

Feasibility Study for a New Studio in Croatia

Final Report for the Croatian Audiovisual Centre and the Croatian Ministry of Culture by Olsberg • SPI



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1. EXECUTIVE SUMMARY

1.1. Background

The Croatian Audiovisual Centre ('HAVC') and the Croatian Ministry of Culture commissioned creative industries consultancy Olsberg•SPI ('SPI') to explore the feasibility of a new film and television studio in Croatia (the 'Study').

Though following the same overall objectives, the requirements of the Study are different for each client. For the HAVC, the objectives are to:

1. Provide an up-to-date assessment of Croatia's place within the global film sector, and a detailed assessment and description of the potential international and local market demand for the Studio, including production volume and trends
2. Propose a model to ensure that local film productions and co-productions can access the Studio at affordable rates
3. Assess current and expected competition for the Studio.

The objectives for the Ministry of Culture are, in addition to Objective 1 above, to:

1. Focus on a small number of sites, building on work in some earlier preliminary analysis undertaken by HAVC five years ago
2. Include a full design and relevant specification for all potential elements of the Studio – to include stages, workshops, storage, production offices, vendor facilities, and potentially backlot, film school and other possible components
3. Include estimated financial projections (revenue and costs), with assumptions for the first five years of the new Studio's operations
4. Identify potential economic and other public benefits that could be generated from the creation of a new Studio in Croatia.

1.2. Principal Findings

SPI has found there is a substantial opportunity for the development of a film and television production facility in Croatia. Although currently production is limited because of the global pandemic, there is very substantial demand for studio space that will resume and increase once the current hiatus is overcome.

A studio would, alongside the continuation of the production incentive, drive valuable international screen production in Croatia. We estimate that each public (incentive) investment in a foreign-financed screen production leverages three or four times the amount invested through private sector inward currency flows for the same project. While international producers have already shot large projects in Croatia, the availability of a studio would allow future projects to spend more time and invest more in the country. This will deliver the substantial range of economic and cultural benefits described in Chapter 11. In consultations for this project, major international producers expressed strong interest in the development of a new studio in Croatia.

Though there will be exceptions, national film and television productions (and co-productions) would not in most cases have sufficient funds to afford a purpose-built studio, due to the small size of many of the productions and consequent low budgets. However, a smaller multi-purpose facility within a new studio could be created to allow some productions to grow, while also giving the crew practical studio experience that would be useful when attracting international shoots.

1.2.1. Site Recommendation

The SPI team visited four sites under serious consideration for a new development for this project: Velika Gorica, Jastrebarsko, Bistra and Ekopark Kras.

In ranking the sites, the main factors we considered were:

- Whether the site was free of any planning constraints
- Whether the site was large enough for a studio facility (at least 50 acres)
- The location of the site, including proximity to an airport with year-around international service, proximity to hotels and amenities
- Whether the land was geologically sound and free from environmental contaminants
- The provision of essential utilities to the site
- Whether the site was free from excessive air traffic, railway and highway noise
- That the site was not impacted by local industrial activity
- That the site was not overlooked
- Whether the site could achieve an internationally recognised acoustic rating
- Whether the site had suitable light levels and suitably low pollution levels

Of the sites we analysed, Jastrebarsko has a number of advantages which make it our first choice for development. In particular, we see the Jastrebarsko site's public ownership as a major advantage as it would potentially allow the Croatian government to donate the land which could be used to ensure that the resulting studio meets the strategic aims of HAVC and the needs of the Croatian national production sector.

Also, it is suitably located, linked to a well-equipped and well-connected town, and has existing structures which could be repurposed for studio use.

1.2.2. Other Sites

The team also visited and assessed the Jadran Film studio which, although an iconic site with considerable heritage, does not have sufficient attributes to be considered for a new development.

The team was made aware of several other possibilities, including at Pula, but none of these had been sufficiently developed to merit serious consideration.

1.2.3. Recommended Specification

SPI recommends a studio facility with 4-6 stages between 15,000 sq ft and 30,000 sq ft.¹ The facility should also have a large backlot for outdoor shooting, as well as all necessary support facilities, including offices, workshops, wardrobe space, and parking. The full proposed specification can be found in Section 9.

The site should also include a training hub for Croatian crew to be developed and upskilled. This training hub could include a B-grade stage, finished to a lower standard than others, which could be let at a cheaper rate to smaller national productions in Croatia.

1.2.4. Financial Projections

Our financial projections for this project, which model the commercial operation of our recommended studio specification, but do not include any CAPEX costs, show there is commercial viability for a studio in Croatia:

¹ In this report all dimensions are given in square feet (sq ft). These can be approximately converted to square metres dimensions by dividing by 10 (or 10.764 for more exact conversion).

Table 1: Income/Expenses Projections

Income		Year 1	Year 2	Year 3	Year 4	Year 5
	Stages	€ 1,913,600	€ 2,927,808	€ 3,484,092	€ 3,807,614	€ 4,142,684
	Workshops	€ 765,440	€ 1,171,123	€ 1,393,637	€ 1,523,046	€ 1,657,074
	Offices	€ 723,840	€ 1,107,475	€ 1,317,895	€ 1,440,271	€ 1,567,015
	Backlot	€ 197,600	€ 302,328	€ 359,770	€ 393,178	€ 427,777
	Total	€ 3,600,480	€ 5,508,734	€ 6,555,394	€ 7,164,109	€ 7,794,551
Expenses						
	Business rates	(€ 500,000)	(€ 510,000)	(€ 520,200)	(€ 530,604)	(€ 541,216)
	Insurance	(€ 500,000)	(€ 510,000)	(€ 520,200)	(€ 530,604)	(€ 541,216)
	Utilities	(€ 450,000)	(€ 459,000)	(€ 468,180)	(€ 477,544)	(€ 487,094)
	Security	(€ 300,000)	(€ 306,000)	(€ 312,120)	(€ 318,362)	(€ 324,730)
	Marketing	(€ 450,000)	(€ 459,000)	(€ 468,180)	(€ 477,544)	(€ 487,094)
	Management/finance	(€ 860,000)	(€ 877,200)	(€ 894,744)	(€ 912,639)	(€ 930,892)
	Cleaning	(€ 300,000)	(€ 306,000)	(€ 312,120)	(€ 318,362)	(€ 324,730)
	Total	(€ 3,360,000)	(€ 3,427,200)	(€ 3,495,744)	(€ 3,565,659)	(€ 3,636,972)
Surplus/(Loss)		€ 240,480	€ 2,081,534	€ 3,059,650	€ 3,598,450	€ 4,157,579
Cume		€ 240,480	€ 2,322,014	€ 5,381,664	€ 8,980,115	€ 13,137,693

Our projections find that the studio would be commercially viable (subject to the carrying costs of CAPEX) and able to generate a meaningful income, even at relatively low occupancy levels in the first years.

We expect the large surplus shown above to be reduce by the carrying costs of CAPEX, which although not modelled here (capital expenditure estimates were outside the scope of this Study) will result in sizeable annual costs.

It should also be noted that the potential impact of the Covid-19 pandemic on the business case has not been modelled. Rather, we assume that if a facility is developed in Croatia, by the time it opens the impact of Covid-19 will be substantially reduced and will not affect the business case.

1.3. Note on Covid-19 Pandemic

At time of writing, the global effects of Covid-19 are causing significant and unprecedented disruption to film and television production, affecting markets and companies of all sizes. The vast majority of projects in most countries across the world have been shut down in response to the virus and associated travel and other restrictions. Clearly, this will also have a short-term impact on the owners and operators of studio facilities.

Our research shows that there is, however, a substantial backlog of projects that will be put into production quickly once restrictions are amended. There are three types of these:

1. Productions that have been halted, and which can resume very quickly
2. Productions that are in the latter stages of pre-production, and have continued on this path, also able to start principal photography quickly, and
3. Projects in earlier stages of pre-production, whose development will be accelerated once markets announce they will open.

While the longevity of Covid-19's effects are unknown, we believe that there will be limited long-term effects on production investment, project flow and the overall development of the

sector. When the market opens up again, there will be a bottleneck of productions waiting to start or resume and capacity issues will ultimately be unchanged.

While there are currently restrictions for the production sector, going forward our view is that demand for production facilities such as dedicated studios will remain strong, once global production activity has resumed at prior levels. Indeed, some countries (such as New Zealand) are already open or have announced plans for resuming production.

SPI believes that as major producers remain committed to investment, production will resume an upward trend once the market is able to function once more. This is because consumer demand for film and television content, which underpins such investment, is likely to remain very durable. This has been underlined by the significant increase in the volume of subscriptions globally to streaming services during "lockdown".

Other constraints mostly relate to availability of global infrastructure such as studios as well as crew and the film-making workforce.

Several governments have demonstrated their continued commitment to investing in the production sector and are considering increasing the level of incentive offered to balance the increased costs of production caused by measures to combat coronavirus.

1.3.1. Croatian Response

At the time of writing, the authorities in Croatia have been quick to address the situation with a series of measures.

HAVC have published recommended guidelines for filming, developed together with industry associations and building on the general guidelines issued periodically by the Croatian Centre for Public Health. Additional support measures to address Covid-related costs of filming are also being implemented to encourage ramping up production.

