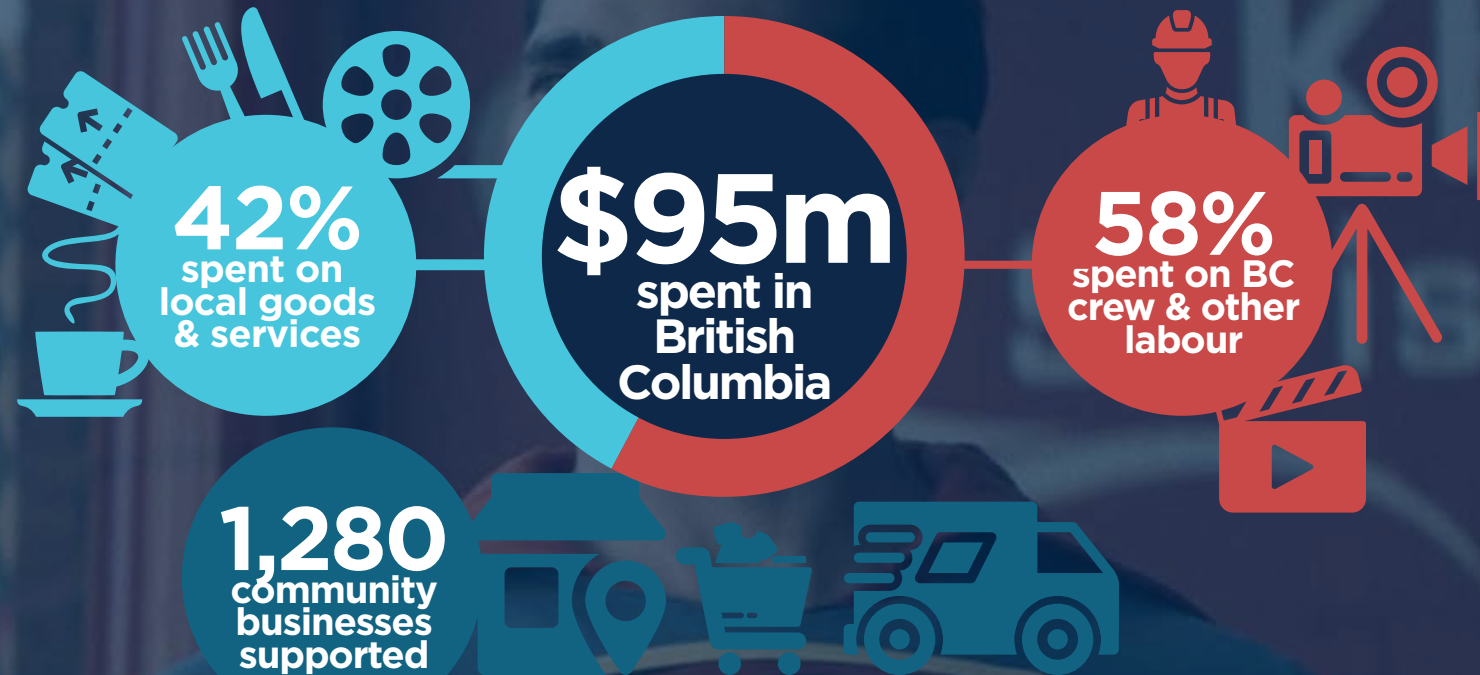
<sup>1</sup> Throughout this report, the currency unit is Canadian Dollars (C\$).



