Examination of the Runnymede 2030 Draft Local Plan
Statement on behalf of Tarmac Trading Limited

Analysis of Runnymede Borough Council Employment Evidence – Vacant Industrial Space

April 2019
1 INTRODUCTION AND OVERVIEW

1.1.1 This Statement has been prepared by Chris Lindley of Heaton Planning Limited ("HPL") and David Adams of Adams Group Real Estate ("AGRE"). It supplements the written and oral submissions made on behalf of Tarmac Trading Limited ("our Client") including those by Zack Simons of Counsel at the “Matter 9 Hearing Session” dated 19 February 2019.

1.1.2 Following the hearing session, the Inspector has provided us with the opportunity to comment upon evidence provided by the Council which engages with vacant industrial space in the Borough and its role examining the overall adequacy of the Council’s approach within its emerging Local Plan to employment land provision (particularly industrial land).

1.1.3 Runnymede Borough Council ("RBC") accepts that a “normal” healthy vacancy rate for employment floorspace would be around 10%. A lower vacancy rate than that could indicate a market which is not, in the words of [8.8] of the draft Local Plan, enabling “choice and flexibility” to “accommodate identified needs”.

1.1.4 For several months now, Tarmac’s representatives have sought to establish what the existing vacancy rate is across the borough in respect of industrial floorspace.

1.1.5 In order to derive that vacancy rate, figures are required for (a) the total industrial floorspace within the borough, and (b) the total vacant industrial floorspace within the borough.

(a) Total industrial floorspace

1.1.6 The total existing industrial floorspace in Runnymede is 263,667 sqm.²

1.1.7 The Council has consistently refused to supply an equivalent figure in respect of the SEAs (see Appendix 1). However, as we explain below, using the Valuation Office Agency database we have done the exercise RBC did not do and identified buildings within the SEAs in industrial use, which amount to 87,617 sqm.

¹ RBCLP_41, page 1, paragraph 3.
² ELR, Table 19, p.53.
**Vacant floorspace**

1.8 The only figures for vacant floorspace the Council has produced relate to the SEAs, and not to the borough as a whole. The figures which have been given for the SEAs are:

   a) **4,755m²** in document RBCLP_12; and more recently

   b) **4,990m²** in the Council’s 15.3.19 “Response to Inspector’s supplementary information request dated 1st March 2019” document.

**Deriving a vacancy rate**

1.9 There are two ways of approaching this:

   a) First, we follow the logic at paragraph 3 on p.1 of the Council’s RBCLP_41 (which was to express vacant floorspace within the SEAs as a % of total floorspace within the Borough); and then

   b) Second, we produce our own SEA-specific vacancy rate.

1.10 First, in RBCLP_41, the Council asserted a 9.2% vacancy rate for B-class uses as a whole. That figure was produced by expressing vacant floorspace within the SEAs as a % of total floorspace within the Borough. But that figure masks a woeful shortfall of vacant industrial land. That shortfall is shown by following the same approach but only for industrial, and not for office, floorspace:

   a) Vacant **industrial** floorspace in SEAs = **4,990m²**

   b) Total **industrial** floorspace in Borough = **263,667m²**.

   \[ \text{vacancy rate} = \frac{4,990}{263,667} = 1.89\% \]

1.11 Second, even attempting to derive an SEA-specific figure – an exercise the Council still has not done itself – the picture does not substantially improve:

   a) Vacant industrial floorspace in SEAs = 4990m².

   b) Total industrial floorspace in SEAs = 87,617m².

   \[ \text{vacancy rate} = \frac{4990}{87,617} = 5.7\% \]
1.1.12 On either approach, the vacancy rate for industrial floorspace in the Borough is critically low, and does not meet the objectives set out in the Council’s plan.
2 CORRESPONDENCE WITH THE COUNCIL

2.1.1 In an e-mail dated 20 March 2019 (attached as Appendix 1) sent to Chris Lindley at Heaton Planning and the Programme Officer and copied to Rachel Raynaud, Zack Simons and David Adams, RBC states the following in response to an e-mail sent by Mr Lindley on 19 March 2019:

*Quote 1* - “I can confirm that the calculation made in your email of 19/03/2019 is not correct as this applies a vacancy figure for industrial floorspace in the SEAs (excluding Longcross) to the total industrial floorspace in Runnymede.”

2.1.2 Our Comment - The vacancy rate calculation made in our e-mail of 19/03/19 referred to above is that set out at paragraph 8 on page 2 of this statement, which concludes the vacancy rate using RBC’s figures is 1.89%. RBC considers this calculation to be incorrect despite Mr Lindley applying identical methodology to that used by RBC in RBCLP_41 to assert a vacancy rate of 9.2%.

*Quote 2* - “The 54,520sq.m figure is the total vacancy figure in the SEAs as stated in RBCLP_41. As set out in the table in RBCLP_41, this total vacancy figure does not include any data for Longcross given the site’s temporary use as a film studios, and does not include vacancy outside the SEAs.”

2.1.3 Our Comment - It is agreed it is correct not to include any vacancy at Longcross because the industrial space is neither available in the open market nor, in our opinion, is the space lettable in the open market because of its imminent loss to the consented office scheme with which it is due to be replaced.

2.1.4 The film studio use is only temporary because the tenant will have to vacate to make way for demolition to allow construction of the committed non-industrial development.

2.1.5 Notwithstanding this, we maintain our position that it is entirely justified to include floorspace losses from the Longcross site. We also maintain that the assertions from RBC that this floorspace will be displaced to neighbouring
boroughs (asserted within the email trail at Appendix 2) cannot be reasonably upheld as:

- Notwithstanding the potential availability of land at Longcross within Surrey Heath Borough, there would be insufficient space to accommodate the displaced industrial floorspace from Runnymede Borough;

- The land within Surrey Heath remains in the Green Belt, the emerging Local Plan for Surrey Heath Borough is in its infancy, and does not at present envisage further Green Belt release at Longcross;

- Although expanded film studio development at Shepperton Studios will contribute to meeting known needs, the loss of space at Longcross and other space at Arborfield will still result in a net reduction in available space. Please refer to page 49 of the enclosed report by Price Waterhouse Coopers included as Appendix 3; and,

- This issue is of such magnitude it would be reasonable to expect it to have been considered and resolved through the Duty to Cooperate. The published DtC evidence does not cover this issue.

**Quote 3-** “As we have stated in our response of the 15/03/19 to the Inspector’s questions, of this 54,520sq.m total vacant employment floorspace, 4,990sq.m. is industrial vacant space and 49,530sq.m. is office vacant space. Thus industrial space accounts for 9.2% of the total 54,520sq.m vacant employment space in the SEAs (excluding Longcross).”

2.1.6 Our Comment- This is an entirely new and different calculation to the calculation in RBCLP_41 which coincidentally has an arithmetically identical answer. The calculation is irrelevant to the fact that industrial space in the Runnymede district is critically undersupplied now and in the future.

**Quote 4-** “Given the data in RBCLP_41 that total vacant floorspace in the SEAs (excluding Longcross) is 54,520sq.m and total employment floorspace in the SEAs (excluding Longcross) is 251,415sq.m. The total employment vacancy rate in the SEAs (excluding Longcross) is 22%.”
2.1.7 Our Comment - This calculation expressing total employment vacancy in the SEA’s is irrelevant for two reasons:

a) First, in RBCLP_12, RBC presented a revised table 2.3 to identify need separating its evidence for office floorspace and industrial floorspace. It is unhelpful to participants in the Examination for the distinction between office and industrial use which lies at the heart of the matter, to be obfuscated by statistics which collate B uses together and for numbers to be changed without full explanation.

b) Table 19 in the ELR states that total B class space within Runnymede is 631,121.40m². The total employment floorspace in the SEA’s represents significantly less than half the space in the district, 39.8%. RBC must plan positively for the quantitative and qualitative needs of all foreseeable types of economic activity. Whilst there is a focus on the SEA’s for new floorspace, the SEA’s represent only a small part of the districts existing stock which for which vacancy rates must also be taken into account.

Quote 5 - “As the Inspector did not request a breakdown of total floorspace in the SEAs by use class, data has not been provided to calculate the vacancy rate for just industrial floorspace within the SEAs.”

2.1.8 Our Comment - Using the Valuation Office Agency database we have done the exercise RBC did not do and identified buildings within the SEA’s, categorised as industrial use, which amount to 87,617m² (approximately one third of the total stock in the Borough). RBC’s vacant space figure for the SEA’s of 4,990m² as a percentage of industrial space in the SEA’s is 5.7%.

2.1.9 A national agent has provided us with a CoStar search for industrial space across the entire Runnymede district. The search area map is attached at Appendix 4 and the schedule of available property is at Appendix 5. The figure of 52,066ft² equivalent to 4,837m² correlates well with RBC’s own figures of 4,755m² updated to 4,990m². Clearly, the data endorses our analysis and shows critically low availability of industrial space across the district.
**Quote 6**: “In conclusion, data has not been provided and the vacancy rate proposed is not considered relevant because the Council is satisfied that the total amount of employment space looking at industrial and office space together is adequate, and the market is able to respond to changing needs within the current vacancy or otherwise as necessary.”

2.1.10 Our Comments - RBC appears to consider that not providing the data is reason to consider our analysis of the vacancy rate as not relevant. The fact is that we have never sought to establish a percentage vacancy rate figure.

2.1.11 Our calculation in our version of the revised table 2.3 applies a figure of 10% (a minimum figure) of the total industrial space in the market, the table 19 figure in the ELR of 263,667.56m2, to arrive at a reasonable level of space available to the market for churn of 26,367m2. Deducted from this figure were RBC’s figures for space available in the market derived from CoStar of 4,755 and RBC’s margin figure of 3,572m2. This showed an additional shortfall of industrial space on top of the shortfall in RBC’s own figures of 18,040m2.

2.1.12 The availability of industrial space will change as developments come to the market and are then let. Whatever the percentages, the figures are clear that there is a critically low supply of industrial space now and to facilitate future growth.

2.1.13 In this regard, paragraphs 160 and 161 of the 2012 National Planning Policy Framework (NPPF) are key. Paragraph 160 requires “Local Planning Authorities to have a clear understanding of business needs within economic markets operating in and across their area”.