HAVC have also adapted their guidelines to adjust for the situation. For example, deadlines for calls and the deadlines for fulfilling the beneficiaries' obligations have been extended. Beneficiaries of calls for the promotion of complementary activities are provided with the opportunity to submit programme changes.

State measures have been introduced to support filmmakers. A total of 66 measures were passed, with an estimated total value of €3.9 billion. Filmmakers will benefit from a postponed tax payment with no interest, employers will be able to apply for help from the 5 billion HRK state fund to cover minimum salaries for their employees.

The Ministry of Culture has established a liquidity fund for the cultural sector, to provide support for independent artists, self-employed and other natural and legal persons. The Crisis Fund will cover the fields of activity under the responsibility of the Ministry of Culture, the Croatian Audiovisual Centre and the Culture New Foundation.

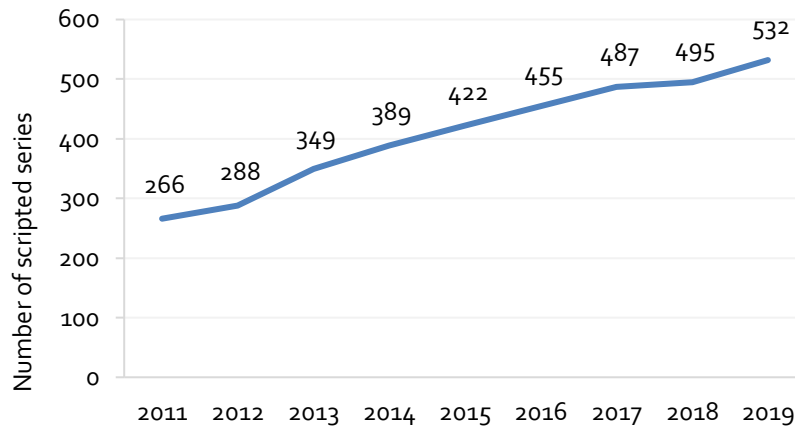
2. THE GLOBAL PRODUCTION ECOSYSTEM

In recent years there has been a massive increase in the quantity of film and television content being produced around the world, and while the coronavirus pandemic has reduced this activity (and will continue to for some time) we expect that the strong demand for content will ensure that its production returns to similar if not greater levels in the future.

2.1. The Global Production Market

Prior to the coronavirus pandemic, there had been unprecedented growth in the global film and television production market. This has been especially evident in television drama, where the number of series available in the US has doubled between 2011 and 2019 from 266 titles to 532.²

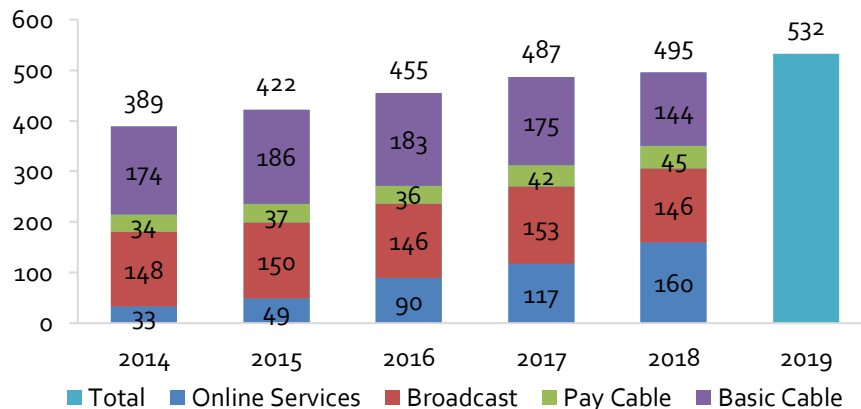
Figure 1: Estimated Number of Original Scripted Series, 2011-19



Source: FX Networks Research. Excludes library, daytime dramas, one-episode specials, non-English-language/English-dubbed, children’s programmes, and short-form content (<15 mins).

As evident in the figure below, this growth is especially noticeable in relation to online platforms, where it has increased by 385% between 2014 and 2018. Netflix alone debuted 371 new original series and films in 2019, which represented a 55% increase on 2018.³

Figure 2: Number of Scripted Originals by Distribution, 2014-19



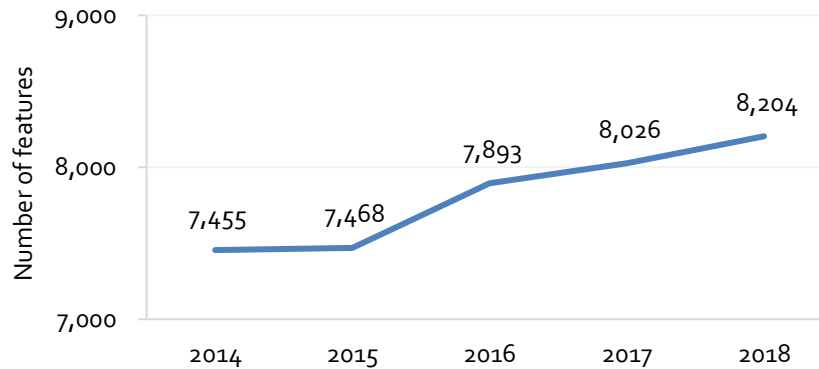
Source: FX Networks Research. Note: FX Networks’ 2019 release did not include a breakdown of distribution format.

² Peak TV Update: Scripted Originals Top 500 in 2019, FX Says. *Hollywood Reporter*, 9th January 2020

³ Netflix Released More Originals in 2019 Than the Entire TV Industry Did in 2005. *Variety*, 17th December 2019

While feature film has seen less pronounced growth over the same timeframe, volume has increased at a sustained level globally. As seen in the figure below, the number of feature films produced worldwide increased by 10% between 2014 and 2018. The most dramatic growth in volume has come from East Asian countries – specifically China and South Korea. In China, this is largely due to an effort to an increase in its soft power. The Chinese government aims to develop their screen industry substantially so as to rival the US by 2035, calling for the production of 100 feature films per year, with the intention that they will each earn more than US\$15 million at the box office.⁴

Figure 3: Estimated Number of Feature Films Produced Worldwide, 2014-18



Source: European Audiovisual Observatory

Global spend on non-sport content in 2018 reached US\$123 billion. This is a 46% increase on 2008 and Ampere forecasts a further 26% growth over the next five years.⁵

Variety estimated that entertainment companies spent US\$121 billion on original content in 2019, inclusive of sports content. As seen in the figure below, 72.5% of that spend, approximately US\$87.4 billion, can attributed to five companies – Netflix, Comcast, AT&T, Viacom CBS and Disney.⁶

A driver for this, is an increase in ‘tentpole’ television, where the cost to produce high-end television is increasing significantly. In October 2019, Netflix estimated the cost of a competitive show had increased 30% since 2018.⁷ While the cost of producing a high-end cable and streaming drama in 2016/2017 was in the range of US\$5-7 million and US\$1.5-3 million for broadcast network dramas, high-end television series in 2018-2019 far exceeded that. The six-episode final season of *Game of Thrones* reportedly cost US\$15 million per episode, with a similar per episode cost being reported for *See* on Apple TV+.⁸

⁴ China aims to become ‘strong film power’ like US by 2035, calls for more patriotic films. *Variety*, 3rd March 2019

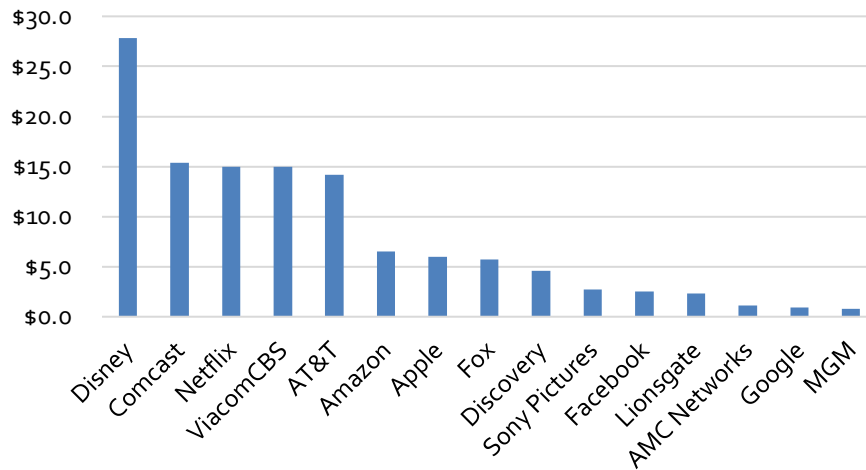
⁵ Ten drama trends to watch. Ampere Analysis presentation at Göteborg Film Festival, January 2020

⁶ Entertainment Companies Spend US\$121 Billion on Original Content in 2019. *Variety*, 6th January 2020

⁷ The lavish budgets of Disney and Apple’s upcoming original TV shows make ‘Game of Thrones’ look frugal. *Business Insider*, 23rd October 2019

⁸ Apple TV Plus’ *See* reportedly costs almost US\$15 million per episode. *The Verge*, 12th July 2019