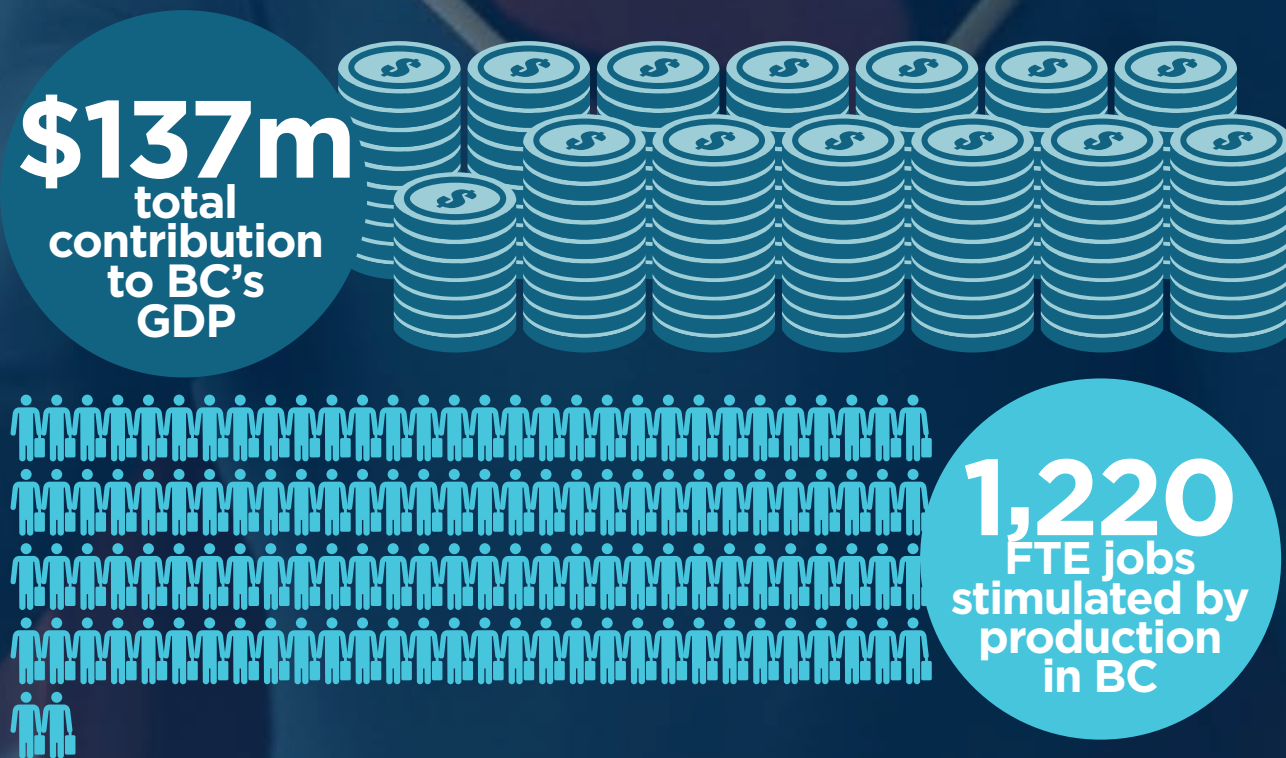
# SUPERMAN & LOIS MAKES BC ECONOMY SOAR

## IN SEASON ONE ALONE:

### DIRECT IMPACT OF PRODUCTION



### TOTAL IMPACT OF PRODUCTION



## 1. INTRODUCTION

*"Superman & Lois"* is a superhero drama TV series based on the DC Comics characters Superman and Lois Lane. The series is filmed in Surrey, British Columbia (BC), and is centered around the return of Clark Kent / Superman and Lois Lane to Smallville with their sons, where their lives are upended by a mysterious visitor from an unidentified parallel Earth.

Season One of the show was produced and distributed by Warner Bros. Production on the pilot was expected to begin in March 2020, but plans were delayed due to the COVID-19 pandemic. Filming of Season One began in October 2020 and concluded in June 2021. The series premiered in February 2021, and the 15th and last episode of the season was aired in August 2021.<sup>2</sup>

Season One of *"Superman & Lois"* was entirely shot in British Columbia, Canada, including the communities of Surrey, Richmond, Delta, and at the Vancouver Film Studios. Throughout the production of the series, significant economic impacts were created for BC residents and businesses.

Oxford Economics was engaged by the Motion Picture Association - Canada to conduct an independent economic impact assessment of the production of the show on the BC economy. For the study, Oxford Economics used data from Warner Bros. Entertainment (WB) to estimate the economic impacts in BC arising from the production of Season One. Season Two began filming in September 2021. Assuming that Season Two has a similar number of episodes and a similar production budget to Season One, the economic impacts can be expected to continue over the course of filming Season Two.

<sup>2</sup> The show went on two hiatuses due to production being impacted by COVID-19, which is why the show was still being filmed after the February 2021 premiere.

## 2. PRODUCTION SPENDING

When a TV show shoots on location, it brings with it jobs, revenue, and related infrastructure development. Physical productions provide an immediate boost to the local economy, fostering job creation and innovation in other industries across the production supply chain. In 2020/21, production of Season One of “*Superman & Lois*” resulted in **total spending in BC of just over C\$95.1 million.**

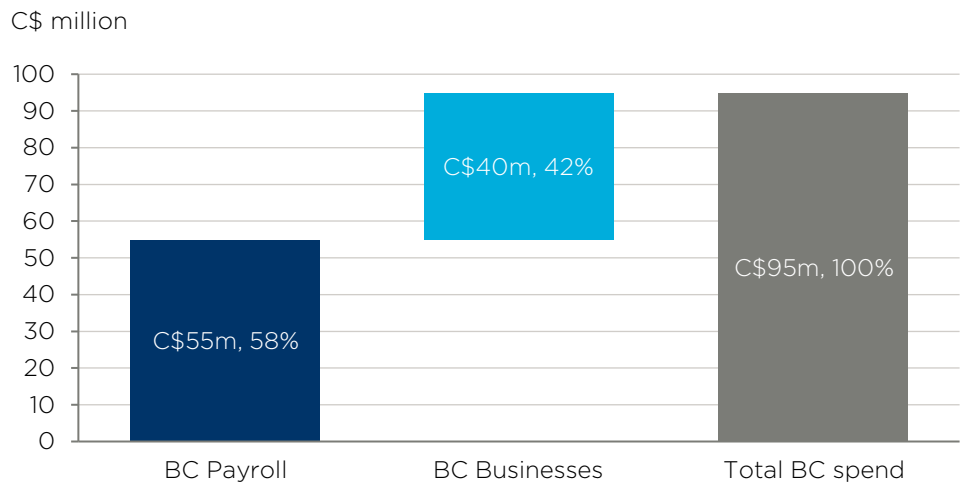
Spending on wages and salaries for local production crew and other labour was the main expenditure item, making up 58% of the total expenditure (Fig. 1). The remaining C\$39.7 million was spent with BC-based suppliers of goods and services.

C\$95m

Direct production expenditure in BC

Spending on BC production crew and qualifying labour was worth C\$55 million, while local spending on goods and services was worth C\$40 million