2.1.14 Paragraph 161 states that Local Planning Authorities should use their evidence base to assess and respond to “the needs for land or floorspace for economic development, including both the quantitative and qualitative needs for all foreseeable types of economic activity over the plan period…..” (our emphasis underlined).
2.1.15  Clearly, the Local Plan fails in its duty to deliver this requirement of the NPPF and our client’s landholding provides an ideal opportunity to positively respond to the identified shortfall.

David Adams BSc(Hons) MRICS – Adams Group Real Estate

Chris Lindley BA (Hons) MSc MRTPI – Heaton Planning Limited
Analysis of Runnymede Borough Council Employment Evidence – Vacant Industrial Space
Thank you for your email. I have spoken with Rachel and can confirm that the Council has the following responses to your queries:

**Question 1.**

I can confirm that the calculation made in your email of 19/03/2019 is not correct as this applies a vacancy figure for industrial floorspace in the SEAs (excluding Longcross) to the total industrial floorspace in Runnymede.

The 54,520sq.m figure is the total vacancy figure in the SEAs as stated in RBCLP_41. As set out in the table in RBCLP_41, this total vacancy figure does not include any data for Longcross given the site’s temporary use as a film studios, and does not include vacancy outside the SEAs.

As we have stated in our response of the 15/03/19 to the Inspector’s questions, of this 54,520sq.m total vacant employment floorspace, 4,990sq.m is industrial vacant space and 49,530sq.m is office vacant space. Thus industrial space accounts for 9.2% of the total 54,520sq.m vacant employment space in the SEAs (excluding Longcross).

Given the data in RBCLP_41 that total vacant floorspace in the SEAs (excluding Longcross) is 54,520sq.m and total employment floorspace in the SEAs (excluding Longcross) is 251,415sq.m. The total employment vacancy rate in the SEAs (excluding Longcross) is 22%.

**Question 2.**

As the Inspector did not request a breakdown of total floorspace in the SEAs by use class, data has not been provided to calculate the vacancy rate for just industrial floorspace within the SEAs.

In conclusion, data has not been provided and the vacancy rate proposed is not considered relevant because the Council is satisfied that the total amount of employment space looking at industrial and office space together is adequate, and the market is able to respond to changing needs within the current vacancy or otherwise as necessary.

Kind regards

Georgina

Georgina Pacey | Local Plans Manager | Runnymede Borough Council
georgina.pacey@runnymede.gov.uk | 01932 425248 | www.runnymede.gov.uk

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Dear Georgina,

Thank you for sending me the information on employment land on Friday.

I have a couple of queries:

1. Under “request 1” a total vacant industrial floorspace figure has been provided which amounts to some 4,990m².

   Table 19 of the ELR confirms that total industrial floorspace amounts to some 263,668m² (rounded) comprising 85,784.56m² B1c/B2 and 177,883m² B8 uses (see below).

   Table 19: Total floor area in Runnymede as at November 2015 broken down by use class (with additions where a gap in the VOA data was found to exist)

<table>
<thead>
<tr>
<th>Use class</th>
<th>Total floor area (sqm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1a/b</td>
<td>367,453.84</td>
</tr>
<tr>
<td>B1c/B2</td>
<td>85,784.56</td>
</tr>
<tr>
<td>B8</td>
<td>177,883</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>631,121.40sqm</strong></td>
</tr>
</tbody>
</table>

   Source: VOA data/Runnymede analysis

   Taking these figures (4,990m² / 263,668m²) x 100 implies a 1.89% industrial vacancy rate across Runnymede Borough.

   Can you please confirm that this calculation is correct?

2. Under “request 2” the Council has provided “total existing floorspace” calculations for the 5no SEAs, however no commentary has been provided as to the breakdown of use classes each of these areas. **Could you please confirm the total amount of industrial floorspace that is known to exist within the SEA’s?**

   It is our intention to prepare our comments for you and the Inspector to consider during this week. A prompt response to these queries would therefore be appreciated.

   Should anything require clarification, please do not hesitate to contact me.

   Kind regards,

Chris
Dear Charlotte and Mr Lindley

Please find attached the additional information requested by the Inspector in relation to employment matters following the matter 9 hearings in February.

Kind regards

Georgina
To help protect your privacy, Microsoft prevented automatic download of this picture from the Internet. Virus-free. www.avast.com
Hi Chris

I write to clarify the situation regarding your query concerning the loss of industrial space at Longcross.

As set out in paragraph 6.53 of the ELR, the Longcross Site is currently used as a film studio which employs in the region of just 200 full-time equivalent staff (estimate) with fluctuating amounts of temporary staff when the studios are in use representing a very low density of employment activity at the site. The existing office and industrial space at the site is ancillary to this use. Given the ancillary nature of this space, the loss of the existing floor space on the site has not been taken into consideration in the calculation of the figures in table 2.3. It should be noted that there is potential scope to accommodate the existing uses either on the part of the Longcross Site within Surrey Heath, or potentially outside the Borough at the Shepperton Studios site (currently the subject of a planning application for a substantial enlargement). The Council is of the opinion that it would be appropriate that this floor space moves to these potential locations outside the Borough boundary, without necessitating the requirement for replacement space in the Borough given the highly specialised nature of this current industrial space which is an integral part of the film industry.

I hope this answers your query.

Kind regards

Rachel
Key findings

TV production facility market
Review of the UK film and high-end

www.pwc.co.uk
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Our key findings

1. More and higher quality screen content (film and high-end TV) is being produced globally.
2. The UK government has a target to nearly double the UK’s film & high-end TV inward investment spend.
3. London is a preferred location for international blockbuster and high-end TV production.
4. London’s ability to accommodate more productions is constrained as there is a relatively small amount of stage space.
5. As a result, there is more demand for London than available supply – we estimate this potential demand as 8 additional blockbusters per year.
6. A studio expansion in Shepperton would address a material portion of this demand.
7. The Shepperton expansion would make a significant contribution towards meeting the government target for inward investment.
Demand for film and TV content is growing globally by c.3% p.a.

Notes: CAGR = Compound Annual Growth Rate.

Global consumer and advertising spend on TV & cinema, 2013-2022

<table>
<thead>
<tr>
<th>Year</th>
<th>TV</th>
<th>Film</th>
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<tbody>
<tr>
<td>2013</td>
<td>2.8%</td>
<td>3.6%</td>
</tr>
<tr>
<td>2014</td>
<td>3.8%</td>
<td>4.7%</td>
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<tr>
<td>2015</td>
<td>4.9%</td>
<td>5.8%</td>
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<tr>
<td>2016</td>
<td>6.0%</td>
<td>6.8%</td>
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<td>2017</td>
<td>7.1%</td>
<td>7.9%</td>
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<tr>
<td>2018</td>
<td>8.2%</td>
<td>8.8%</td>
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<tr>
<td>2019</td>
<td>9.3%</td>
<td>9.8%</td>
</tr>
<tr>
<td>2020</td>
<td>10.4%</td>
<td>10.8%</td>
</tr>
<tr>
<td>2021</td>
<td>11.5%</td>
<td>11.1%</td>
</tr>
<tr>
<td>2022</td>
<td>12.6%</td>
<td>11.9%</td>
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</table>

Key drivers:
- continued rollout of cinema, especially in emerging markets (e.g., China), is growing global admissions
- IMAX screens continue to rollout in the US, as exhibitors hope to differentiate themselves through their exclusive content
- Studios continue to create higher-budget blockbusters and franchises, which support admissions through their global popularity
- More people are watching more filmed content, especially in developing markets (e.g., China), is aiding growth in TV subscriptions
- Growth in penetration of internet enabled, mobile devices which can play video content

Note: CAGR = Compound Annual Growth Rate.

New entrants into the film & TV market have driven increased competition for viewers.

Internet companies with direct access to the consumer have significant (and growing) programming budgets, which is encouraging other media companies to launch their own streaming services and grow programming spend in response. Internet companies, with direct access to the consumer, have significant (and growing) programming budgets, which is encouraging other media companies to launch their own streaming services in response.

Increased competition is likely to continue driving filmed content creation.

"If you believe that the deathstar fight for viewers has't really started yet, because Apple and Disney haven't really entered the TV streaming market, then you have to believe that production of high-quality content will continue."

UK film and TV industry body (#2)

"With the rise of Netflix, Amazon, and Disney, the mainstream is being shifted. More money flows into higher quality content, more money flows into the most successful shows because there's only 8 hours in the most successful timeline."

This leads (production of high-quality content)...

"If you believe that the deathstar fight for viewers has't really started yet, because Apple and Disney haven't really entered the TV streaming market, then you have to believe that production of high-quality content will continue."

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UK film and TV industry body (#2)
As a result, more and higher quality screen content is being produced, and spend on filmed content is growing.

Number of blockbusters (defined as films with budget of $100m+), 2001-2017

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<td>42</td>
<td>45</td>
<td>39</td>
<td>28</td>
<td>21</td>
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In this growth context, there is a UK Government target to grow UK film and HETV inward investment as it creates employment and economic uplift. The Creative Industries Sector Deal states “with substantial increases in studio capacity and investment in skills, it is feasible that our revenues could nearly double to approximately £4bn a year, and our profit margins could reach nearer 20% per annum.”

The UK Government has a target to nearly double inward investment within 7 years.

The Creative Industries Sector Deal notes that the Pinewood Group has plans for a major expansion at its Shepperton Studios, where it has recently acquired a new plot of land adjacent to the existing site.

Inward investment is particularly important in generating high levels of spend within the UK.

Inward VAT, volume of films produced in the UK by type of investment: 2017

Value vs. volume of films produced in the UK: 2017

Value of spend on production

Number of films


Value of spend on production

Number of films


Going forward, the Government has a target to nearly double inward investment within 7 years.
Inward investment to the UK is primarily driven by large international productions, that can choose from a number of global clusters to film in.