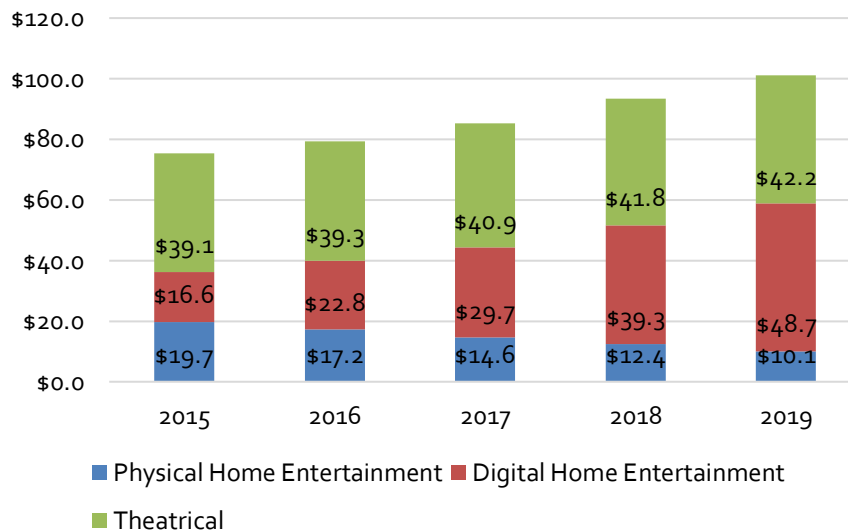
Figure 4: 2019 US Original Content Spend (US\$bn)



Source: Variety

Production growth aligns with rising consumer spend on theatrical and home entertainment. In 2019, global consumer spending on theatrical, physical and digital home entertainment reached US\$101 billion. This was an increase of 34% on 2015 and the first time this market surpassed the \$100 billion mark.⁹

Figure 5: Global Theatrical and Home Entertainment Consumer Spending (US\$bn)



Source: 2019 THEME Report. MPA

While digital entertainment is rapidly expanding, the global box office is also showing continued growth. In 2019 the global box office reached US\$42.4 billion, an increase of 3% from 2018. The international box office – all regions excluding the US and Canada, reached US\$31.1 billion, representing 73% of total grosses in 2019.

While the coronavirus pandemic has interrupted box office growth, demand for streaming services has exploded and underlying consumer interest in scripted, and non-scripted, content remains high.

2.2. Production Growth in Streaming and Online

The increase in production is underpinned largely by consumer demand and the evolution and growth of consumer access to content. As consumers continue to gain access to reliable and high-quality internet globally, low-cost platforms such as Netflix, Amazon Prime and Disney+ are offering access to a steadily growing array of new, original and existing content for consumption.

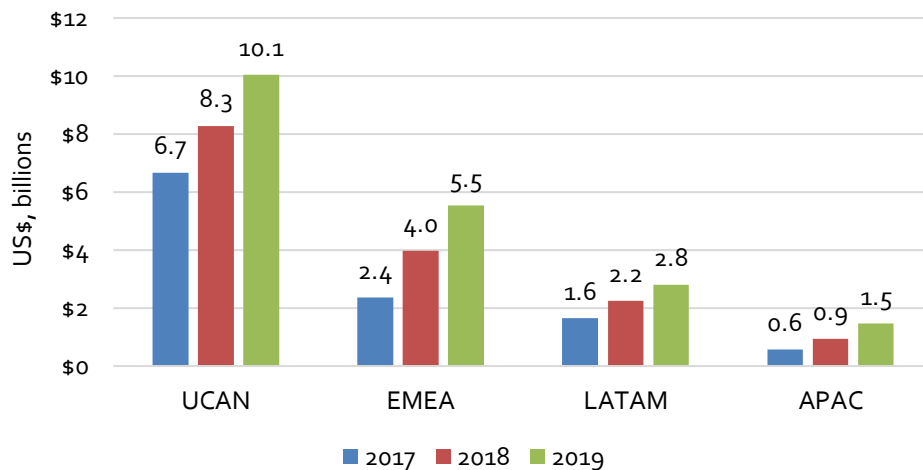
2.2.1. Global Subscription Growth

A key catalyst for growth has been the entry and expansion of over-the-top (OTT) services. There are approximately 700 million global subscribers outside of China. Netflix and Amazon Prime Video are the two current leaders in this market. Netflix had 182.8 million paid global subscribers by the end of Q1 2020. Meanwhile, Amazon Prime Video had approximately 75 million paid subscribers in Q4 2018, with predictions that it will reach 120 million by 2023.^{10,11}

However, they are facing competition from newer streamers such as services launched by Apple, Disney, WarnerMedia and NBC Universal. Disney+ had a reported 10 million mobile app subscribers sign-up in the first 24 hours of its November launch in the US, Canada and the Netherlands, and 28.6 million subscribers by February 2020.¹² This has grown as Disney+ has launched in various international territories in 2020 and by end of Q.1 2020 it had 54.5 million subscribers.

In streaming, Netflix's revenues from international subscriptions overtook its revenues from its domestic (US) subscription revenues back in 2018. As it turned its attention towards global subscribers, Netflix started breaking its reporting into four regions: UCAN (US/Canada), EMEA, Latin America (LATAM), and APAC. As the figure below shows, while streaming revenue is increasing across all regions, the growth is particularly evident in EMEA and APAC. Between 2017 and 2019 EMEA has seen an increase of 129%, while APAC has increased by 150%. This is bolstered by a fast-growing subscriber base in both regions for Netflix. In 2019 EMEA added approximately 14.2 million new subscribers to the region, an increase of 38% over 2018. During the same period APAC reached 16 million subscribers, an increase on 2018 of 51%.¹³

Figure 6: Netflix Streaming Revenue by Region



¹⁰ Netflix Earning Call Q2 2019

¹¹ Exclusive: Amazon's internal numbers on Prime Video, revealed. *Reuters*, 15th March 2018

¹² Disney+ already has 28.6M subscribers. *TechCrunch*, 4th February 2020

¹³ Q4 shareholders letter. *Netflix*, 21st January 2020

2.2.2. Internationally-financed, locally-created Content

Efforts by streamers to demarcate themselves from competitors have led to an increased spend on original content. Disney is expected to invest US\$1 billion into developing new content for Disney+ in 2020. Netflix also increased their content spend in 2019 by US\$3 billion and was predicted to spend US\$17 billion on content in 2020, of which original content is expected to be a large focus.¹⁴

In addition to expanding content spend for original content, some of these streaming platforms have turned to financing locally-created content to attract global subscribers. These 'hybrid' productions use local above-the-line creative talent but tend to have budgets and production values closer to their US counterparts.

Netflix has reported success with this strategy, noting that local originals were among its most popular 2019 titles. These included: *Sacred Games 2* in India; *Naked Director* in Japan; *Quicksand* in Sweden; *Kingdom* in South Korea; *Money Heist S3* in Spain; *Undercover* in the Netherlands; *The Stranded* in Thailand and *Home for Christmas* in Norway.

Local productions have also proved popular in other countries. The third season of the Spanish series *Money Heist (La Casa de Papel)* led the most-watched lists for Netflix in Spain, Italy, Brazil, Israel, France and Belgium. This underlines the opportunities being created for markets like Croatia, to create local content for audiences and expand to global audiences connected through streaming platforms like Netflix.

2.3. The International Market for Portable Productions

SPI estimates that the combined content budget of all major US production companies in 2019 was US\$91 billion (including licensing spend, but excluding sports spend). While the content budgets of US production houses used to be mainly spent in California, the lack of local capacity and the attractiveness of other jurisdictions (such as Croatia) means that much of the resulting production activity will be portable, i.e. shot outside the country of origin.

This presents a substantial opportunity for countries around the world to attract investment by hosting productions. Governments, including that of Croatia, have responded by offering several policy initiatives to capture this business, including incentives, studio facilities, workforce programmes, and responding to producer needs through film commissions.

The biggest content investors are involved with too many projects to manage all phases of production in-house. As a result, the most sought-after local production companies, production services companies, and jurisdictions are those which can deliver the final product to a high standard with minimal oversight.

2.4. The Production Location Decision

SPI's analysis of the production location decision factors taken into account by international portable productions is outlined below. This demonstrates how different factors influence where productions choose to film, and shows that the availability and quality of infrastructure, particularly studios and workforce, are becoming among the most important factors alongside creative, logistical, and financial considerations.

The global dearth of studios has caused some Hollywood based major producers to attempt to pre-book studio space well before a particular piece of content has entered pre-production.

¹⁴ Netflix to spend \$17bn on content in 2020: analyst. *Screen Daily*, 16th January 2020

This is because they are concerned that essential studio space will not be available in the possible countries they could choose for shooting.

The main factors are:

1. Creative specifics
2. Initial budgeted costs
3. The effect of incentives on reducing costs
4. The availability of dedicated shooting spaces (i.e. studios)
5. The availability and experience of crew and workforce
6. The variety and availability of external locations (if needed)
7. Safety and security¹⁵
8. Perceived ease of filming and support from local agencies
9. Communications and transport infrastructure
10. Lifestyle offer and key talent and creatives.