Fig. 1: Production spend of Season One of “*Superman & Lois*” in BC, by type



Source: Warner Bros, Oxford Economics

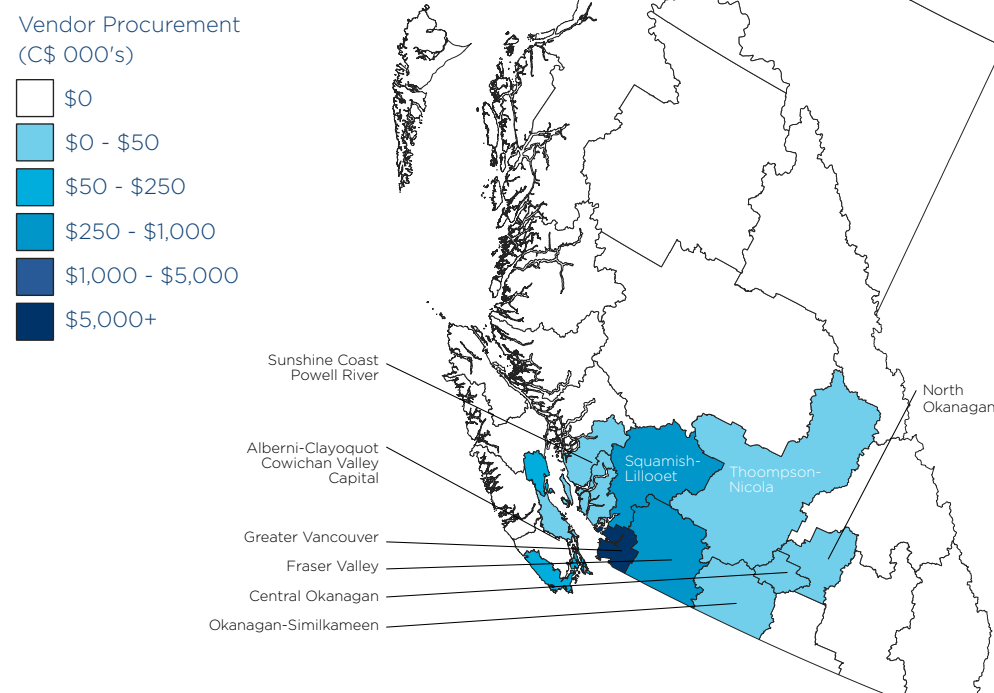


Season One production spending engaged at least 1,280 businesses from communities across all of BC. Some 1,210 of them were based in the Greater Vancouver area, while the remaining 70 were based elsewhere in BC. Fig. 2 and Fig. 3 show the amounts received by BC-based companies across the province and the Greater Vancouver area. The localities that received the largest amounts in business spending were Burnaby and Vancouver.

The production of TV shows typically relies on a wide range of goods and services that are required for production, from the manufacturing of costumes to on-set catering activities. Production of Season One of *“Superman & Lois”* engaged a wide variety of BC-based businesses, including local retailers, production facilities, security companies, equipment rental companies, dry cleaners, hotels and restaurants, catering companies, automobile rental companies, alteration

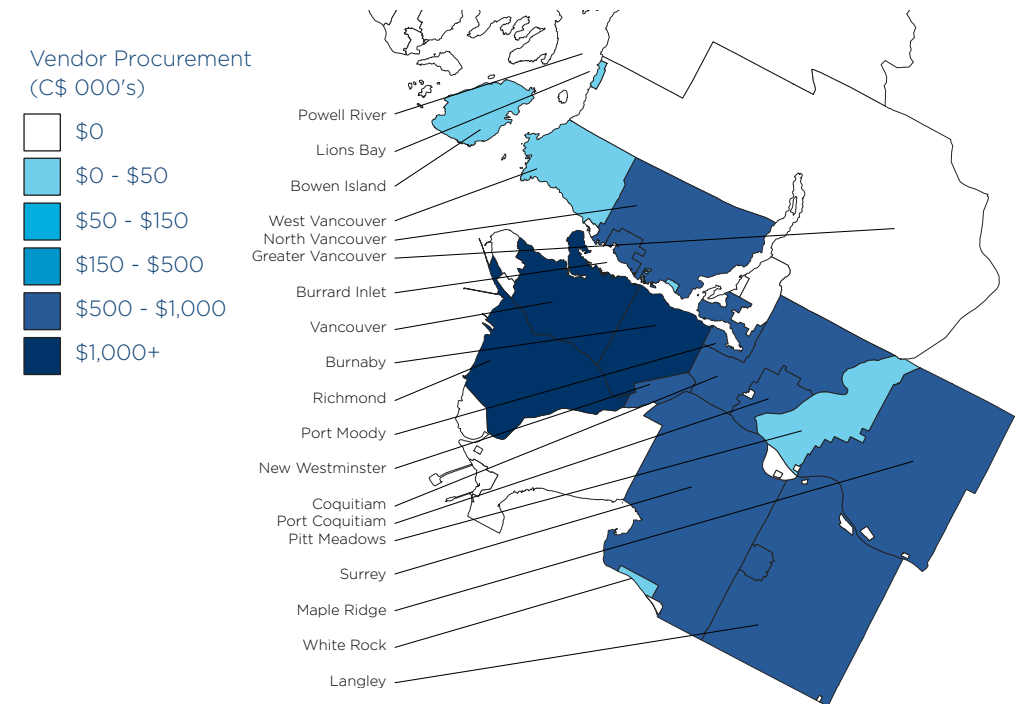
and repair companies, metal fabricators, florists, party suppliers, and waste management services. Some 31% of the local spending went to suppliers in the information and cultural sector (C\$12.4 million), which includes visual and special effects for example. The second largest industry sector for BC-based production expenditure was rental and leasing (C\$10.8 million, including stage rentals for example), followed by retail trade (C\$10.5 million, including lighting & grip equipment and costumes for example).