Selected major production facilities worldwide:

- **UK (London)**: Pinewood Studios, Shepperton Studios, WB Leavesden, Longcross, Elstree, Titanic Studios
- **Canada (Toronto / Vancouver)**: Pinewood Toronto, Mammoth Studios, Canadian Motion Pictures Park, Vancouver Film Studios, Island North Studios, Martini Studios, Skydance Media
- **USA (LA / Atlanta / New York)**: Universal Studios, MBS Media Campus, Sony Pictures Studios, Celtic Studios (Raleigh), Warner Bros Burbank, Big Easy Studios, Walt Disney Studios, Fox Studios, EUE/SG Atlanta, Paramount Studios, Michigan Motion Picture, Silvercup Studios, Kaufman Astoria Studios, Steiner Studios, Broadway Studios
- **China**: Hong Kong Studios, Beijing Film Studios
- **French Riviera**: Cité du cinéma
- **Australia**: Fox Studios, Village Roadshow Studios, South Australia
- **Germany**: Babelsberg, Korda Studios
- **Hungary (Budapest)**: Origo (Prev. Raleigh Budapest)
- **South Africa**: Cape Town Studios
- **South Korea**: Korda Studios (Prev. Raleigh Budapest)
- **USA (cont.)**: Pinewood Atlanta, Third Rail Studios, EUE/SG Miami, Blackhall Studios, Eagle Rock Studios, L.A. Live Film Studios

**Note:** We have analysed the 2013 – current period to provide a medium term historical view on capacity expansions.

**Key:**
- Opened before 2013
- Opened after 2013
- Has expanded >25% since 2013 or has planning permission to expand >25% in the future
- Expanded <25% since 2013 or has planning permission to expand <25%

**Source:** Studio Websites, Interviews, Film London Production Report 2017, PwC Analysis. Please see p27 of the Technical Appendix for the relative size of major international studios.
The 'greater west London cluster' is the UK’s premier film and HETV production hub (centred around Shepperton, Pinewood and Leavesden).

In particular, there is a cluster in Greater West London close to the major production studios.

The motion picture, video and television industry is highly clustered in the UK.

### London Production Facilities

<table>
<thead>
<tr>
<th>Studio Type</th>
<th>Studio Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large, purpose built studio (&gt;14k sq.m, &gt;150k sq. ft.)</td>
<td>Black Hangar</td>
</tr>
<tr>
<td>Smaller, purpose built studio</td>
<td>Abbotts</td>
</tr>
<tr>
<td>Smaller, converted studio</td>
<td>Longcross</td>
</tr>
<tr>
<td></td>
<td>Bray</td>
</tr>
<tr>
<td></td>
<td>Gillette Building</td>
</tr>
<tr>
<td></td>
<td>Wembley</td>
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<tr>
<td></td>
<td>Black Island</td>
</tr>
<tr>
<td></td>
<td>Cardington</td>
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<td></td>
<td>Twickenham</td>
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<td>Elstree</td>
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<td>Wimbledon</td>
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<tr>
<td></td>
<td>Gillette Building</td>
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</tbody>
</table>

### Concentration of companies involved in motion picture, video and TV production

- **High concentration**
- **Low concentration**
- **Relative concentration of firms**

Source: ONS Regional Economic Analysis “The Spatial Distribution of Industries”, Studio Websites, Interviews, Discussions with Management. Please see p. 28, 29, and 36 for further information.
London is a world leading filming location, and a key destination for large film productions.

**Number of blockbusters produced within each location for major studios in each cluster, 2015-17, largest 7 clusters**

- Germany: 6
- LA US: 6
- London, UK: 27
- Atlanta, US: 8
- Australia: 9
- Vancouver, CA: 9
- Louisiana, US: 9

Note: Where films have used studios in more than one cluster they are both included. Excludes animated films.

However, London's ability to accommodate more productions is constrained as there is a relatively small amount of stage space. Sound stage space at production facilities, 000 sq. m.

Major London facilities have been running at capacity for at least 5 years due to high demand for a limited volume of stage space. Utilisation of Pinewood Group and Shepperton stages, %.

Due to high demand for a limited volume of stage space, there is a relatively small amount of stage space (1 of 2).
We tried on a couple of occasions to shoot in the UK... on one occasion, Pinewood, Shepperton and Leavesden were all full. We only looked at those three studios as they were the only ones available at those three studios as they were the only ones available. We needed a couple of occasions to shoot in the UK.

There’s a drastic shortage of stage space to film on right now.

The lack of capacity is the first thing that comes to mind when I think of film-making in the UK. Capacity pressure is particularly concentrated around the South East for the obvious reason that the industry is substantially based in the South East.

The lack of sound stages is crucial for the success of industry. Planning permission is crucial for the success of industry. The lack of sound stages is a huge issue. There are no studios available in London as we don’t know that we can get space in advance. There is a relatively small amount of stage space as constrained as there is a relatively small amount of stage space.

The two biggest challenges we face are providing enough traditional space for people to shoot and also providing alternative space. There’s a drastic shortage of stage space to film on right now.

UK film and TV industry body (#4)

UK film and TV industry body (#3)

Independent film producer (#1)

Major US film studio (#2)

Major US film studio (#1)
As a consequence, London and the UK are missing out on potential additional demand which is currently going to other international locations (we estimate potentially c.8 blockbuster films p.a.).

We estimate there were 23 blockbusters from 2015-17 (excluding animated films) that might have filmed in London, if capacity were available (c.8 p.a.).

In addition to blockbusters, there is demand for stage space from high-end TV and from internet companies (e.g., Netflix) and other players, which may also be lost. We have not quantified this here.
The 8 additional blockbuster p.a. would represent nearly £3bn of production expenditure, and would require c.90k sq. m. of new sound stage space.

<table>
<thead>
<tr>
<th>Blocks</th>
<th>Annual (average)</th>
<th>2015-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blockbuster production budget ($) per sq. ft. / sq. m. of sound stage space</td>
<td>$1,421m</td>
<td>$3,657m</td>
</tr>
<tr>
<td>Required floorspace (rounded)</td>
<td>£7.4bn</td>
<td>£8.4bn</td>
</tr>
<tr>
<td>Number of 'apparently footloose' blockbusters</td>
<td>8</td>
<td>23</td>
</tr>
<tr>
<td>Floorspace figures are NLA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Floorspace figures are NLA. Please see 44-45 of the Technical Appendix for further information.
Key observations

Helping London to close more of the gap

The proposed Shepperton development would result in an additional maximum c.43k sq. m. NLA (c.465k sq. ft. NLA / 59k sq. m. GEA), and will add to the already committed additional capacity.

This is an estimate which only includes blockbusters and not HETV; as a result, this is likely to be a conservative view of London’s potential.

Shepperton is expected to be a competitive new studio for London, which is expected to rise in 2019 and 2021 based on committed expansions at Pinewood, Leavesden and Elstree.

Current capacity is 15k sq. m. NLA (c.165k sq. ft.), which is expected to rise in 2019 and 2021 based on committed expansions at Pinewood, Leavesden and Elstree.

As described in the prior pages, the currently unmet market potential is estimated at c.8 blockbusters p.a., with a space requirement of c.90k sq. m. (c.900k sq. ft.) −

The new studio investment proposed by Shepperton would provide London with the ability to capture a material portion of this demand.

Note: Floorspace figures are NLA.
Shepperton would also make a significant contribution towards meeting the government target for inward investment, £bn. The contribution of capacity expansions to achieving the government target for inward investment in real terms (2025 target in 2017 money) is worth £3.3bn.

**Government Inward Investment**

- Committed capacity expansions in London
- Additional growth (e.g. new studios)
- Large (£1bn and HETV), £bn
- Shepperton expansion
- 2017 UK inward investment
- 2025 Government target (real terms)
- £bn

**Contribution of capacity expansions to achieving government target for inward investment**

- 3.3
- 0.3
- 0.2
- 2.4
- 4.0

Review of the UK film and high-end TV production facility market

Technical Appendix

www.pwc.co.uk
Important Notice

This document has been prepared only for Shepperton Studios Ltd ("Shepperton") and solely for the purpose and on the terms agreed with Shepperton. We accept no liability (including for negligence) to anyone else in connection with this document, and it may not be provided to anyone else without our prior consent.

This report contains information obtained or derived from a variety of sources as indicated within the report. PwC has not sought to establish the reliability of those sources. The report contains information obtained or derived from a variety of sources as indicated within the report. PwC has not sought to establish the reliability of those sources. By their very nature, the creation of forward looking projections cannot be regarded as an exact science and the conclusions arrived at in many cases will of necessity be subjective and dependent on the exercise of individual judgment.
Our work has been informed through the review of available industry information and data, and through a range of data sources and interviews.

**Data Sources**
- Entertainment and Media Outlook 2018
- PwC World in 2050 report 2017
- BFI Statistical Yearbook 2017; Film, high-end television and animation programmes production in the UK: full year 2017; Statistical Research Unit
- NESTA The Geography of Creativity in the UK
- UK Government Creative Industries Sector Deal March 2018
- ONS Regional Economic Analysis "The Spatial Distribution of Industries"
- IMF WEO Outlook
- FCA 2017 report on 'Rates of return for FCA prescribed projections' prepared by PwC
- Ericsson Consumer Lab "TV and Media 2017"
- Olsberg "Economic Contribution of the UK's Film, High-End TV, Video Game, and Animation Programming Sectors"
- FilmLA Soundstage Production Report 2017
- The Numbers.com
- Variety
- IMDB
- FX Networks Research
- Recode
- The Economist
- Pinewood internal data 2013-2018
- The Economist
- The Numbers.com
- PwC World in 2050 report 2017
- PwC Entertainment and Media Outlook 2018

**Interviews**
- Our interviewees were selected due to their prominent and relevant roles within the global film and entertainment industry, in order to provide up-to-date views of industry trends and motivations. Our data sources were selected on the basis of being widely used across the UK film industry and for public policy purposes.