The priority assigned to these factors changes over time. For example, currently, the safety from a health and COVID-19 perspective is probably the main consideration at present, when previously other factors would have been more important. Because of the lack of studios globally, and also workforce, these factors will also rate highly for years to come.

¹⁵ Particularly in a post-pandemic environment

3. THE CROATIAN FILM AND TV PRODUCTION MARKET

This chapter presents an overview of the two sectors in the Croatian film and television production market which might use a studio facility; the production services and the national feature film sectors; and details the impact of government financial support for those sectors in Croatia.

To give an idea of the size of the sector, a recent study undertaken by the Croatian Institute of Public Finance (per a call for public tenders issued by HAVC) found that there are 514 enterprises registered for performing audiovisual activities including distribution and exhibition. Of these there are 433 enterprises operating in the production sector, and 14 post-production enterprises.

3.1. Production Services

Since introducing the current production incentive in 2012 there has been a consistent flow of international film and television productions shooting across Croatia. These productions have included *Game of Thrones*, *Mamma Mia: Here We Go Again*, and *Star Wars: The Last Jedi*.

The driving forces behind Croatia as a location for international productions are (1) its locations and (2) low costs.

1. In terms of **locations**, international producers choose Croatia for its natural landscapes, coasts, and islands, as well as its historic cities.

Many of these locations can double for others, for example Croatia can be used to double as a range of coastal locations (Spain, Italy, Greece), while Zagreb can double for other Austro-Hungarian cities like Vienna, among others.

2. In **costs**, Croatia is a relatively low-priced country to shoot in, and in this sense competes with a range of countries in South and Eastern Europe which are popular among producers for this reason.

With the incentive in place, Croatia is a highly cost-competitive production environment for international productions.

In consultations for this project, major international producers expressed interest in the development of a new studio in Croatia.

The production services industry in particular has been positively impacted by the introduction of the Croatian production incentive in 2012. This incentive, details of which are provided in Section 3.4, has put Croatia in a position to compete with Europe and other parts of the world for large international productions which generate cultural, economic, and tourism impacts.

Last November, the Croatian State Secretary at the Ministry of Culture Krešimir Partl said that since 2012, the country has earned HRK1 billion from international production, in large part due to the production incentive.¹⁶ He also noted that international production significantly contributes to the development of local communities and tourism in Croatia.

3.2. National Feature Film

Croatia has a growing, well-supported national feature film sector which in recent years has also co-produced a number of projects with other European companies. The HAVC supports new filmmaking during development, production, distribution, exhibition, and its marketing and

1. ¹⁶ 'Hrvatska je od stranih produkcija dosad zaradila milijardu kuna', *Poslovniki*, 30th November 2019

promotion. For this it has a budget to support the national film industry (including co-production funding), which was €9.4 million in 2019.

12 national and majority co-production feature films were produced in 2019 (not including documentaries), nine of which were supported by the Croatian Audiovisual Centre. In Addition, 10 minority co-productions were supported. The majority of these productions are very small in scale when compared to the types of productions for which sound stages are in demand. Nonetheless it is a key aim of the HAVC to make the studio facility accessible to national projects if there is the desire to use stages and other facilities.

3.3. National Television

The national public service broadcaster is Hrvatska radiotelevizija (HRT) which produces a range of television content, including talk shows, dramas, news, and soap operas. HRT is complemented by a range of private broadcasters which are subsidiaries of large European media conglomerates: Nova TV is part of the United Group and RTL is part of the RTL group.

The independent TV production sector is growing in Croatia and is increasingly focused on high-end TV production, which would potentially make use of a studio. In particular, we note the recent deal in which Beta Film, a German high-end TV production company, took a stake in Drugi Plan, one of Croatia's foremost television companies which has previously produced for HBO Europe.

Despite there being a relatively strong TV production sector in Croatia, we expect most productions are not at a budget level where state-of-the-art sound stages are in high demand. Nonetheless the creative high-end TV productions which are set to increase in volume with the Beta Film-Drugi Plan deal may be potential clients for a studio should it be developed. The national and commercial TV companies could also be candidates for partnership in any new studio, but we have not explored these opportunities in any detail, as yet.

3.4. Croatia's Production Incentive

The Croatian production incentive was introduced in 2012, and the last major revision was in 2018, when the incentive value was increased from 20% to 25%. A 5% uplift was also added for production spend in areas of Croatia with below-average development – the first regional uplift to be introduced in Europe.

In 2019, further revisions were made to enhance the competitiveness of the incentive. The per-project cap was increased from HRK4 million to HRK5 million and it was made so applications for the scheme only had to be submitted 8 days prior to the start of principal photography (or the start of animation) in Croatia, where previously it was 30 days.

The 2020 budget for the production incentive is HRK60 million, matching what was ultimately made available in 2019. This is an increase on the previous annual budgets (HRK30 million in 2018) and indicates the government's awareness of the importance of this programme.

The Institute of Public Finance study for HAVC estimated that for every HRK1 of incentives awarded through the Filming in Croatia incentives programme in the 2012-2018 period generated a minimum of HRK11.6 of economic impact in Croatia, while a minimum of HRK6.6 was paid into the state and local budgets via taxes and contributions.

Continued support for the production incentive will be a key determinant in the success, and indeed feasibility of any new studio facility in Croatia.

3.5. Workforce Provision

Croatia has a growing film and television workforce which has worked on a range of mid-sized projects for international producers. According to the Institute of Public Finance study for HAVC, in 2017 Croatian companies engaged in activities of production and distribution of film,

television and video employed 1,493 people (this includes many permanent employees not engaged in the production sector but will not count the many freelancers engaged in on individual national and international productions). The majority of crew are located around Zagreb.

A film studio in Croatia would ideally boost production by such an extent that it would be necessary to rapidly build and add to the workforce and upskill those already in the sector. Croatia's labour market for skilled trades, from camera operators to carpenters, is already reportedly tight. A long-term workforce development strategy for Croatia is necessary to ensure a sufficient labour supply into the future. This could however be partially addressed with a training centre on-site, which would aim to provide practical education for new crew in a variety of roles.

A studio also offers the opportunity to create a multidisciplinary creative cluster bringing together experts in the fields of digital, post-production and VFX, gaming, and illustration among others.

An issue that has been expressed by multiple consultees is the "brain drain" of skilled young people to elsewhere in Europe. Part of the aim of the studio facility should be to provide well-paid and interesting work opportunities to skilled young people.

4. CURRENT STUDIO PROVISION IN CROATIA

Croatia does not have an international standard, purpose-built film studio, but as part of our work we have assessed the renowned Jadran Film site and the use of temporary ('pop-up') shooting spaces.

Croatia's lack of a modern studio facility makes it difficult to attract productions for extended amounts of time – and more often than not, Croatia is used for location-based shoots which, while valuable, do not bring as much investment, skills transfer, and other benefits as more long-term, complex projects.

4.1. Jadran Film

Jadran Film is Croatia's only studio, but despite its central place in the history of film production in Croatia, it has not been considered completely fit for purpose. It has recently been used by Croatian producers, but we have not been advised of any concrete plans to redevelop the site.

Furthermore, while work could be done to improve the existing facilities, the site no longer includes its former backlot or expansion space.

Despite its admirable heritage, and due to its existing composition, the relatively poor state of its facilities, and the complexities around the future use of the site, we found that Jadran Film was not a suitable site for active consideration, although it would still offer overflow space for less costly projects.

4.2. Pop-ups

While temporary, or pop-up shooting spaces are not used as often in Croatia as they are in markets like the UK, the strong demand for indoor shooting space has led some productions (a mix of national and international) to use warehouses and other buildings for filming.

Although these can potentially be used by international productions, there are substantial differences between a warehouse and a fully equipped soundstage, and the SPI team were not presented with any viable options for conversion to a fully equipped studio facility.

5. STUDIO COMPETITION IN THE REGION

5.1. Types of Competition

Should a studio facility be developed in Croatia, our analysis has found that Croatia will compete with a number of nearby countries for production. These countries can broadly be split into those with similar locations, and those which have more infrastructure.

5.1.1. Location Competition

On the one hand, countries like Greece and Italy will continue to compete with Croatia's popular coastal locations. While the first *Mamma Mia* film was set and shot in Greece, its sequel relocated production to the Croatian coast – perhaps as a result of delays in the introduction of the Greek production incentive. Croatian locations have also recently doubled as Italy, in the case of *The Hitman's Wife's Bodyguard*, and as the Spanish island of Ibiza in the Netflix film *Ibiza*.

5.1.2. Infrastructure Competition

On the other, the more developed infrastructure offers in Bulgaria, the Czech Republic, Hungary, Romania, and Serbia will compete with any infrastructure developments in Croatia. While these countries do not have the coastal Mediterranean shooting locations which are one of Croatia's main selling points, they each have established studios which are known to regional or international producers.