**Fig. 2: Map of spending with BC-based businesses by census division**



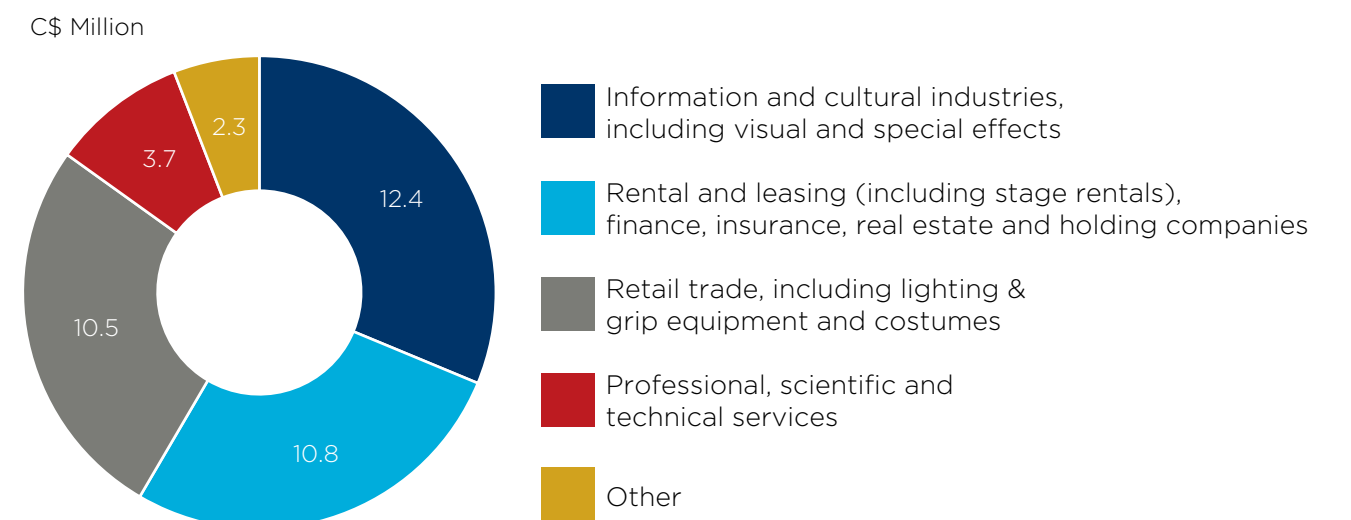
Source: Warner Bros, Oxford Economics

**Fig. 3: Map of spending with Vancouver-based businesses by census subdivision**



Source: Warner Bros, Oxford Economics

**Fig. 4: Spend on goods and services with BC-based suppliers, by industry<sup>3</sup>**



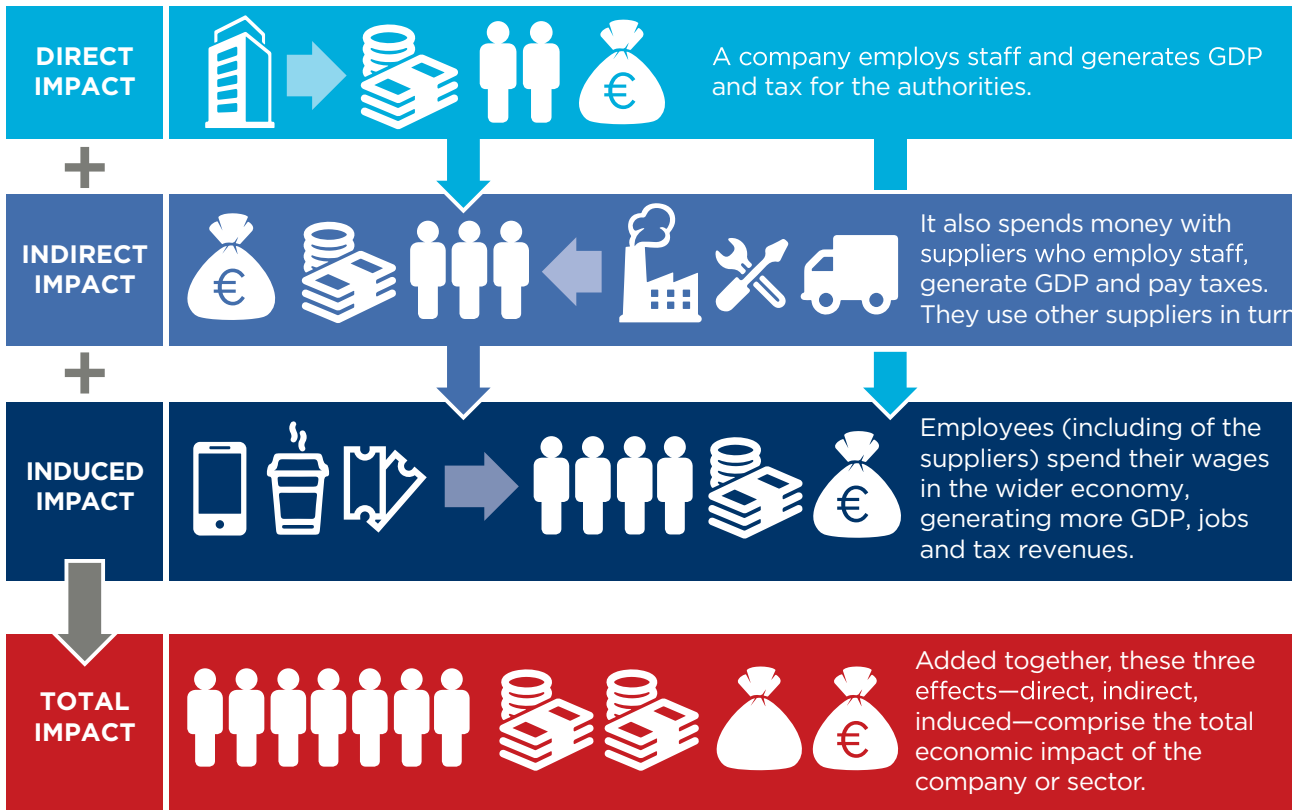
Source: Warner Bros, Oxford Economics

<sup>3</sup> In particular, Information and cultural industries include NAICS code 51 Information, which in turn includes the production and distribution of information and cultural products, the provision of the means to transmit or distribute these products as well as data or communications, and data processing. Rental and leasing, finance, insurance, real estate and holding companies include the following NAICS codes: 52 Finance and Insurance; 53 Real Estate and Rental and Leasing; and 55 Management of Companies and Enterprises.