<table>
<thead>
<tr>
<th>Company</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Film London</td>
<td>UK TV &amp; film industry bodies</td>
</tr>
<tr>
<td>British Screen Advisory Council</td>
<td>UK TV &amp; film industry bodies</td>
</tr>
<tr>
<td>Department for Culture, Media, and Sport Senior Civil Servants</td>
<td>UK TV &amp; film industry bodies</td>
</tr>
<tr>
<td>British Film Institute Amanda Nevill, Anna Mansi</td>
<td>UK TV &amp; film industry bodies</td>
</tr>
<tr>
<td>British Film Commission Iain Smith</td>
<td>UK TV &amp; film industry bodies</td>
</tr>
<tr>
<td>Creative Skillset Seetha Kumar</td>
<td>UK TV &amp; film industry bodies</td>
</tr>
<tr>
<td>Production Guild Alison Small</td>
<td>UK TV &amp; film industry bodies</td>
</tr>
<tr>
<td>Creative England Caroline Norbury</td>
<td>UK TV &amp; film industry bodies</td>
</tr>
<tr>
<td>Creative England Andrew Noakes</td>
<td>UK TV &amp; film industry bodies</td>
</tr>
<tr>
<td>Working Title Films Tim Bevan</td>
<td>UK TV &amp; film industry bodies</td>
</tr>
<tr>
<td>Ingenious Media Seetha Kumar</td>
<td>UK TV &amp; film industry bodies</td>
</tr>
<tr>
<td>Working Title Films Tim Bevan</td>
<td>Independent film producers</td>
</tr>
<tr>
<td>Working Title Films Tim Bevan</td>
<td>US film studios</td>
</tr>
<tr>
<td>HBO</td>
<td>US film studios</td>
</tr>
<tr>
<td>Marvel</td>
<td>US film studios</td>
</tr>
<tr>
<td>Lucasfilm</td>
<td>US film studios</td>
</tr>
<tr>
<td>Disney</td>
<td>US film studios</td>
</tr>
<tr>
<td>Fox</td>
<td>US film studios</td>
</tr>
<tr>
<td>MGM</td>
<td>US film studios</td>
</tr>
<tr>
<td>Sony</td>
<td>US film studios</td>
</tr>
<tr>
<td>HBO</td>
<td>US TV commissioners</td>
</tr>
<tr>
<td>Netflix</td>
<td>US TV commissioners</td>
</tr>
<tr>
<td>Amazon Studios</td>
<td>US TV commissioners</td>
</tr>
<tr>
<td>Working Title Films Tim Bevan</td>
<td>UK &amp; European independent film producers</td>
</tr>
<tr>
<td>Independent Film Producer</td>
<td>UK &amp; European independent film producers</td>
</tr>
<tr>
<td>Independent Film Producer</td>
<td>UK &amp; European independent film producers</td>
</tr>
<tr>
<td>Independent Film Producer</td>
<td>UK &amp; European independent film producers</td>
</tr>
<tr>
<td>Independent Film Producer</td>
<td>UK &amp; European independent film producers</td>
</tr>
<tr>
<td>Independent Film Producer</td>
<td>UK &amp; European independent film producers</td>
</tr>
</tbody>
</table>

We have conducted 28 interviews and data, and conducted 30 interviews with production facility buyers and stakeholders.
More and higher quality screen content (film and high-end TV) is being produced globally. The UK government has a target to nearly double the UK’s film & high-end TV inward investment spend. London is a preferred location for international blockbuster and HETV production. As a result, there is more demand for London than available supply. We estimate this potential demand as 8 additional blockbusters per year. An expansion in Shepperton would address a material portion of this demand. A studio expansion in Shepperton would make a significant contribution towards meeting the government target for inward investment spend.

London’s ability to accommodate more productions is constrained as there is a relatively small amount of stage space available. The UK government has a preferred location for high-end film and TV production. London is a preferred screen location. The UK is producing globally more and higher quality screen content (film and TV)
More and higher quality screen content (film and high-end TV) is being produced globally.

The UK government has a target to nearly double the UK’s film & high-end TV inward investment spend.

London is a preferred location for international blockbuster and HETV production.

As a result, there is more demand for London than available supply – we estimate this potential demand as 8 additional blockbusters per year.

Shepperton expansion would address a material portion of this demand.

The Shepperton expansion would make a significant contribution towards meeting the government target for inward investment.

London’s ability to accommodate more productions is constrained as there is a relatively small amount of stage space available.

The UK government has a target to nearly double screen content (film and high-end TV) globally.
Cinema: Spend on cinema is growing year-on-year on a global basis.

<table>
<thead>
<tr>
<th>Year</th>
<th>Admission Spend</th>
<th>Advertising Spend</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>38.8</td>
<td>3.1</td>
<td>6.2%</td>
</tr>
<tr>
<td>2014</td>
<td>39.3</td>
<td>3.0</td>
<td>6.8%</td>
</tr>
<tr>
<td>2015</td>
<td>39.8</td>
<td>2.9</td>
<td>7.3%</td>
</tr>
<tr>
<td>2016</td>
<td>39.2</td>
<td>2.8</td>
<td>6.2%</td>
</tr>
<tr>
<td>2017</td>
<td>38.7</td>
<td>2.6</td>
<td>4.5%</td>
</tr>
<tr>
<td>2018</td>
<td>38.1</td>
<td>2.5</td>
<td>4.7%</td>
</tr>
<tr>
<td>2019</td>
<td>37.6</td>
<td>2.3</td>
<td>4.7%</td>
</tr>
<tr>
<td>2020</td>
<td>37.1</td>
<td>2.2</td>
<td>4.5%</td>
</tr>
<tr>
<td>2021</td>
<td>36.6</td>
<td>2.0</td>
<td>6.2%</td>
</tr>
<tr>
<td>2022</td>
<td>36.1</td>
<td>1.9</td>
<td>6.8%</td>
</tr>
</tbody>
</table>

Source: PwC Entertainment and Media Outlook 2018

Global consumer and advertisers spend on cinema, 2013-22
Forecast

Cinema: Admissions growth in APAC is one factor contributing to the
worldwide growth of an increasingly global medium

Global cinema admissions, 2013-22

Cinema: Admissions growth in APAC is one factor contributing to the

Source: PwC Entertainment and Media Outlook 2018

CAGR 13–17

CAGR 17–22

Billions

2022 2021 2020 2019 2018

Source: PwC Entertainment and Media Outlook 2018

CAGR 3.5%

North America 9.6 9.3 9.1 8.7 8.4

APAC 5.9 5.3 4.2 5.3 5.3

EMEA 8.4 8.4 6.6 8.4 8.4

Forecast

2013 2014 2015 2016 2017

CAGR 0.8% 1.9%

CAGR 1.3 2.1%

CAGR 3.5% 5.3%

1.3 1.4 1.3 1.3 1.3

1.4 1.4 1.4 1.4 1.4

6.6 6.7 7.5 7.7 8.1

1.3 1.3 1.3 1.3 1.3

4.4 5.0 5.0 5.0 5.0

4.4 4.4 4.4 4.4 4.4

3.4 3.4 3.4 3.4 3.4

8.4% 4.5% 0.8% 1.9% 2.4%

2023

2024

2025

2026

2027
Global admissions have been driven by the rollout of new screens in APAC, with admissions in developed markets supported by new format rollout in the Americas and EMEA. Overall growth outside of APAC is relatively muted, in particular in the mature markets of Europe and North America.

Growth is driven by new screens being built in Tier-3-5 cities, as the growing middle classes increasingly have the appetite to go to the cinema.

Cinema owners look to lure spectators to their auditoriums to enjoy huge-budget "tentpole" movies shown on giant screens. That is why more and more IMAX 3D screens are opening across the country (US).”

APAC admissions growth has been driven by cinema screen rollout

Cinema: Global admissions have been driven by the rollout of new screens in APAC, with admissions in developed markets supported by new format rollout

Source: PwC Entertainment and Media Outlook 2018
In addition, audiences globally are willing to pay to see high budget, quality films as evidenced by blockbusters growing box office share.

This trend appears to be

China and c.50% in the US

6%

%55

%65

%75

%85

%95

60% (real prices)

Total global box office revenues split by blockbusters ($100m+ budgets) and other films, 2001-2017

Blockbusters defined as films with a budget of $100m+

Source: TheNumbers.com, PwC Entertainment & Media Outlook 2018

60% to 40%

46% to 30%

50% to 30%

48% to 30%

52% to 30%

54% to 30%

55% to 30%

51% to 30%

52% to 30%

55% to 30%

50% to 30%

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50% to 30%

50% to 30%
Franchise: Film "franchises" (produced based on well-known formats or characters) are driving admissions, accounting for c.55-80% of blockbuster box office takings.

Cinema: Film "franchises" (produced based on well-known formats or characters) are driving admissions, accounting for c.55-80% of blockbuster box office takings.

Global box office revenue of franchises (prequel, sequel and spin-offs), reboots vs. non-franchise blockbusters, 2013-17

<table>
<thead>
<tr>
<th>Year</th>
<th>Franchise</th>
<th>Reboot</th>
<th>Non Franchise</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>14.4</td>
<td>1.5</td>
<td>0.7</td>
<td>16.6</td>
</tr>
<tr>
<td>2014</td>
<td>15.5</td>
<td>1.3</td>
<td>0.9</td>
<td>17.7</td>
</tr>
<tr>
<td>2015</td>
<td>16.0</td>
<td>1.4</td>
<td>0.9</td>
<td>18.3</td>
</tr>
<tr>
<td>2016</td>
<td>16.2</td>
<td>1.5</td>
<td>1.0</td>
<td>18.7</td>
</tr>
<tr>
<td>2017</td>
<td>16.4</td>
<td>1.6</td>
<td>1.1</td>
<td>19.1</td>
</tr>
</tbody>
</table>

Note: We have defined franchise as films that are sequels, prequels and spin offs of existing film series. Source: The-Numbers.com, PwC analysis.
There is some growth in cinema ticket prices, predominantly driven by 3D (higher price) mix and inflation. Prices are expected to continue rising due to inflation and the higher prices associated with 3D cinema tickets. The forecast indicates a steady increase in average cinema admission prices globally, with a CAGR of around 1.5% from 2013 to 2018.