5.2. Case Studies

For this study, SPI has researched seven countries which would potentially compete with Croatia. Five of these would compete primarily in infrastructure terms:

- Bulgaria
- Czech Republic
- Hungary
- Romania
- Serbia

The remaining two are considered to compete because they have similar locations to those in Croatia:

- Greece
- Italy

Figure 7: Competitors to Croatia, by type of competition



Source: Olsberg•SPI

5.3. Bulgaria

Bulgaria has a long history of servicing productions through Nu Boyana Film Studios, which is owned by Nu Image/Millennium Media. This studio offers full-service production (i.e. the owners of the facility are also the production services company).

Table 2: Studio Facilities in Bulgaria

	Stages	Other facilities
Nu Boyana Film Studios	<ul style="list-style-type: none"> • Stage 1 (6,243 sq ft) • Stage 2 (10,333 sq ft) • Stage 3 (6,243 sq ft) • Stage 5 (16,145 sq ft) • Stage 6 (4,650 sq ft) • Stage 7 (3,875 sq ft) • Stage 12 (18,987 sq ft) • Stage 13 (15,822 sq ft) <p>Nu Boyana also has a 12,701 sq ft underwater stage with a 4,356 sq ft water tank (20 ft depth), and a motion-capture studio.</p>	<p>There are a range of standing sets (London, New York, Roman, Ancient Village, Middle East) and a forest backlot.</p> <p>The facility also houses workshops, offices, a restaurant and café, onsite vendors, storage.</p>

While Bulgaria (or Nu Boyana) is popular with low-budget feature film productions, often produced in-house, the lack of an incentive in Bulgaria makes it less appealing as an option for international producers. There is an incentive in development, but it is unclear when – or if – this will be approved.

5.4. Czech Republic

The Czech Republic has a long history in film production and remains an active location for international productions due to their low costs, good reputation and substantial studio offerings.

One of the two key production facilities available is the historic Barrandov Studios (in Prague) which has been used for films such as *Casino Royale*, *Jojo Rabbit* and *Snowpiercer*. Additionally, Barrandov Studios is a regular co-producer of Czech films, having supported 63 projects between 1993-2018.¹⁷ Complimenting Barrandov Studios are the modern Prague Studios. Prague Studios has six stages in operation ranging from 3,300 sq ft to 31,736 sq ft.

The Czech Republic offers a 20% rebate on qualifying Czech spend, available to film, television and post-production work. The incentive has no per-project cap or sunset date. Since its introduction in 2010 the incentive programme has supported more than 195 film and television projects, including *Carnival Row*, *1983* and *The Letter for the King*. Foreign investment in the Czech film industry reached US\$120 million in 2018, across 1,072 shooting days for 38 foreign film and television productions.¹⁸

Table 3: Studio Facilities in the Czech Republic

	Stages	Other facilities
Prague Studios	<ul style="list-style-type: none"> • Stage 1: 31,736 sq ft • Stage 2: 27,066 sq ft • Stage 3: 13,464 sq ft • Stage 4: 13,464 sq ft • Stage 5: 19,210 sq ft • Stage 6: 3,300 sq ft 	<ul style="list-style-type: none"> • Production offices totalling 22,604 sq ft • 25-acre backlot
Barrandov Studios	<p>Barrandov Studio lot:</p> <ul style="list-style-type: none"> • Stage 1: 6,930 sq ft • Stage 2: 6,889 sq ft • Stage 4: 8,065 sq ft • Stage 5: 12,710 sq ft • Stage 6: 21,514 sq ft • Stage 7: 12,500 sq ft • Stage 8: 22,090 sq ft • Stage 9: 10,766 sq ft • Stage 10: 11,130 sq ft <p>Hostivar complex: currently committed to long term television programmes</p> <ul style="list-style-type: none"> • Stage 1: 5,782 sq ft • Stage 2: 5,782 sq ft • Stage 3: 8,064 sq ft • Stage 4: 8,064 sq ft 	1,722,225 sq ft backlot

5.5. Greece

Greece competes with Croatia due to its coastal locations. However, its lack of studio infrastructure and, until recently, a financial incentive has resulted in productions selecting

¹⁷ Barrandov Studio to coproduce four new Czech films, *Film New Europe*, 7th December 2018

¹⁸ The Game of Thrones effect: Central European film industry on a roll, *Reuters*, 10th April 2019

Croatia as a filming location. In 2018, the sequel to *Mamma Mia* chose Croatia over the island of Skopelos in Greece – where the first film was shot and both films are set.

However, Greece introduced a competitive film incentive in 2019, and a studio facility is due to be constructed in Thessaloniki. Financed by Nu Boyana Film Studios and John Kalafatis of New York City-based York Studios, the new studio (dubbed Nu Boyana Hellenic) will reportedly offer eight sound stages with a total capacity of 161,459 sq ft. The studio is due to be operational in 2021.¹⁹

5.6. Hungary

Hungary is an active production location, popular for large international productions due to their generous tax rebate, cheap labour and studio infrastructure and location options. Studio space is centrally located close to Budapest, with two modern studio offerings - Korda Studios and Origo Studios – and the state-owned Mafilm Studios. There are 19 soundstages between the three studios, with a total stage offering of 353,970 sq ft.

Hungary offers a tax rebate of 30% with expenses occurring abroad also qualifying. With no minimum spend on the incentive and an annual budget of €99 million, Hungary has attracted a number of international blockbusters, including *Red Sparrow*, *Robin Hood*, *Blade Runner 2049* and *Dune*. In 2018, 333 productions shot in Hungary with a total spend of US\$385 million. Some 84% of the investment came from international productions.²⁰

Crews in Hungary speak English and are considered to be highly skilled and experienced, while cheaper than crews in Western Europe. Hungary has primarily been popular for blockbuster film production, however SVoD platforms such as Netflix have begun to use Hungary for production of series, including *The Witcher*, *The Alienist* and the yet to be released, *Shadow and Bone*.

Table 4: Studio Facilities in Hungary

	Stages	Other facilities
Korda Studios	<ul style="list-style-type: none"> • Stage 1: 21,550 sq ft • Stage 2: 19,460 sq ft • Stage 3: 19,460 sq ft • Stage 4: 10,880 sq ft • Stage 5: 25,600 sq ft • Stage 6: 64,310 sq ft 	<ul style="list-style-type: none"> • 1,076 sq ft water tank at stage 1 • 30,138 sq ft of furnished production facilities • 59,201 sq ft workshop and storage building, also houses art dept. offices and meeting rooms • 24 acres of backlot sets: medieval, New York and renaissance • 37 acres of empty backlot space
Origo Studios	<ul style="list-style-type: none"> • Stage 1: 21,334 sq ft • Stage 2: 21,334 sq ft • Stage 3: 28,654 sq ft • Stage 4: 28,654 sq ft 	<ul style="list-style-type: none"> • 1,075 sq ft greenbox stage • 9.8 acres of backlot space • 40,500 sq ft office space

¹⁹ Oliver Laxe’s ‘Fire Will Come’ wins best film at Thessaloniki film festival, *Screen Daily*, 11th November 2019

²⁰ The Game of Thrones effect: Central European film industry on a roll, *Reuters*, 10th April 2019

	<ul style="list-style-type: none"> • Stage 5: 21,460 sq ft • Stage 6: 47,074 sq ft • Stage 7: 12,741 sq ft • Stage 8: 12,741 sq ft • Stage 9: 2,325 sq ft 	<ul style="list-style-type: none"> • 48,717 sq ft warehouse space • 4,425 sq ft outdoor water tank • Rental services on site
Mafilm Studios	<p>Budapest site</p> <ul style="list-style-type: none"> • Stage 1: 8,934 sq ft • Stage 2: 4,144 sq ft <p>Fót site</p> <ul style="list-style-type: none"> • Stage 1: 17,222 sq ft • Stage 2: 11,517 sq ft 	<p>Fót site:</p> <ul style="list-style-type: none"> • 180 x 19.6ft outdoor green screen • Costume and weapon hire • 53,919 sq ft backlot, including sets such as medieval settlement, WWII concentration camp, cloister, windmill, 1800s London • 16 acres green area

5.7. Italy

Italy also competes with Croatia in terms of its coastal locations and historic towns but is a highly developed media production hub with well-established ties to other Europe sectors as well as the US. Italy also has a number of well-funded broadcasters and a strong national production industry.

Cinecittà Studios is Italy's main production facility for film and high-end television. After many quiet years of private ownership, it has returned to the state and has attracted several large productions, including *The Young Pope* (a Sky, HBO and Canal+ series) and *The Two Popes* (a Netflix feature film).

Table 5: Studio Facilities in Italy

	Stages	Other facilities
Cinecittà Studios	<ul style="list-style-type: none"> • T1 (4,844 sq ft) • T2 (8,611 sq ft) • T3 (8,611 sq ft) • T4 (4,826 sq ft) • T5 (31,000 sq ft) • T6 (4,844 sq ft) • T8 (8,554 sq ft) • T9 (4,844 sq ft) • T10 (15,069 sq ft) • T11 (5,167 sq ft) • T12 (10,118 sq ft) • T13 (8,611 sq ft) • T14 (8,611 sq ft) • T15 (17,222 sq ft) • T16 (4,144 sq ft) • T18 (16,146 sq ft) • T19 (8,611 sq ft) • T20 (13,993 sq ft) 	<p>Cinecittà has a range of permanent standing sets (Ancient Rome, Florence, Jerusalem), dressing rooms, make up and wardrobe space, offices, a green screen studio.</p> <p>It plans to offer two more stages and an underwater filming stage.</p>

5.8. Romania

Romania has one large production facility, Castel Film Studios. Offering 10 soundstages ranging from 6,000 sq ft to 36,100 sq ft, a water tank, 65 acres of backlot and standing sets, Castel Film Studios has attracted films such as *The Nun*, *Dragonheart Vengeance*, and the *A Christmas Prince* film series.