### 3. ECONOMIC IMPACTS

#### 3.1 CHANNELS OF IMPACT

The impact of the filming of Season One of “*Superman & Lois*” on the BC economy is calculated using an economic impact assessment. This involves quantifying the production’s economic contribution to British Columbia across three channels of expenditure, where the total impact is the sum of the three channels.



Source: Oxford Economics

**C\$137m**

**Total contribution to BC GDP supported by Season One of “*Superman & Lois*”**

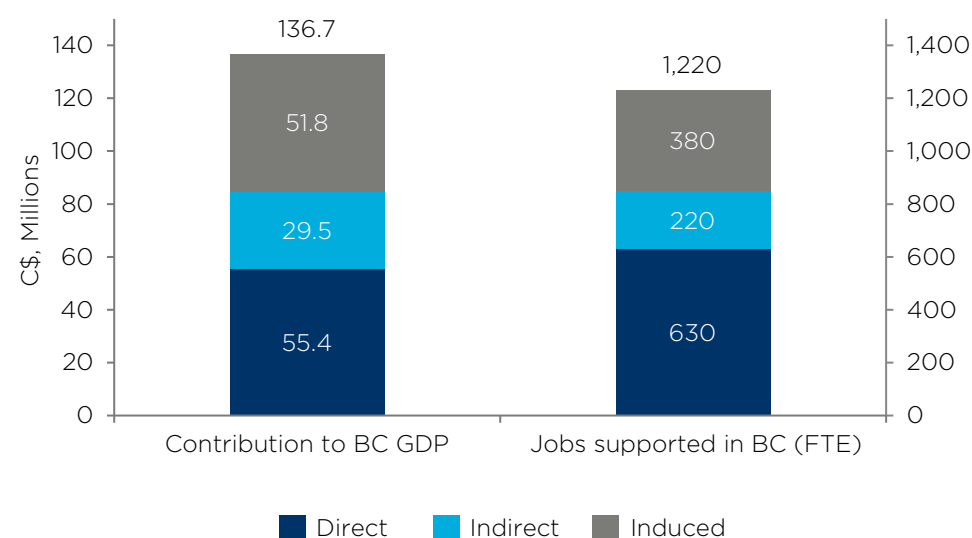
### 3.2 TOTAL IMPACT

Combining all channels of impact, we find that Season One of “*Superman & Lois*” supported a C\$136.7 million contribution to BC GDP in 2020/21. Some C\$55.4 million, or 41%, of this was generated by the production itself (direct). The local spending on goods and services supported another C\$29.5 million along the BC supply chain (indirect), which represented 22% of the total. The payment of wages by the production studios and the BC-based firms in the show’s supply chain (induced) stimulated a further C\$51.8 million contribution to GDP, or 38% of the total (Fig. 5).

To put the scale of the show’s total impact into context, this is equivalent to 2% of Prince Edward Island’s GDP or to two-thirds of the size of the entire computer and peripheral equipment manufacturing sector in Canada.

For Season One of “*Superman & Lois*”, for every C\$1 million in direct GDP that was generated by the production itself, it supported a further C\$1.5 million around BC through its expenditure at the province level.

**Fig. 5: The total GDP and employment contribution supported by Season One of “*Superman & Lois*” in BC, by channel of impact**



Source: Warner Bros, Oxford Economics

**1,220 FTE**

**Jobs supported across BC as a result of Season One of “*Superman & Lois*”**

The production of the show also had a significant impact on BC employment. In 2020/21, Season One of “*Superman & Lois*” supported a total of 1,220 FTE jobs across BC. The production itself employed an estimated 630 FTE workers, or 51% of the total. The local spending on goods and services supported another 220 FTE jobs along the BC supply chain or 18% of the total. A further 380 FTE jobs, or 31% of the total, were supported by the spending of wages by production crews and employees at the show’s suppliers in BC (Fig. 5).

To give a sense of scale, the total employment supported by Season One of “*Superman & Lois*” in BC was equivalent to 6% of all FTE employment in the agriculture sector in BC.

In 2020/21, for every 100 people employed in the production itself, a further 90 jobs were supported across BC through secondary effects.

According to WB Studios, Season One of “*Superman & Lois*” is estimated to have benefitted from nearly C\$7.1 million in federal tax incentives and \$18.9 million in provincial tax incentives. The incentives provided by the Government of BC are estimated to have produced C\$7.2 in provincial GDP per dollar of BC tax incentive received by the production.

The remainder of this section describes the three channels of impact in more detail.