**Source:** PwC Entertainment and Media Outlook 2018

**Forecast:**

- **2013:** Initial starting point
- **2018:** Projected endpoint
- **2019-2022:** Forecast years

**Global Average Cinema Admission Price (nominal), 2013-22**

- **APAC**
  - Growth Rate: 4.6% CAGR

- **Americas**
  - Growth Rate: 0.6% CAGR

- **EMEA**
  - Growth Rate: 1.0% CAGR

- **Global**
  - Growth Rate: 1.2% CAGR

**Note:** The global average cinema admission price is expected to increase at a CAGR of approximately 1.5% from 2013 to 2018.
Forecast 2022

Global consumer and advertiser spend on TV, 2013-2022

Like Netflix at the expense of others

TV: Spend on TV is also growing, with certain formats gaining (e.g. online TV)
Subscriber growth in the billion-plus population markets of China and India is expected to be strong. Increases in the number of television subscriptions will be supported by the emergence of middle classes.

Subscription TV has come under increased pressure with the growth of OTT services in the US in particular.

Historically, sports has been a barrier to cord-cutting. However, viewership of some of the most popular sports in the US has declined, which has been a driver to cord-cutting.

Most popular sports in the US has declined.

The emergence of middle classes in the billion-plus population markets of China and India is expected to drive subscription growth.

The majority of growth is driven by the Middle East and Africa, which are expected to see c. 6.3% growth.

The majority of growth is driven by the Middle East and Africa.

Subscription volumes in Western Europe are expected to see an increase.

Subscription volumes in Western Europe are expected to increase.

The majority of growth is driven by the Middle East and Africa (EMEA) and Asia Pacific (APAC).

The majority of growth is driven by EMEA and Asia Pacific.

The majority of growth is driven by EMEA and Asia Pacific.

TV: TV subscriptions continue in developing countries while in EMEA, the majority of growth is driven by EMEA.

TV subscriptions by region, 2013-2022

Note: TV subscriptions is defined as “the number of households with a paid-for TV subscription service, i.e. a TV service that can only be legitimately received by paying a subscription fee. This definition does not include services that are provided solely over the open internet, such as Netflix. Source: PwC Entertainment and Media Outlook 2018.
There has been a proliferation of internet-enabled devices that can play video, widening access to filmed content. % of UK households

Penetration of communication devices and services in the UK, 2007-2017

Source: Ofcom report “Public service broadcasting in the digital age”
TV: Consumer-focused, internet-enabled OTT platforms with large and growing content budgets have emerged rapidly.

- **Global Hulu Subscriptions (Year End), Millions**
  - 2012-2017
  - Note: Hulu figures are for acquired content only pre 2016

- **Global Netflix Subscriptions (Year End), Millions**
  - 2012-2017

- **Total Programming Spend by Hulu**
  - 2013-2017

- **Total Programming Spend by Netflix**
  - 2013-2017

- **Total Programming Spend by Amazon Prime**
  - 2013-2017

Note: OTT video stands for Over The Top video and refers to platforms that distribute video content via an internet connection, which is independent of a TV signal. Reliable figures are not available for Amazon Prime video.

Reliable figures for Amazon Prime video members are not available, given Amazon bundles video content with other Prime services (e.g., 1-2-day delivery). Total Amazon Prime subscribers were 85m in June 2017, up from 38m in June 2014.

Research: PwC Interviews, Forbes.com

TV: OTT video stands for Over The Top video and refers to platforms that distribute video content via an internet connection, which is independent of a TV signal. Reliable figures are not available for Amazon Prime video. Total Amazon Prime subscribers were 85m in June 2017, up from 38m in June 2014.

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Source: Hub Entertainment Research, Press, PwC Interviews, Forbes.com
<table>
<thead>
<tr>
<th>Commissioner</th>
<th>Ownership of Subscription Video on Demand Services by Selected Commissioners</th>
</tr>
</thead>
<tbody>
<tr>
<td>PwC</td>
<td><strong>Not exhaustive</strong></td>
</tr>
</tbody>
</table>

**Table:**

- **Example owned SVOD Services with scripted content:**
  - HBO, Nickelodeon, Paramount, etc.
  - Launched in 2016
  - Reportedly developing an aggregated SVOD service

- **Notable examples:**
  - Viacom are reportedly developing an aggregated SVOD platform, including NBC content as well as USA, Bravo, and Syfy material.
  - TimeWarner are focusing on distributing content through its brands (e.g., DC Universe / HBO), but have not yet planned to release new content on these platforms, using linear TV instead to broadcast the content before uploading to these VOD services.

**Launch date and region:**

- **Disney+**
  - Exp. 2020
  - US only

- **ESPN+**
  - Exp. 2019
  - Exp. Global

- **Bet Play**
  - 2016
  - C.100 countries, not including US, Italy, France or Africa

**Note:**

1) OTT video stands for Over The Top video, and refers to platforms that distribute content via an internet connection, which is viewable via a PC, TV, mobile device or other device, without the use of a traditional TV subscription. These services are split between transactional VOD services (TVOD) and subscription video on demand (SVOD). TVOD services (such as iTunes) deliver entertainment content the open internet and do require a subscription. SVOD services (such as Netflix) are delivered over the open internet, but require a subscription. The following table shows the launch date and region for selected SVOD services by selected commissioners.

**Source:**

Company Websites, Press

**Terms of use:**

- OTT video stands for Over The Top video, and refers to platforms that distribute content via an internet connection, which is viewable via a PC, TV, mobile device or other device, without the use of a traditional TV subscription.
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**Notes:**

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Ownership of Subscription Video on Demand services by selected commissioners

---

**Table:**

<table>
<thead>
<tr>
<th>Commissioner</th>
<th>Streaming Service</th>
<th>Example owned content with scripted SVOD services</th>
<th>Content for own scripted SVOD services</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CBS</strong></td>
<td>CBS All Access</td>
<td>CBS operates two main stand-alone SVOD services with scripted content</td>
<td>Content will also appear as bonus to other series on CBS All Access</td>
<td>for own scripted SVOD services</td>
</tr>
<tr>
<td><strong>AMC</strong></td>
<td>Sundance Now</td>
<td>Expected to launch in 2019</td>
<td>High-quality storytelling focused on the Sundance brand</td>
<td>focused on subscription SVODs</td>
</tr>
<tr>
<td><strong>Discovery</strong></td>
<td>GO TV Everywhere</td>
<td>Digital strategy is focused on ad-supported SVOD services</td>
<td>Not available in pay-TV with discovery+ app, where app is available with Discovery+ package</td>
<td>Digital strategy focused on SVOD services</td>
</tr>
</tbody>
</table>

**Source:** Company Websites, Press

---

TV: In response to increased competition from OTT players, broader media players have been developing their own streaming services (2 of 2)
TV: Competition is unlikely to abate in the medium / long term, given continued
commitment to commissioning original content

Selected media and internet companies scripted content strategies

Open in Europe 2018 with exclusive shows and an increased programming budget for HBO

Aiming to produce more content with appeal to outside the US, where Prime membership is currently lower

Prime started showing sports in 2017, and will increase this in 2018 with exclusive rights to the US Open in tennis

No core Amazon strategy

A core Amazon strategy is to convert video subscribers to shoppers on their online platform

Increased commissioning of high-budget drama

Joint discussions between BBC, ITV and Channel 4 on creating a joint SVOD service to rival Netflix

Increased investment in high-quality dramas (e.g. a show involving Jennifer Aniston and Reese Witherspoon)

Acquisition of Time Warner by AT&T

Expected to launch a new streaming service in 2019 – creating new content (film and TV) across different brands (e.g. Disney, Pixar, Marvel and Lucasfilm)

Removing licenced Disney content from rivals’ platforms

Expected to continue leasing and building office space in California to support content creation

Joint discussions between BBC, ITV and Channel 4 on creating a joint SVOD service to rival Netflix

Reported to be looking to offer local sports to other markets through co-productions (e.g. Sacred Games in India)

BBC

Netflix

Disney

Amazon

Apple TV

HBO

Prime

Select media and internet companies scripted content strategies

Strategy

18

PwC
TV: Investment in content appears sustainable over the medium term (1 of 2)

Note: Conclusions on high-end TV based on US and UK. Source: Wall Street Journal, interviews

UK Film and TV Industry Body (3)

There won't be any more sharing between providers, and the only way to satisfy this is to produce more; streaming services have a high demand for content, continue growing. We've learnt that viewers of high-quality content will grow in the foreseeable future because there's more money going into competing for viewers, and the demand on which the competition is focused. Therefore, we expect that the volume of high-quality content will continue to grow. (9)

The net outlook is for the volume content to continue growing. We've learnt that viewers of streaming services have a high demand for content, and the only way to satisfy this is to produce more.

Major content investors have seen profit growth, which could support content investment.

UK production company (4)

Competition for viewers is expected to remain intense, particularly as new players enter the market.

EBITDA of selected media companies and OTT commissioners, 2013-2017

"This trend [production of high-quality content] will grow in the foreseeable future, because there's more money going into competing for viewers, which is the ground on which the competition is focused. Therefore, we expect that the volume of high-quality content will continue to grow. (9)"

Source: Wall Street Journal, interviews

"The net outlook is for the volume content to continue growing. We've learnt that viewers of streaming services have a high demand for content, and the only way to satisfy this is to produce more; streaming services have a high demand for content, continue growing. We've learnt that viewers of high-quality content will grow in the foreseeable future because there's more money going into competing for viewers, and the demand on which the competition is focused. Therefore, we expect that the volume of high-quality content will continue to grow. (9)"

"This trend [production of high-quality content] will grow in the foreseeable future, because there's more money going into competing for viewers, which is the ground on which the competition is focused. Therefore, we expect that the volume of high-quality content will continue to grow. (9)"

UK Film and TV Industry Body (3)
TV: Investment in content appears sustainable over the medium term (2 of 2)

"Apple, Amazon etc. need to build up a library in the next 5 years, which is the ground on which the competition is going into competition for viewers, which is the ground on which the competition is going into competition, so do the players who are not in the TV space. I think this trend will grow in the foreseeable future, because there is more money." (Major US Film Studio #7)

"The long-term opportunity is in the small screen. Sustainable growth is in the area of high-end TV drama, rather than high-end movies." (UK Film and TV Industry Body #4)