While production levels are not as high as in neighbouring countries, the introduction of their cash rebate in 2018, combined with low production costs, has revived foreign interest in the country as a site for production. In 2019 there were 62 international and domestic projects submitted for consideration for the rebate. 48 projects have been approved, with five projects rejected and the remainder still in consideration. At least 20 of the submissions were for international productions.²¹

Romania recently introduced a cash rebate of up to 45%. The baseline was 35% on qualified expenditure for feature and short films, documentaries, TV/web series and animation projects with a minimum spend of €100,000 and €10m project cap. However, since last November the incentive has been inactive owing to a change in managing authority. The incentive is expected to be back in operation later this year.

Table 6: Studio Facilities in Romania

	Stages	Other facilities
Castel Film Studios	<ul style="list-style-type: none"> • Stage 1: 5,813 sq ft • Stage 2: 5,813 sq ft • Stage 3: 5,813 sq ft • Stage 4: 13,563 sq ft • Stage 5: 35,994 sq ft • Stage 7: 27,125 sq ft • Stage 8: 2,325 sq ft • Stage 9B: 8,235 sq ft • Stage 10: 4,424 sq ft • Stage 33: 15,758 sq ft 	<ul style="list-style-type: none"> • 65 acres backlot • Collection of standing sets, including gothic church, western town, American suburbia, medieval village, urban street, forest and lake. • 1 water tank, 2,178 sq ft

5.9. Serbia

Serbia is a low-cost competitor to Croatia, and were a studio built in Croatia, many productions would consider Serbia’s infrastructure as another viable option during the decision-making process. Currently, two large studio facilities operate in Serbia (Avala and PFI – see below), with PFI the being the largest and most well-equipped.

Table 7: Studio Facilities in Serbia

	Stages	Other facilities
Avala Studios	<ul style="list-style-type: none"> • Stage 1 (15,386 sq ft) • Stage 7 (6,026 sq ft) • Stage 4 (3,822 sq ft) • Stage 5 (4,386 sq ft) 	Stage 4 includes 2,152 sq ft of office make up, and wardrobe space.

²¹ Market Analysis 2019: Romania, *Film New Europe*, 2020

	The only available stage (i.e. not committed to a long-term lease) is Stage 4.	
PFI Studios	<ul style="list-style-type: none"> • Stage 2 (19,625 sq ft) • Stage 3 (19,625 sq ft) • Stage 4 (13,524 sq ft) • Stage 5 (13,524 sq ft) • Stage 6 (13,524 sq ft) • Stage 7 (6,468 sq ft) • Stage 8 (6,468 sq ft) • Stage 9 (6,468 sq ft) 	Studio facilities include multi-story annexes attached to the stages, which house offices, make up and wardrobe space.

Despite its strong studio offering relative to the Balkan region, Serbia is less established on many fronts in comparison to Croatia. Serbia’s incentive is newer than Croatia’s, having been established in 2016. While it has attracted mid-sized productions in recent years (including *McMafia*, which primarily shot in Croatia) it has not attracted any large-scale productions for filming.

6. POTENTIAL SITES

6.1. Location

As part of the Study, SPI considered a number of sites on which a studio could be developed. Early in the Study, it became clear that while there were possibilities in several parts of Croatia, the focus should be on the Zagreb region.

Our analysis of productions listed on the Filming in Croatia website showed that the majority of international productions in Croatia shoot in Zagreb:

Table 8: Number of Shoots by Location in Croatia

City/town	Number of Shoots
Zagreb	18
Split	11
Dubrovnik	9
Opatija	10
Rijeka	6
Rovinj	5
Pula	4

Filming in Croatia/Olsberg•SPI analysis

A studio facility also requires good travel options and proximity to an airport. While a number of Croatian cities could potentially fulfil this requirement, Zagreb is the city that is best connected to other cities within Croatia (and indeed outside of Croatia) and has good links with coastal locations. It has a large international airport and good railway connections.

Most crew are based in the Zagreb region so a potential studio would be able to draw from Croatia's main crew base, and there is an existing critical mass which could be scaled up to meet the demands of a modern studio facility.

6.2. Researched Options

The SPI team visited four sites which could potentially be used to develop a studio. For the purposes of the study, these are defined as 'Velika Gorica', 'Jastrebarsko', 'Bistra', and 'Ekopark Kras'.

Several other sites which are no longer being considered were also investigated by SPI, including the Jadran Film studio and a site at Pula. The project team researched several former studio projects in Croatia which never came to fruition.

The section below presents our findings for each of the visited sites.

6.2.1. Velika Gorica

The Velika Gorica site is near to the centre of Zagreb (27-minute drive), Zagreb Airport (10-minute drive), and the city of Velika Gorica.

Figure 8: Velika Gorica Aerial View



Source: Apple Maps, Olsberg•SPI

At 98 acres, the site provides ample development potential for a scalable studio build. While a minimum of 50 acres is recommended, the extra space at Velika Gorica would be ideal for attracting allied businesses and for the development of a training hub.

The plot is bordered on the south by a 300m wide defensive embankment and flood control system designed to handle and control any heavy snow melt. This area remains dry for most of the year and is available to use as additional backlot.

Running the length of the northern boundary is a main highway and a more distant railway line. Ten minutes to the west is Zagreb's Franjo Tudman Airport. The land currently has a single tenancy, a small house at the entrance. It is understood that the property can be purchased and that the plot would be supplied free from tenants.

During the course of the Study, Velika Gorica was being considered for development by a private team of investors ('**Studio 2020**'), working with the local Velika Gorica government. However, while the site is suitable for development and well-located, an acoustic survey revealed noise issues which cannot be mitigated, meaning the site cannot be used for a studio facility.

6.2.2. Jastrebarsko

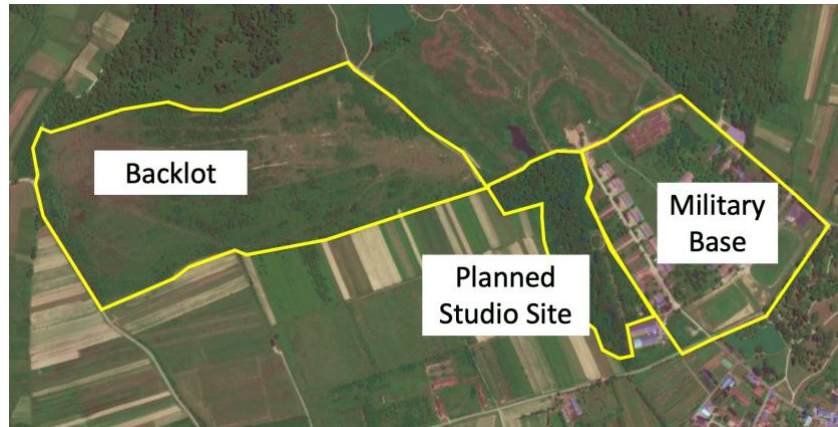
Three connected plots of land are available for consideration in Jastrebarsko, a small town around 35-40 minutes' drive from Zagreb, and located just off the major E65 highway (Zagreb Airport is a 33-minute drive). As with other sites, seasonal traffic can increase the travel time – in this case, the journey to Jastrebarsko from Zagreb can increase to over an hour. Jastrebarsko also has good rail connections to the capital.

The potential for a studio in Jastrebarsko was first discussed several years ago, and while that project did not come to fruition, the site is still available. There is a good level of political will for the project in Jastrebarsko, as well as flexibility regarding land use.

Of the four options considered in this study, this site is the most equipped in terms of amenities (restaurants, bars, basic shops) in the immediate area, as it sits just on the outside of the town.

The three plots of land are on the outskirts of the town (but within walking distance of the centre). As shown in the image below, the sites can be split into the Planned Studio Site, the (former) Military Base, and the Backlot.

Figure 9: Jastrebarsko Site Aerial View



Source: Apple Maps, Olsberg•SPI

All three areas have been confirmed by local government to be available for development. The intended use of each plot would require addressing. As it stands, the Planned Studio Site that has been suggested would be too small (at around 20 acres), but the use of the Military Base would make up for this.

The Military Base is a key advantage of the Jastrebarsko site, as many of the existing facilities could be repurposed. This would increase the speed at which the site could be developed and would certainly reduce the capital expenditure for building in many areas. For example, existing tank hangars would make excellent workshop facilities and small shooting stages, and the existing office building is suitable for conversion to production offices.

Because it was formerly used by military, there is high voltage electricity present on the site already. The site is however hillier than Velika Gorica, and land itself will require a large amount of earth works/cut and fill, adding a cost.