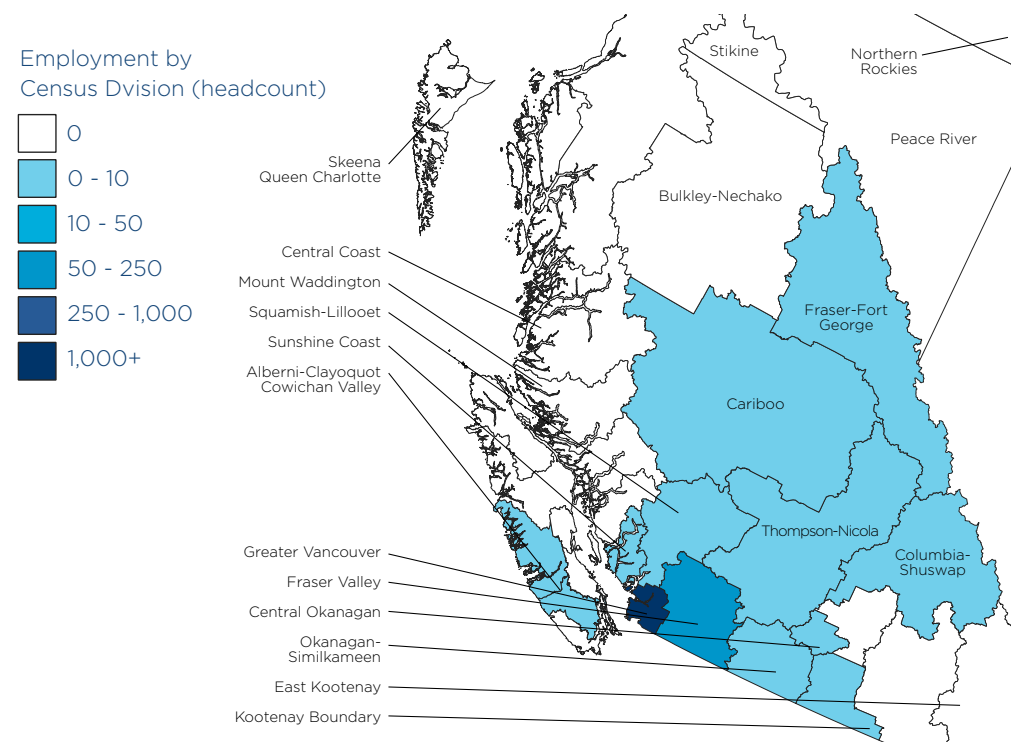


### 3.3 DIRECT IMPACT

During the production period, Season One of *Superman & Lois* directly employed an estimated 630 full-time equivalent (FTE) workers in BC. The vast majority of these workers lived around Vancouver, especially in Port Coquitlam and Surrey (Fig. 6 and Fig. 7). We estimate some 550 FTE workers lived in Greater Vancouver and just over 70 lived elsewhere in BC.

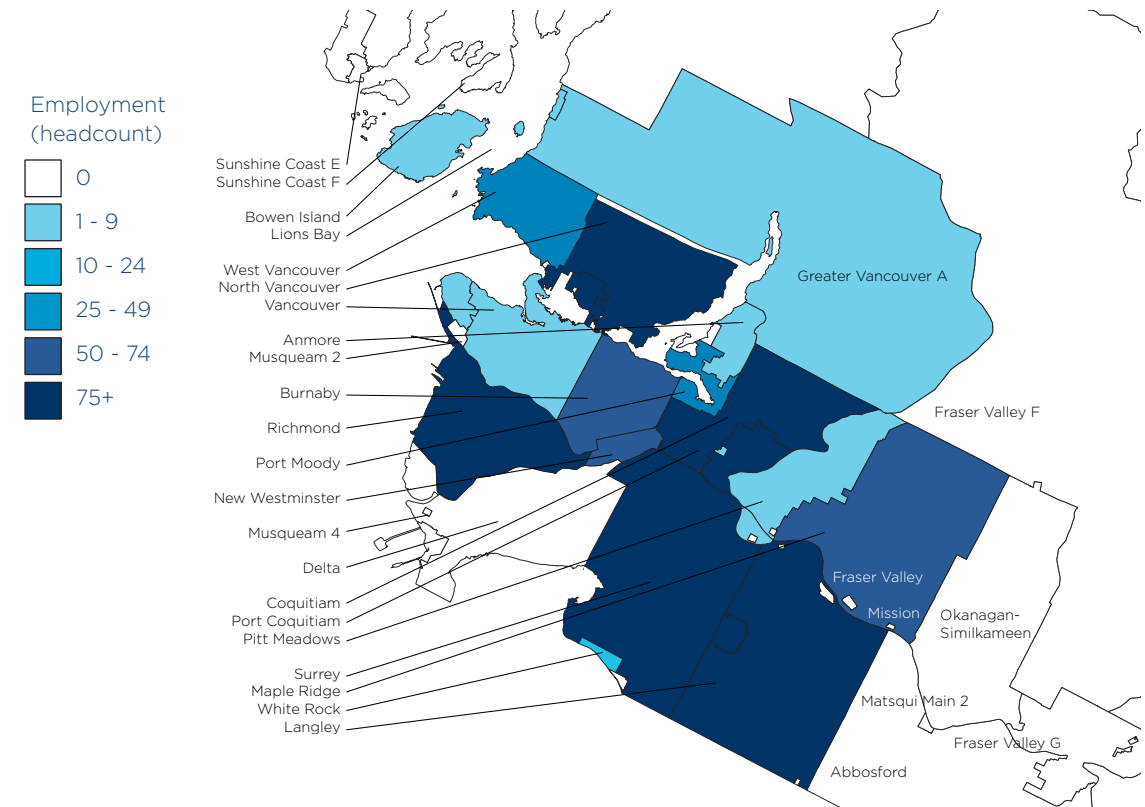
We estimate that the *Superman & Lois* production made a C\$55.4 million direct contribution to BC GDP in 2020/21, which came from the payment of employee compensation to BC-based staff.<sup>4</sup>

**Fig. 6: Map of production workers by residence in BC**



Source: Warner Bros, Oxford Economics

**Fig. 7: Map of production workers by residence in Vancouver**



Source: Warner Bros, Oxford Economics

14 <sup>4</sup> The contribution to GDP generated by a company or a project can be calculated as the sum of its surplus (profits) and employee compensation. This approach, known as the income approach, is consistent with the principles of national accounting. In this case, we assume that the profits do not accrue as GDP in BC because Warner Bros is headquartered in the US and is therefore likely to repatriate its profits. Employee compensation of local workers, instead, directly contributes to BC and Canada's GDP.