"There's probably 3-5 years of growth in high-end TV, though I can't really predict into the next 5 years. I think that the growth of Netflix is potentially sustainable because it's subscriber based. None of the analysts looking at Netflix are saying that the subscribers are going away. The subscribers are there and as long as they continue to pay then business will be good. I think it will be strong for some time." (Major US Film Studio #1)

"TV: I don't believe it's boom and bust. It's sustainable for the next 5 years." (UK Film and TV Industry Body #1)

"I think that the growth of Netflix is potentially sustainable because it's subscriber based. None of the analysts looking at Netflix are saying that the subscribers are going away. The subscribers are there and as long as they continue to pay then business will be good. I think it will be strong for some time." (Major US Film Studio #4)

"The long-term opportunity is in the small screen. Sustainable growth is in the area of high-end TV drama, rather than high-end movies." (UK Film and TV Industry Body #7)

Expectations across a broad cross-section of the film and TV industry are for ongoing strong competition driving sustained investment.
The impact for production facilities is that there is growing demand for stage space from films and now also high-end TV productions. Blockbuster films typically take c.9k+ sq. m. (100k+ sq. ft.) of stage space, plus ancillary workshops, offices and backlot. Since many of our films are fantastical in nature, we need a significant amount of space. Typically, it’s 80-100k sq. ft. of stage space. When I look for a 30,000 sq. ft. office, it’s a significant amount of space. It’s really not ideal to have to use 2 TV productions show a greater range of stage preferences, although cost constraints for film productions show a greater range of location choices. If at all possible, producers prefer to arrange all filming at one facility, rather than split over multiple sites. They need to keep their footprint to a minimum to save money, and our sanity. It really helps to make the difficult moves a little less difficult. We want to be in one place to save time, because we’re cost constrained. We’ll look for 40-60k sq. ft. of stage space; in addition, I need everything else. Like a backlot. Office, it’s a misconception that TV series are smaller than film. These [high end] TV series are the same size as conventional locations. From films and now also high-end TV productions, offices and backlot (100k+ sq. ft.) of stage space. Plus, Blockbuster films specifically like c.9k+ sq. m.
More and higher quality screen content (film and high-end TV) is being produced globally. The UK government has a target to nearly double the UK’s film and high-end TV inward investment spend per year.

London is a preferred location for international blockbuster and HETV production. As a result, there is more demand for London than available supply. We estimate this potential demand as 8 additional blockbusters per year – then available supply is below demand for London.

The Shepperton expansion would make a significant contribution towards meeting the significant contribution of this demand. A studio expansion in Shepperton would address a material portion of this demand.

The UK government has a target to nearly double the UK’s film and high-end TV inward investment spend per year.

London’s ability to accommodate more productions is constrained as there is a relatively small amount of stage space. London is a preferred location for high-end TV production due to the large size of the market, skilled workforce, and strong infrastructure. The UK government has set a target to nearly double the UK’s film and high-end TV inward investment spend per year.

The Shepperton expansion would make a significant contribution towards meeting the significant contribution of this demand. A studio expansion in Shepperton would address a material portion of this demand.
UK Government policy has been highly supportive of attracting international film and high-end TV to the UK and been consistently implemented cross-party. Film and high-end TV tax relief applies to all UK qualifying expenditure.

**Film tax relief**
- UK tax relief applies to all British films of any budget level.
- Initially, the tax relief applied to 25% of UK qualifying expenditure. In 2013, the UK Government increased and simplified this, to a flat rate of 25% of UK qualifying expenditure.
- Film tax relief is available for British qualifying expenditure incurred on filming activities (pre-production, principal photography, and post-production). Tax relief is available for British qualifying expenditure incurred on filming activities (pre-production, principal photography, and post-production). Production expenditure is defined as expenditure incurred on activities relating to the production of a film. The tax relief is available for expenditure incurred on activities relating to the production of a film. In 2013, the Government introduced a new tax relief for high-end TV for scripted TV projects with a minimum core expenditure of £1m per broadcast hour. Tax relief is available for British qualifying TV and must reach a minimum UK spend of 25% of UK qualifying expenditure. Details can be found on HMRC’s website.

**High-end TV tax relief**
- Initially, the tax relief applied to 25% of UK qualifying expenditure. In 2013, the UK Government increased and simplified this, to a flat rate of 25% of UK qualifying expenditure. In 2015, the UK Government increased and simplified this, to a flat rate of 25% of UK qualifying expenditure. Details can be found on HMRC’s website.

Source: UK Government
The UK Government is supportive of inward investment as it creates economic growth and employment.

Economic contribution (GVA) of Core UK Film sector, 2013:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount (FTEs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct impact</td>
<td>17,000</td>
</tr>
<tr>
<td>Spillover effects</td>
<td>40,500</td>
</tr>
<tr>
<td>Multiplier effects</td>
<td>39,800</td>
</tr>
<tr>
<td>Total</td>
<td>97,300</td>
</tr>
<tr>
<td>Additional GVA</td>
<td>12,492</td>
</tr>
<tr>
<td>Additional tax revenue</td>
<td>1,000</td>
</tr>
<tr>
<td>Tax relief</td>
<td>3,742</td>
</tr>
</tbody>
</table>

Source: Olsberg Report - "Economic Contribution of the UK’s Film, High-End TV, Video Game, and Animation Programming Sectors," Investo

Note: GVA is Gross Value Added, which provides a value for the amount of goods and services that have been produced, less the cost of all inputs and raw materials that are directly attributable to that production.

Investment in the film industry brings substantial benefits to the UK, both through economic output and employment growth and employment. It is estimated that the tax relief which incentivizes film production in the UK generates large returns in terms of tax revenue and GVA.

Between 2006/07–2013/14, £1 tax relief granted to the film industry in the UK:

<table>
<thead>
<tr>
<th>Impact</th>
<th>Amount (FTEs)</th>
</tr>
</thead>
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<tr>
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<td>39,800</td>
</tr>
<tr>
<td>Total</td>
<td>97,300</td>
</tr>
</tbody>
</table>
| Estimated impact on tax revenue and GVA of each £1 additional tax relief granted to the film industry in the UK, £:

- Film induced tourism and merchandise
- Suppliers to the value chain
- Production, distribution, cinema exhibition, e.g. production, distribution, cinema exhibition
- Film induced tourism and merchandise
- Suppliers to the value chain
- Production, distribution, cinema exhibition

It is estimated that the tax relief which incentivizes film production in the UK generates large returns in terms of tax revenue and GVA.
Going forward, the UK Government has set a target of nearly doubling inward investment from Film & HETV to £4bn by 2025.

UK Government target for inward investment in Film and HETV, 2017-2025

In the Creative Industries Sector Deal published in March 2018, the government stated that growing inward investment in film and HETV to £4bn by 2025 is feasible if sufficient capacity in sound stages is added and the crew base is sufficiently expanded.

• Film inward investment and high-end TV in the UK have increased by c.92% and c.162% respectively over the last 5 years.

Source: UK Government Creative Industries Sector Deal March 2018
4 London is a preferred location for international productions. However, the relatively small amount of stage space is a constraint as there is a limited ability to accommodate more productions.

5 The UK government has produced significant investment in the UK’s film and high-end television market. London’s ability to accommodate more productions is constrained as there is a relatively small amount of stage space.

6 More and higher quality screen content (film and high-end TV) is being produced globally. The UK government has a target to nearly double the UK’s film and high-end TV inward investment spend.

7 As a result, there is more demand for London than available supply. We estimate this potential demand as 8 additional blockbusters per year.

8 The Shepperton expansion would make a significant contribution towards meeting the demand for London location for international blockbuster and HETV production.

9 London is a preferred location for international productions. However, the relatively small amount of stage space is a constraint as there is a limited ability to accommodate more productions.
A small number of production facilities globally regularly serve international blockbuster movies and high-end TV; the top studios globally are all based in and around London. Note: 1) Films quoted as having used multiple studios have been double counted; 2) Does not include animated films; 3) We have included high-budget drama series with budgets >$100m per season, but excluded longrunning comedies and sitcoms like The Big Bang Theory.

Major international production facilities by number of large film / TV productions, 2013-17

Source: IMDB, The Numbers, PwC Research.
There is high concentration of suppliers near to Shepperton, within the Greater west London cluster.

50% of suppliers within 30km

Source: Management Information
Major studios such as Pinewood, Shepperton and Leavesden are the most desirable locations in the UK for blockbuster films; smaller studios tend to serve different customers.

UK production facility landscape

Proximity to greater west London cluster (miles)

Source: TheKnowledge.com, Studio Websites, PwC Interviews

Note: 1) A number of these studios would also be considered part of the greater west London cluster

UK Film and TV Industry Body

in order to get the relevant facilities wouldn’t be able to do it outside of the southeast which are thinking for long time periods just crew, and location. Huge shows and movies moves due to the size of the facility, volume of productions are not going to house tent pole Regional studios are not going to house tent pole

Independent Film Producer

These studios are all way smaller than Pinewood and Shepperton. Gillette Corner, Elstree – but these productions when required e.g. Longcross, number of smaller UK facilities which can also serve productions in the UK. There are area prestigious studios in the UK, The London tent-pole studios are Leavesden, Pinewood and Shepperton. Pinewood and Shepperton, bigger houses will leavesden.
London is attractive to international productions due to its infrastructure & skills, location, and financial advantages.

**Infrastructure & skills**
- Highly skilled crew and talent base is present in the UK, avoiding the need for imports from elsewhere.
- Purpose-built production facilities with sizeable stage footprints and backlots are available.
- High-quality equipment is available, minimising the need for imports.
- International top talent is happy to be based in London whilst filming.
- A number of films are set in the UK, which encourages filming here.
- A variety of filming landscapes are available within reasonable proximity (city, countryside, rugged).
- The UK is well served by major airports, especially Heathrow which may be expanded following parliamentary approval for a third runway.

**Location**
- Close to Heathrow is a great benefit.
- The local infrastructure is important in terms of imports required.
- The talent and creatives like to go to London. We don’t have to force them to go there. They want to film in real locations.
- The UK is globally recognised as second to none in having all of the people and talent you need to make a film.
- The UK has the most robust tax incentives compared to other locations (e.g., no cap, applies to above and below the line).