While a full acoustic survey should be carried out, the site appears to be relatively quiet with no acoustic challenges. Aircraft were witnessed at the Jastrebarsko site and were audible. The noise levels we heard are unlikely to cause issues, but the number of flights and the peak noise level require further investigation.

One potential issue is that the local government wishes to develop other adjacent plots – it is unclear at this stage if these plans would affect the operability of a studio as regards noise and privacy. As mentioned, however, there is a high level of political will to accommodate a potential studio development, so this is not viewed as a major concern.

The site is state-owned (it is owned by the State of Croatia, rather than the local government), which provides a major advantage for HAVC as it could be donated, reducing costs for developers. This benefit could be used to ensure the resulting facility meets the strategic objectives of the Croatian government and HAVC – for instance regarding training and accessibility for local productions.

SPI considers Jastrebarsko to be the best option for development as a studio facility. It is suitably located, linked to a well-equipped and well-connected town, is state-owned, and has existing structures which could be repurposed for studio use.

6.2.3. *Bistra*

The site at Bistra Business Park emerged later on in the course of the Study but was visited by the SPI team last. It is close to the city (around 30 minutes' drive, though longer in seasonal traffic) and the plot is part of a larger private industrial development.

While the Velika Gorica and Jastrebarsko sites are both owned by the Croatian government, Bistra is privately owned. While this could have advantages for developers, as it could potentially be acquired more quickly and thus be developed and enter the market sooner, this is not guaranteed.

Crucially, the land being privately held means that it cannot be donated by the government as an incentive to developers, which could be leveraged by HAVC in order to ensure the facility meets its strategic goals in terms of training and local usage.

The land is suitably large for a studio to be developed, there is a large shopping centre adjacent which has many facilities, and the nearby town of Zaprešić has shops, bars, and some accommodation. There is also further adjacent land which could be used for expansion, or for aligned businesses and vendors.

There are no known acoustic issues at the site, and it is not situated on flight paths. It has good utilities provision and good roads to the plot. As it was only considered at a late stage in the Study, there are a number of unknowns which remain – however SPI regard it as a suitable alternative option if Jastrebarsko is ruled out.

6.2.4. Ekopark Kras

The SPI team considers Ekopark Kras to be the least suitable of the sites surveyed. The site is currently used as a tourist destination and is under private ownership, but was visited as it offers suitable land in terms of size.

The site is large enough for a studio, and fairly level. The existing infrastructure at Ekopark would also be very attractive as part of a studio development but would require exclusive use by the studio.

However, there are a range of issues. First, at a 52-minute drive from Zagreb the site is too far from the capital. It is also a 38-minute drive from Zagreb Airport, the furthest away of the three sites. Second, it is unclear if the current owner wishes to engage and if so, how punitive to studio BP entry would be. It is also believed that a theme park is also planned for some of the available land. Third, there are potential acoustic issues, as military jets and helicopters have been witnessed overhead and there is an adjacent private airfield. No acoustic study has been carried out.

Ultimately, Ekopark Kras is too remote and so should not be considered as an option for studio development.

6.3. Feasibility Test

The table below sets out the key considerations for any new studio site and shows how each site – Velika Gorica ('VG'), Jastrebarsko ('J'), Bistra ('B'), and Ekopark Kras ('EK') – scores.

Table 9: Feasibility of Sites Against Key Considerations

	VG	J	B	EK
Free of planning constraints	✓	✓	✓	?
Of suitable size (at least 50 acres)	✓	✓	✓	✓
Travel distance from city/hotels	27 min	38 min	30 min	52 min
Travel distance from airport	10 min	33 min	25 min	38 min
Geologically sound	✓	✓	✓	✓
Free from any environmental contaminants	✓	✓	✓	✓
Utility provision to the door	✓	✓	✓	✓
No air traffic noise	X	✓	✓	X
No railway noise	X	✓	✓	✓

	VG	J	B	EK
No highway noise	✓	✓	✓	✓
Not impacted by local industrial activity	✓	?	?	✓
Not overlooked by neighbouring land	✓	✓	✓	✓
Able to achieve an internationally recognised acoustic rating	X	✓	✓	✓
Suitable light levels	✓	✓	✓	✓
Suitably low pollution levels	✓	✓	✓	✓

6.3.1. Pula and Others

Several other new studio proposals in Croatia were mentioned during the course of the Study. Most of these were past studio projects which are no longer active, but a site in Pula was considered for the study.

While there was some interest from investors in the Pula site, SPI found it to be too far from any major production centre, and too difficult to access from outside Croatia – with limited air, rail, and highway connections.

6.4. Ranking

The SPI team visited and surveyed four sites in Croatia. They are ranked as follows:

1. Jastrebarsko
2. Bistra
3. Ekopark Kras
4. Velika Gorica

Jastrebarsko has a number of advantages which make it our first choice for development. In particular, we see the Jastrebarsko site’s public ownership as a major advantage as it would potentially allow the Croatian government to donate the land which could be used to ensure that the resulting studio meets the strategic aims of HAVC and the needs of the Croatian production sector.

It is also suitably located, linked to a well-equipped and well-connected town, and has existing structures which could be repurposed for studio use.

Bistra is considered suitable for further exploration if Jastrebarsko becomes unfeasible, but the latter has a number of advantages which make it our first choice. The third, Ekopark Kras, is too far from Zagreb and should not be considered as a potential site going forward.

Velika Gorica should not be considered due to the serious acoustic issues discovered during our research, which prevent the site from being developed as a studio. Jastrebarsko and Bistra do not appear to have any acoustic issues but full acoustic surveys should be undertaken for these options if seriously considered.

7. OPTIONS FOR STIMULATING LOCAL PRODUCTIONS

The potential for a studio to service international projects is clear, but a key element of exploring the feasibility of a film studio in Croatia is the possibility for it to stimulate the local production sector. If the studio is to receive public funding (which could be in the form of donated land) the facility could be expected to meet certain cultural or industrial objectives in Croatia.

Furthermore, the health of the international sector and that of local productions are intertwined. These two elements of the same market have a symbiotic relationship. The domestic sector provides early career paths for filmmakers who might graduate to international projects, thus expanding the range and depth of the workforce for both elements. And having local crew work on incoming productions provides many opportunities for knowledge transfer and skills development.

The Croatian industry has expressed interest in a studio but also has doubts regarding whether the domestic productions, which are generally lower in budget, would be able to afford studio space in a new facility, were it to be developed on purely commercial terms. To address this, the studio's strategy should include measures to ensure accessibility for local producers.

The SPI team proposes two measures:

1. The facility could include a B-grade stage, finished to a low/mid-standard compared to the rest of the facility. This could be let to local productions for a lower rate than the main stages.

Ideally this would be included as part of a training hub on the studio lot, so it could be used for education as well as for national film and television productions. This way, as well as benefiting Croatian productions, trainees would have access to a fully functional studio where they could gain hands-on experience.

A B-grade stage would have reduced gantry and rigging compared to a standard stage and would be soundproofed to a lower level. For additional support facilities which would be included with main stages, a B-grade stage could be built without bespoke dimmer rooms, and with downsized welfare areas – recognising that lower crew numbers would likely be lower. Overall, a 25-30% reduction in build cost would be aimed for.

The recommended specification in Section 9 does not include a B-grade stage, and therefore it is also not modelled in our financial projections for the Study.

2. The second measure we propose would be adapting incentive or film funding systems to give additional support for making use of facilities.

For example, the production incentives offered in Malta and Portugal have higher rates for projects which (in Malta) use local facilities or (in Portugal) have a significant economic impact. It may be possible in Croatia to link an uplift – like the 5% uplift available for regional filming – to the cost of using qualified infrastructure such as a new B-grade studio.

However, we note that HAVC has a limited funding pot for incentives – so adding an uplift of this kind would reduce the funding available for other programmes. Particularly if the uplift were available for international projects, it may have the effect of reducing the funding available for domestic productions.

8. EUROPEAN STATE AID

Please note: State Aid is a complex area of European competition law. This document provides a research overview of some issues for consideration. Further, qualified legal advice is essential in relation to any specific studio development or investment.

As part of the Study, SPI were asked to consider the potential issues around State Aid that could arise from a government investment in a studio facility. This section defines State Aid, and provides a case study of one notable European State Aid case relating to a studio facility in Valencia, Spain, and its implications for this project.

8.1. Definition of State Aid

In the European Union (EU), any subsidies given by governments are considered State Aid, and if a subsidy is considered to distort competition or the free market, it is classed as illegal State Aid.

A range of derogations exist to allow what would otherwise be considered illegal aid to be given, and these relate to the guiding objectives of the EU. These derogations include one which allows support to be given for promoting culture and this forms the basis of film funding in Europe, and which (as one key example) allows governments to offer incentives for film and television productions under certain defined conditions.²²

Governments are also allowed to invest in projects using the Market Economy Investor Principle ('MEIP') – which essentially means that the investment is considered to have been made on market terms. In these cases, the government must be able to show that a market investor could have made the investment on the same terms.

8.2. State Aid and Studios

Seeking qualified legal advice regarding State Aid is particularly important in the case of film studio facilities, after a large government-funded studio in Spain (Ciudad de la Luz) was shut down when the European Commission ruled that the government funding it received was illegal.