### 3.4 INDIRECT IMPACT

The production's positive contribution to the BC economy, however, extends past the contribution it makes directly through its own operations. This is related to the purchases of goods and services made from other firms in order to produce the show. This spending stimulates additional economic activity along the show's BC supply chain. This is referred to as the *indirect* impact.

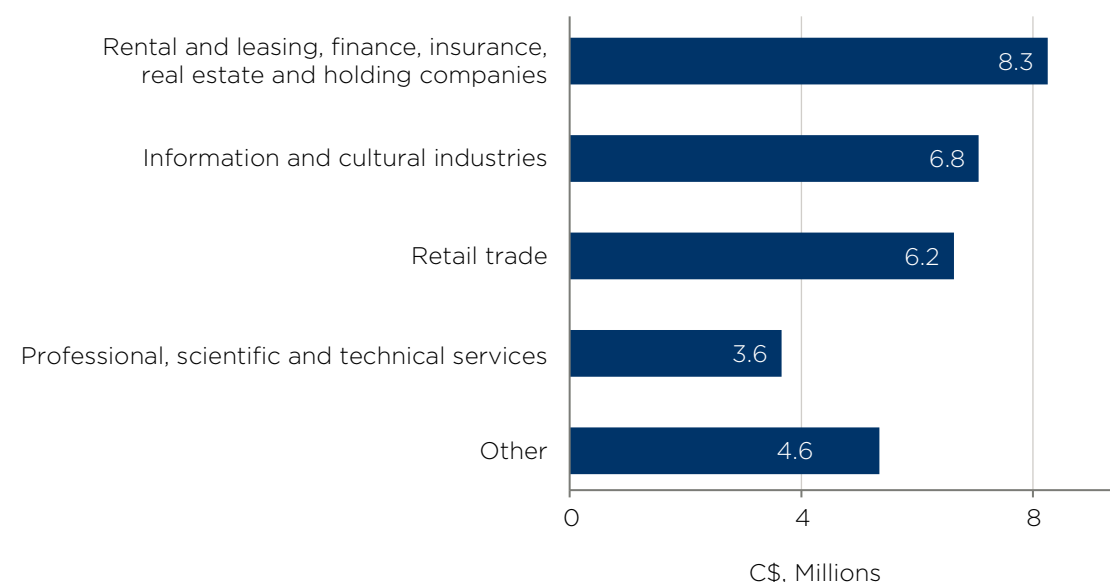
Using Statistics Canada's input-output table for BC and the Season One production expenditure data (excluding payroll) provided by WB Studios, Oxford

Economics estimated that the procurement associated with "*Superman & Lois*" Season One stimulated a C\$29.5 million contribution to BC GDP along the supply chain. Over half of this indirect impact was in the rental and leasing and information and cultural sectors, where the show's supply chain spending stimulated a GDP contribution of C\$8.3 million (28%) and C\$6.8 million (23%), respectively (Fig. 8).

The show's expenditure on inputs of goods and services from BC-based suppliers also stimulated 220 FTE jobs in the province. Of these, 80 FTE jobs (or 39% of the total), were at firms providing retail

services. A further 30 FTE jobs were supported in the professional services sector, including engineering and consulting services suppliers. Another 30 FTE jobs were in the information sector.

**Fig. 8: GDP contribution stimulated by the procurement of goods and services from BC suppliers, by industrial sector**



Source: Warner Bros, Oxford Economics

### 3.5 INDUCED IMPACT

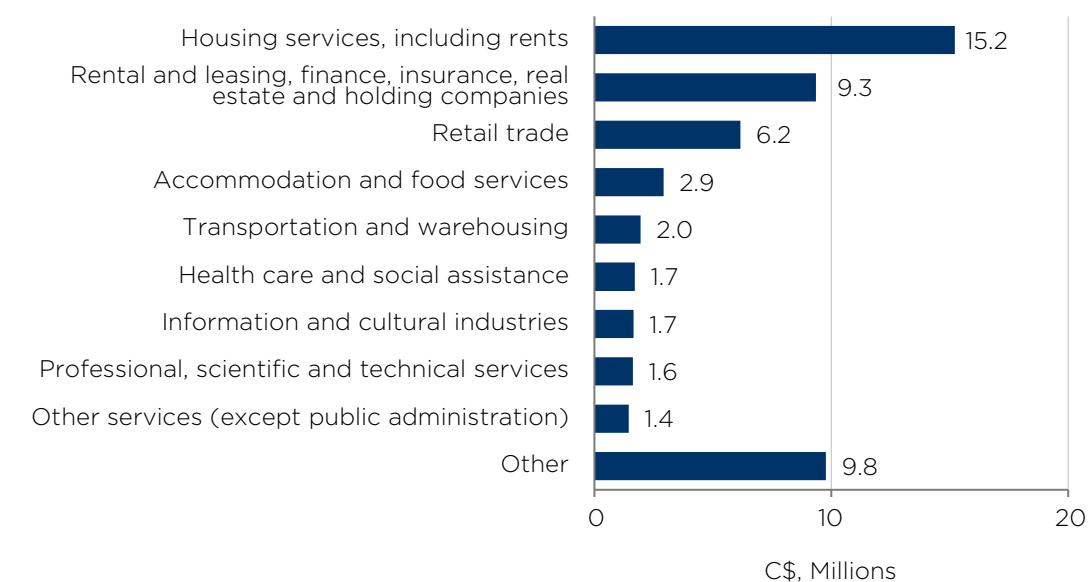
During the production period, WB studios paid on-site staff C\$55.4 million in gross wages and salaries. In addition to this, the people whose jobs are stimulated by the local spending on goods and services are also paid additional wages and salaries.