**Financial**
- The UK tax incentives are simple and attractive compared to other locations (e.g., no cap, applies to above and below the line).
- Government support for the creative industries, including film & HETV, is bipartisan.
The depth and expertise of the UK production crew base is widely recognised, and is a key reason why producers choose the UK.

In particular, the level of technical expertise amongst the UK crew base is highlighted as a key strength.

The crew and talent base in the UK is large is widely seen as a highly valuable asset to filmmakers and production companies. It is noted that the UK is home to some of the best in the world in terms of technical skills and infrastructure in the South East is way ahead of anything else in the UK.

Everyone wants to film in the UK because the crew base and production facilities are so good.

Source: PwC Interviews

“UK is attractive for a number of reasons…film crew, construction – that can be provided”
Major US Film Studios #5

“The UK has world-class facilities partly because of scale and partly about the scale of the South East…”
UK Film and TV Industry Body #3

“The UK is really attractive to film in…there’s really good crew.”
US TV Commissioner #2

“A lot of our directors are already UK-based. The crew base is really good.”
Independent Film Producer #2

“The UK has excellent technical knowledge.”
Independent Film Producer #2
<table>
<thead>
<tr>
<th>Location</th>
<th>Number of stages</th>
<th>Range of stage sizes (sq. ft. 000)</th>
<th>Total sound stage footprint</th>
<th>Backlot?</th>
<th>Offices?</th>
<th>Flight time to LA</th>
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</thead>
<tbody>
<tr>
<td>Pinewood</td>
<td>21</td>
<td>3.9 - 75.8</td>
<td>300</td>
<td>Yes</td>
<td>Yes</td>
<td>11.5 - 14.9</td>
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<tr>
<td>Iver Heath, UK</td>
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<td>7.6 - 41.9</td>
<td>116</td>
<td>Yes</td>
<td>Yes</td>
<td>12 hours</td>
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<tr>
<td>Pinewood</td>
<td>18</td>
<td>3.9 - 75.8</td>
<td>168</td>
<td>Yes</td>
<td>Yes</td>
<td>12 hours</td>
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<tr>
<td>Atlanta, USA</td>
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<td>3.9 - 42</td>
<td>106</td>
<td>Yes</td>
<td>Yes</td>
<td>12 hours</td>
</tr>
<tr>
<td>Culver City, USA</td>
<td>18</td>
<td>3.9 - 75.8</td>
<td>106</td>
<td>Yes</td>
<td>Yes</td>
<td>12 hours</td>
</tr>
<tr>
<td>Belfast, UK</td>
<td>18</td>
<td>3.9 - 42</td>
<td>106</td>
<td>Yes</td>
<td>Yes</td>
<td>12 hours</td>
</tr>
<tr>
<td>Carbon, Germany</td>
<td>14</td>
<td>3.9 - 42</td>
<td>106</td>
<td>Yes</td>
<td>Yes</td>
<td>12 hours</td>
</tr>
<tr>
<td>Woking, UK</td>
<td>14</td>
<td>3.9 - 42</td>
<td>106</td>
<td>Yes</td>
<td>Yes</td>
<td>12 hours</td>
</tr>
<tr>
<td>Hertfordshire, UK</td>
<td>15</td>
<td>3.9 - 42</td>
<td>106</td>
<td>Yes</td>
<td>Yes</td>
<td>12 hours</td>
</tr>
<tr>
<td>Surrey, UK</td>
<td>15</td>
<td>3.9 - 42</td>
<td>106</td>
<td>Yes</td>
<td>Yes</td>
<td>12 hours</td>
</tr>
<tr>
<td>Iver Heath, UK</td>
<td>15</td>
<td>3.9 - 42</td>
<td>106</td>
<td>Yes</td>
<td>Yes</td>
<td>12 hours</td>
</tr>
<tr>
<td>Longcross, Babelsberg, Ireland</td>
<td>15</td>
<td>3.9 - 42</td>
<td>106</td>
<td>Yes</td>
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<td>Titanic Studios</td>
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<td>106</td>
<td>Yes</td>
<td>Yes</td>
<td>12 hours</td>
</tr>
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</tbody>
</table>

London has premier production facilities with large sound stage footprints suitable for blockbuster productions, in addition to backlots and offices (1 of 2).
London has premier production facilities with large sound stage footprints, in addition to backlots and offices (2 of 2).

<table>
<thead>
<tr>
<th>Source: Company Websites, Public Information</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>---</td>
</tr>
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<td>Offices?</td>
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<tr>
<td>Range of stage sizes (000 sq. ft. NLA)</td>
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</tr>
<tr>
<td>Location</td>
</tr>
<tr>
<td>Number of stages</td>
</tr>
</tbody>
</table>
The UK’s tax incentives are very attractive to producers as incentives apply to all spending and there is no annual cap on rebates paid. It is difficult to compare tax incentive schemes across countries/regions as:

- Each country applies the tax incentives to different parts of the budget or expenditure.
- Many have caps or different rates for different sizes of production budgets.
- The volatility/frequency of change varies significantly.

It is difficult to compare tax incentive schemes across countries/regions as:

- Each country applies the tax incentives to different parts of the budget or expenditure.
- Many have caps or different rates for different sizes of production budgets.
- The volatility/frequency of change varies significantly.

Australia:
- Annual cap of $1.5bn from 2018 onwards.
- Project cap of $4.3bn per project.
- Minimum project spend of $50m.
- 25% rebate on above-the-line and below-the-line expenditure.
- Province credits available; production can only apply for 1 credit (ranging from 16.5% to 40% depending on the qualifyiNG spend).

Georgia, USA:
- 20% Transferable tax credit.
- Applies to above and below the line expenditure.
- No project cap.
- $500k minimum project spend (can be split over multiple projects).
- Additional 10% if Georgia promotional logo included in content.
- No annual cap.

Ontario, Canada:
- Federal tax credit of 16%.
- Province tax credit of 28%.
- Minimum project spend of $745m; no project cap.
- No annual cap.

The UK:
- 25% cash rebate of qualifying project expenditure.
- No project cap.
- Applies to above and below the line expenditure.
- No annual cap.
- Additional 10% if UK promotional logo included in content.
- No project cap.
The FX rate is a consideration when producing a film, however it is unlikely to be a critical deciding factor. Even so, GBP/USD rate has been relatively attractive in recent years. The current USD/GBP rate makes the UK quite attractive for filming locations, more or less desirable. The GBP/USD FX rate is quoted as of the date of this text, which is 2018-2019.
The greater west London cluster is the preferred location for international productions in the UK; if they can’t film here they typically consider other international locations.

**Crews and equipment**

Independent Film Producer #3

"The reality is that it’s a very tight market and if we can’t find space at Pinewood or Shepperton then we have to look elsewhere. This is the reality of UK locations."

US TV Commissioner #1

"Being close to Heathrow is a great benefit. Execs don’t want to have to drive or make connecting flights. We want to be close to an airport and not too far from central London."

Independent Film Producer #3

"Access to Heathrow and internet connectivity are expected from all top facilities."

US TV Commissioner #1

"If we can’t film here in the UK, then we have to look elsewhere. This is the reality of UK locations."

UK Film and TV Industry Body #2

"There are a number of things that we can’t be based in this cluster. Sometimes look internationally if they can’t be based in the UK. However, international productions will sometimes look internationally if they can’t be based in the Greater West London area for a number of reasons including the quality of crews and transport links."

"Top talent really like being close to London, and producers and directors like to be close to their homes in London."

Major US Film Studios #1

"Top talent really like being close to London and want to be in close proximity to London and our facilities and directors."

UK Film and TV Industry Body #2

"The technical and talent infrastructure in the South East is way ahead of anywhere else in the UK."

UK Film and TV Industry Body #4

"There are a number of films that we haven’t been able to fit into the UK’s top facilities, and they end up filming internationally."

UK Film and TV Industry Body #2

"The reality is that it’s a very tight market and if we can’t find space at Pinewood or Shepperton then we have to look elsewhere."

US TV Commissioner #1

"The Greater West London cluster is the preferred location for international productions in the UK; if they can’t film here they typically consider other international locations."

Source: PwC Interviews
The UK has experienced strong growth in the volume of film and HETV produced.
In value terms, 2017 recorded the highest value of screen sector production spend since 1994, due to the inclusion since 2013 of high end TV (HETV) production expenditure and a boost in inward investment film production spend. Co-production and inward investment.

In volume terms, 2017 recorded the highest value of screen sector feature film production (HETV) spend since 1994, due to the inclusion since 2013 of high end TV (HETV) production expenditure and a boost in inward investment film production spend.
The UK’s main competitor locations currently are Vancouver, Atlanta and Budapest; interview feedback suggests space is hard to find in all three areas, although Atlanta has eased pressure by expanding in recent years.

**Major US Film Studio #1**

Budapest and Vancouver are perceived very well in the UK market, despite some interviewees noting a decline in interest in these locations in recent years. Budapest was seen as particularly promising due to its strong tax incentive and available stage space.

**Major US Film Studio #2**

Vancouver is well perceived due to its film community, crew base and favorable climate. However, its film tax rebate only applies to below-the-line spend (i.e., applies to below-the-line spend), which limits its appeal to some productions.

**Major US Film Studio #3**

Atlanta is perceived very well in the UK market due to its strong tax incentive and available stage space. However, its climate and lack of film community are not as favorable as Vancouver or London.

**Major US Film Studio #4**

Budapest and Vancouver are seen as more relaxed and efficient options, with some interviewees noting a decline in interest in these locations in recent years. Budapest was seen as particularly promising due to its strong tax incentive and available stage space.

**Major US Film Studio #5**

Budapest is perceived very well in the UK market due to its strong tax incentive and available stage space. However, some interviewees noted that talent may be reticent to film here.

**Major US Film Studio #6**

Vancouver is well perceived due to its film community, crew base and favorable climate. However, its film tax rebate only applies to below-the-line spend (i.e., applies to below-the-line spend), which limits its appeal to some productions.

**Major US Film Studio #7**

It is hard to get stage space in Atlanta. Although Atlanta has eased pressure by expanding in recent years, space is hard to find in all three areas.
A reasonable amount of capacity in these locations has opened recently or is scheduled to become available; the UK needs to expand or risk losing business.

From available sources and desktop research we have found no evidence of plans for new studios or significant expansions amongst Budapest studios.

### Budapest
- Four studios already open at 812 sq. m (8,750 sq. ft.), 700 sq. m. (7,500 sq. ft.) and two at 580 sq. m. (6,250 sq. ft.)
- Two more studios to follow in early 2019.
- Site includes office space and a prop shop.

### Vancouver
- Martini Film Studios is a 15k sq. m. (150k sq. ft.) facility with eight stages.

### Atlanta
- Skydance Studios sits on a 13.8 acre site.
- Opened in 2016.
- Consists of five sound stages on 60 acres as well as offices.
- Includes office space, mill space and post.
- Plans to double in size in 2018.
- Proposed new Founders Studio is being built in Atlanta.

### Budapest
- Significant expansions amongst Budapest studios.

### Almaty
- New studios established in 2018 on the former site of Tyler Perry Studios in Atlanta.
- Consists of five sound stages on 60 acres as well as offices.
- Includes office space, mill space and post.
- Plans to double in size in 2018.
- Proposed new Founders Studio is being built in Atlanta.

### Source:
Company Websites, Public Information
More and higher quality screen content (film and high-end TV) is being produced globally. The UK government has a target to nearly double the UK’s film & high-end TV inward investment spend. London is a preferred location for international blockbuster and HETV production, as there is more demand for London than available supply. As a result, there is more potential demand as 8 additional blockbusters per year are estimated to address a material portion of this demand. The Shepperton expansion would make a significant contribution towards meeting this demand. A studio expansion in Shepperton would therefore make a significant contribution towards meeting the government target for inward investment spend. The UK government has produced globally screen content (film and high-end TV) is being more and higher quality.
We have used a number of data inputs to estimate the market need today and in the future for sound stages in London.

Current – 2017

Future – up to 2025

Market potential vs. supply analysis for Greater West London – calculation steps and data sources
• Calculate sound stage space within the greater west London cluster (based on company websites). This includes:
  - Pinewood, Shepperton, WB Leavesden, Longcross,
  - Arborfield, Cardington, Elstree, Gillette Building, Black Island, West London, Black Hanger, Elstree,
  - Twickenham, Wimbledon, 1H2 and Duke’s Island

• We estimate that in 2017 the entire usable supply of sound stage space was occupied (i.e., demand = supply).

  This is based on several data sources:
  - Utilisation of Pinewood and Shepperton being c.85-90% in the past 2–3 years
  - Anecdotal hearing that other major studios (e.g., Leavesden) are also ‘full’
  - Significant evidence from interviews (both with major US film studios and independent film producers) that it is very challenging to find sound stage space in London
Potential unmet demand (1 of 2)

Source: PwC Analysis

Step 1: estimate unmet production spend

Potential unmet demand (1 of 2)
We took the 10 blockbuster productions that had filmed at Pinewood and Shepperton from 2014-17.

For each of these films, we found:

° Production budget (from TheNumbers.com)
° Stage footprint taken (from Pinewood data; NLA)
° Length of time spent filming (from Pinewood data)

Using this information, we calculated an average production budget per occupied sq. ft. per year metric – c.$1,500.

We then adjusted this to account for unoccupied stage space, based on Pinewood and Shepperton average utilisation of 85% between 2013-17. This provided a production budget : floorspace ratio for major studios in London – c.$1,300.

We applied the production budget : floorspace ratio to the production budgets of internationally footloose productions to estimate the UK’s ‘potential unmet demand’ in sq. ft.

(c) £1.3bn – c.£1.5bn

Step 2: Estimate equivalent floorspace

Potential unmet demand (2 of 2)
<table>
<thead>
<tr>
<th>Studio</th>
<th>Location</th>
<th>Expansion in stage space</th>
<th>Year of expansion / closure</th>
<th># stages</th>
<th>Progress / Description</th>
<th>Source: Studio Websites, Management Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pinewood</td>
<td>Greater west London</td>
<td>13 (East: 8, West: 5)</td>
<td>2019; 2021</td>
<td>8</td>
<td>Opened 2014</td>
<td>Planning permission gained</td>
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<tr>
<td>WB Leavesden</td>
<td>Greater west London</td>
<td>7 (74)</td>
<td>2019</td>
<td>2</td>
<td>Opened 2014</td>
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<td>Elstree</td>
<td>Greater west London</td>
<td>3 (32)</td>
<td>2019</td>
<td>2</td>
<td>Opened 2014</td>
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<td>Bedford</td>
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<td>1</td>
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<tr>
<td>Arborfield</td>
<td>Reading</td>
<td>-9 (0)</td>
<td>2025/26</td>
<td>4</td>
<td></td>
<td>Planning permission only granted</td>
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<td>Longcross</td>
<td>Reading</td>
<td>5</td>
<td>2005/2006</td>
<td>5</td>
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</table>

**Changes to capacity to 2025**

- Potential unmet demand (2 of 2)
Potential unmet demand (3 of 3)
Producers and commissioners are very supportive of the planned expansion of Shepperton.

"Shepperton receiving planning permission is crucial for the success of industry." Independent Film Producer #1

"If you expand Shepperton then the tentpoles will always want the additional stages." Independent Film Producer #2

"The benefits to UK from the expansion of Shepperton are so great it really is worth doing – we need more sound stages in the UK." UK Film Industry Body #2

"The UK could certainly do with the space!" Film financing & accountancy expert

"If the UK [could] send the positive signal to send to the west coast that the UK is ready to produce even more quality content, then Shepperton will add much needed capacity and a positive signal to send to the west coast that the UK is ready to produce even more quality content." Owner, Independent Film management consultancy

"We love London for obvious reasons and we prefer Pinewood and Shepperton. Those are the best Playgrounds and Shepperton. Those are the best Playrooms and Shepperton."

"I'm in full support of Shepperton expanding – we need more sound stages in the UK." Major US Film Studio #7

"Shepperton is the UK's crown jewel of film-makers." Major US Film Studio #5

"Producers and commissioners are very supportive of the planned expansion of Shepperton."
Potential site closures (e.g., Longcross and Arborfield Garrison) due to residential housing developments would have a negative impact on capacity.

Source: Company Websites, PwC Analysis

Key Assumptions

Longcross closes in 2023:
- The Longcross site is an ex-military base. The north-west portion of this site is used as a sound stage. The rest of the site is being used for residential housing, which is being used for residential housing in various stages of completion.
- The Longcross site is an ex-military base.
- Some interviewees hypothesised that Longcross Studios may close in the future to provide additional housing.

Arborfield closes in 2025:
- Arborfield currently has planning for 20 years from 2017 (i.e., to 2037/38).
- Some interviewees hypothesised that Arborfield Studios may close to provide additional housing.

The Longcross site is an ex-military base.

Sound stage space and blockbuster market potential for London (000 sq. m NLA, 2017-2025)

Graph showing the capacity and market potential from 2017 to 2025.

Market Potential
- Capacity
- Longcross (inc. expansion, inc. Shepperton"
- Arborfield and Longcross (inc. Shepperton)
- Capacity (incl. Shepperton expansion)
More and higher quality screen content (film and high-end TV) is being produced globally. The UK government has a target to nearly double the UK’s film and high-end TV inward investment spend. London is a preferred location for international blockbuster and HETV production. As a result, there is more demand for London than available supply—there is a material portion of this demand that we estimate this could address—a material portion of this demand would be met by a studio expansion in Shepperton.

The Shepperton expansion would make a significant contribution towards meeting the government target for inward investment spend. London’s ability to accommodate more productions is constrained as there is a relatively small amount of stage space. The UK government has a target to nearly double the UK’s film and high-end TV inward investment spend, which is being driven by both the higher-quality screen content produced globally and the higher-quality production being produced in the UK.
We estimate that committed capacity developments in major London studios could contribute c.50% of the inward investment required to meet the UK Government target.

*We have used a GDP deflator rate of 2.5% as a measure of long-run inflation since our growth rate figure is based on GDP. This is a more appropriate measure for inflation than CPI as it looks at inflation in both intermediate and final goods and services. Since supply of studio space is an intermediate service used in the production of films, it is not captured in CPI’s basket of goods and services, but is captured in GDP.

Based on this, the UK Government target for 2025 in real terms is £3.3bn (vs. £2.4bn in 2017). This represents a gap of £883m p.a. of additional inward investment for the UK to capture by 2025.

The BFI estimates that c.67% of inward investment film production budgets are spent in the UK (where the filming has at least partially taken place in the UK). This means that the planned capacity increase budget of $896m is expected to enable an inward investment of c.£465m p.a. of at least £883m, which is 53% of the UK Government target of £883m.

The methodology to estimate annual inward investment that capacity increases will capture follows:

1. **Calculate inward investment target increase in real terms**
   - Using the GDP deflator rate of 2.5% as a measure of long-run inflation since our growth rate figure is based on GDP. This is a more appropriate measure for inflation than CPI as it looks at inflation in both intermediate and final goods and services. Since supply of studio space is an intermediate service used in the production of films, it is not captured in CPI’s basket of goods and services, but is captured in GDP.
   - We have used a GDP deflator rate of 2.5% as a measure of long-run inflation.

2. **Estimate annual inward investment that planned capacity increases will capture**
   - The BFI estimates that c.67% of inward investment film production budgets are spent in the UK (where the filming has at least partially taken place in the UK). This means that the planned capacity increase budget of $896m is expected to equate to inward investment of c.£465m p.a. of at least £883m, which is 53% of the UK Government target of £883m.

3. **Estimate annual inward investment that capacity increases will capture**
   - Planned capacity expansions in Pinewood, Leavesden, Elstree and Shepperton will add 66k sq. m. NLA (711k sq. ft.) of floorspace.
   - This is equivalent to hosting productions with budgets of at least £896m.

- London
- Production will add 66k sq. m. NLA (711k sq. ft.) of floorspace.
- Planned capacity expansions in Pinewood, Leavesden, Elstree and Shepperton will add 66k sq. m. NLA (711k sq. ft.) of floorspace.

Source: Oanda, BFI, UK Government, PwC Analysis
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