Production crews, and workers employed throughout the supply chain, spend a proportion of their wages at retail, leisure, and other outlets in BC. This stimulates economic activity and employment at these firms, but also along their supply chains. This is referred to as the show's *induced* impact.

We estimate the wage-financed spending of local production crews and workers at BC-based suppliers stimulated a C\$51.8 million contribution to BC GDP during the production period. Of this figure, a combined 47% of this occurred in the housing and financial services sectors, where GDP contributions of C\$15.2 million and C\$9.3 million were stimulated, respectively (Fig. 9).<sup>5</sup>

We estimate the wage financed consumer spending of production crews and workers within the show's supply chain supported 380 FTE jobs across BC in 2020/21.

**Fig. 9: GDP contribution stimulated by the payment of wages to BC-based workers, by industrial sector**



Source: Warner Bros, Oxford Economics

<sup>5</sup> Housing services here include the housing costs paid to rent an accommodation, or the imputed rent if the household owns the dwelling it occupies.





## 4. WIDER IMPACTS

In addition to the economic impacts that arise through production spending, television series such as *“Superman & Lois”* can produce impacts that extend beyond the jobs and GDP they support.

### 4.1 FACILITIES AND INFRASTRUCTURE

For example, they can make effective use of spaces that would otherwise be vacant, as was the case for the Vancouver Sun and Province office during the height of the COVID-19 pandemic. The premise had been sitting empty since staff were sent home to work remotely in March 2020 and was used as a filming location for the Daily Planet’s newsroom.

### 4.2 FILM-INDUCED TOURISM

As it is often the case when existing buildings and facilities are used as filming locations, Vancouver and its surrounding areas may start attracting visitors and fans of the show as a result of the filming. Film induced tourism is a well-known phenomenon and it has increasingly been viewed as an important component of tourism marketing.<sup>6</sup> Vancouver has even been nicknamed “Hollywood North”, in recognition of all the movies and TV shows that regularly use the city to stand in for other locations.

### 4.3 PERSONAL SPENDING FROM OUT-OF-PROVINCE CAST AND CREW

In addition, TV shows productions bring non-resident workers to a city/region. While this is not counted as part of the economic footprint of the show, it is important to acknowledge that this could support further economic impacts. For example, non-resident cast members may spend part of their compensation locally to visit local attractions or leisure outlets in their spare time. They may even receive visits from friends and relatives while in the region, thereby supporting further economic activity.

While we have not measured the wider impacts of the production of *“Superman & Lois”* in this study, it is worth observing that film and TV productions can also create additional economic, community, and social benefits. These may comprise the creation of job openings for apprentices or students, the development of business ventures, the formation of spin-off firms, and contributions to community and culture.

<sup>6</sup> See for example, Jeeyeon (Jeannie) Hahm & Youcheng Wang (2011) Film-Induced Tourism as a Vehicle For Destination Marketing: Is it Worth the Efforts?, *Journal of Travel & Tourism Marketing*, 28:2, 165-179 or Beeton, Sue. “Understanding film-induced tourism.” *Tourism analysis* 11, no. 3 (2006): 181-188.





# APPENDIX: METHODOLOGY

The impact of the filming of Season One of “*Superman & Lois*” on the BC economy is calculated using an economic impact assessment. This involves quantifying the production’s economic contribution to British Columbia across three channels of expenditure. The channels of impact are:

- **Direct impact** – relates to the employment and economic activity generated at the filming locations across BC.
- **Indirect impact** – captures the economic activity stimulated by the procurement of inputs of goods and services from BC-based supply chain.
- **Induced impact** – comprises the wider economic benefits that arise from the payment of wages by the television series, and the firms in its BC supply chains, to staff who spend a proportion of this income in local retail, leisure, and other outlets.

The total impact is the sum of the three channels.

This approach enables us to build a picture of the series’ overall contribution to BC across two key metrics:

- The gross value-added contribution to BC GDP.<sup>7</sup>
- Employment measured on a FTE basis.

The results are presented on a gross basis. They therefore ignore any displacement of activity from other firms or activities. Nor do they consider what the resources currently used by the show’s production, or stimulated by its expenditure, could alternatively produce in their second most productive usage.

Data on the direct impact of “*Superman & Lois*” Season One—including the show’s contribution to GDP and jobs created—were provided directly by Warner Bros Studios. Direct GDP contribution in BC is taken to be equal to local employee compensation.

To estimate the indirect and induced GDP impacts of the show, Oxford Economics used the 2017 Statistics Canada provincial input-output table for BC (the latest available). A basic domestic input-output table gives a snapshot of an economy at a given point in time. The model shows the major spending flows from “final demand” (i.e., consumer spending, government spending, investment, and exports to the rest of the world); intermediate spending patterns (i.e., what each sector buys from every other sector—the supply chain in other words); how much of that spending stays within the domestic/ provincial economy; and the distribution of income between employment income and other income (mainly profits). In essence, an input-output table shows who buys what from whom in the economy.

To estimate the indirect impact, we used figures for the amount spent and type of goods and services purchased from BC-based businesses over the course of the production of Season One. In order to calculate the induced impact, we took the figures for wages paid to workers, as provided by WB, and then allocated those to the sectors where they would have spent those wages in line with the proportions in the BC input-output table. We then used those figures to show how many dollars of GDP the show’s production supported in the BC economy for every C\$1 of direct GDP contribution; and how many jobs were stimulated across the province for each 100 people directly employed on the production.

<sup>7</sup> Where GDP is the main indicator of economic activity in Canada. It is used to measure the rate of growth or decline of the economy, and when it enters a recession.



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