Studios have since been built using public money, and we do not believe there to be a substantial barrier to Croatia investing in or subsidising the development of a facility. Nonetheless the case of Ciudad de la Luz illustrates many potential State Aid hurdles.

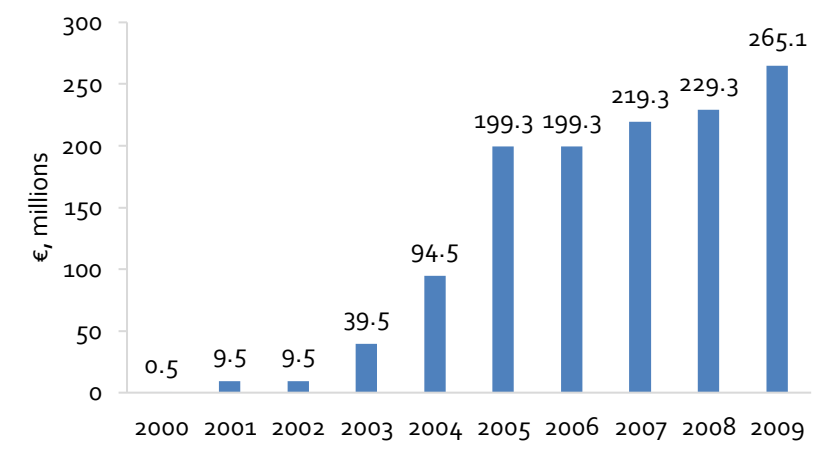
8.3. Ciudad de la Luz – Case Study

Ciudad de la Luz was a large film studio complex outside the town of Alicante in Valencia, Spain. Conceived as a state-of-the-art film production facility for Europe, which would eventually have the world's largest sound stage and host major Hollywood projects, the development was entirely publicly funded, receiving huge amounts of public money and ultimately failed to attract large international productions.

In 2008, the European Commission (EC) launched an investigation into the funding of the facility, and in 2012 it found that the Valencian government's investment of €265m constituted illegal aid under European Union regulations.²³

²² Communication from the Commission on State aid for films and other audiovisual works, European Commission, 15th November 2013

²³ Commission Decision of 8 May 2012 on State Aid implemented by Spain for Ciudad de la Luz SA, European Commission. 8th May 2012.

Figure 10: Total Valencia Government Investment in Ciudad de la Luz, 2000-2009

Source: European Commission

8.3.1. Initial Complaint and Response

The investigation into Ciudad de la Luz was prompted by a complaint from Pinewood Studios alleging illegal State Aid in the public funding of Ciudad de la Luz and, especially, the system of film incentives put in place by Ciudad de la Luz.

The Spanish authorities responded that the public support was not State Aid, as a private investor would have invested on the same terms.²⁴ This relates to the EC's Market Economy Investor Principle, or MEIP:

'The essence of the MEIP is that when a public authority invests in an enterprise on terms and in conditions which would be acceptable to a private investor operating under normal market economy conditions, the investment is not a State Aid.'²⁵

It also argued that if the investment did constitute State Aid, it would comply either as regional aid, or cultural aid.

After an initial examination of the business case, the EC

- doubted a private investor would have provided 100% funding for the studio;
- thought that that State Aid may have been involved; but
- doubted that this would be compatible with EU State Aid rules.

The EC launched an investigation into Ciudad de la Luz at this stage, 'to determine whether the funding by the Valencia Regional Government constitutes illegal State Aid which distorts competition between European film studios.'²⁶

8.3.2. European Commission Findings

The first part of the investigation involved testing whether the MEIP applied, i.e. whether a market investor would have invested on the same terms. If it was found that the MEIP did apply, then the investment would not be subject to State Aid rules. After rigorously testing the business plan, however, and commissioning an independent consultancy to do the same, the EC found that no rational market investor would have made the investment on the same terms.

²⁴ State aid: Commission investigates funding of major Spanish film studio complex, European Commission. Press release. 13th February 2008.

²⁵ The Market Economy Investor Principle, *Competition Policy Newsletter*, No. 2, 2002. European Commission.

²⁶ State aid: Commission investigates funding of major Spanish film studio complex, European Commission. Press release. 13th February 2008.

This, along with the fact that the investment provided selective support, generated state resources, distorted competition, and had an effect on trade, meant the investment did constitute State Aid in the eyes of the EC.

The EC then investigated whether the investment, which now constituted State Aid, was compatible with either regional or cultural State Aid rules (as mentioned, the Spanish authorities argued that the investment in Ciudad de la Luz was compatible with both of these).

The EC first found that it was not compatible with regional aid rules. In this case, regional aid rules required that 25% of the financing must have come from the recipient of the investment, and that this 25% should not contain any aid. Ciudad de la Luz did initially have a private investor, which held a 25% stake in the project. However, this private investor was also the management company for the project and received a fee (which was considered aid, since it came from the government). Moreover, by 2004 the private investor's stake was only 0.2% due to continued government investment in the project.

Then, to assess whether it was compatible under cultural State Aid rules, a 'balancing' test was undertaken, and the following questions were raised:

- a) Is the aid measure aimed at a well-defined objective of common interest (i.e. does the proposed aid address a market failure or other objective)?
- b) Is the aid well designed to deliver the objective of common interest? In particular:
 - i. Is the aid measure an appropriate instrument, i.e. are there other, better-placed instruments?
 - ii. Is there an incentive effect, i.e. does the aid change the behaviour of firms?
 - iii. Is the aid measure proportional, i.e. could the same change in behaviour be obtained with less aid?

Are the distortions of competition and the effect on trade limited, so that the overall balance is positive?²⁷

The EC ultimately found that the investment in Ciudad de la Luz did not constitute cultural State Aid, for the following reasons (related to the balancing test above):

a. Market Failure

On the issue of market failure, a market failure is considered to exist if 'the market outcome does not lead to the highest total social welfare'²⁸ in the case of roads, education, or libraries, where it is permitted for governments to provide or subsidise.²⁹

The EC found that a competitive commercial market exists for film studios, and that although Valencian filmmakers stood to benefit from Ciudad de la Luz (lower transportation costs, proximity to other film services) this did not constitute a market failure. To succeed on these grounds, it would need to be shown that the social value of a studio is higher than the cost.

b. Well-designed Aid

Here the EC tested whether the aid was well-designed and proportionate to the 'objective of common interest' (i.e. the market failure) – and found that because

²⁷ European Commission. 8th May 2012. Paragraph 102.

²⁸ European Commission. 8th May 2012. Paragraph 103.

²⁹ European Commission. 8th May 2012. Paragraph 103.

there was no well-defined market failure, the aid could not be considered proportionate to it.

If a studio was funded to support local production, the intervention would have to be compared with other measures which could have achieved similar effects from the perspective of local film producers.

c. Distortion of Competition and Trade

Here the EC found that while it could be argued Ciudad de la Luz did not have a significant distortive effect on competition (since it had failed to attract major productions), the mere fact that it increased the overall supply of filming space meant it would affect the overall market prices in the sector.

Taking all of this into account, the EC found that the MEIP *did not apply* to the investment in Ciudad de la Luz, meaning State Aid rules *did apply*. Confirming its initial doubts, it then found that the investment was not compatible with State Aid rules – and was therefore illegal State Aid.

8.3.3. Consequences

The €265m invested by the Valencian government constituted illegal aid under European Union regulations, and it was ordered that this be recovered and returned to the state. Unable to recover the money, the studio closed. A number of attempts have since been made by the government to sell the facilities off in lots, with no suitable buyer found.³⁰

In the last few years, after a transfer of Ciudad de la Luz's assets and debts to the public investment agency which funded it, the site has been allowed by the EC to be used again on the condition it is not used for filming.³¹

8.4. Findings

While the Ciudad de la Luz case study does suggest it can be difficult for governments to justify investment in studios, there have since been a number of publicly funded studios in Europe. These include The Sharp Project and Space Studios in the UK, Troy Studios in Ireland, or the planned studios in Estonia.

The main difference is cost: Ciudad de la Luz received €265m in public funds, whereas The Sharp Project received less than a tenth of that at £17m (€20m), for example, while the studios in Tallinn, the Estonian capital, will reportedly cost even less at €5m.^{32,33} The substantially lower costs of these investments show that these authorities are making far more strategic investments at a level much more proportionate to their aims and objectives.

The other key difference is the presence of a cultural or social impetus for investment, or the presence of a market failure that the investment would address. Similarly, co-production funding could be linked to the use of infrastructure. In both cases, a model would need to be developed, and it would be necessary for the Croatian government to seek State Aid advice.

In Manchester, it is notable that The Sharp Project (a local authority-funded studio project) was positioned as a "digital hub" and received funding from the European Regional Development Fund (ERDF). An ERDF press release highlights that the facility is home to '60 digital entrepreneurs and production companies specialising in digital content production, digital

³⁰ Alicante's Ciudad de la Luz film studio sell-off draws Hollywood big guns, *The Guardian*. 13th February 2015.

³¹ Bruselas levanta el veto de 15 años a la iniciativa privada en Ciudad de la Luz, *El País*. 11th December 2017.

³² The Sharp Project: Expanding Support to the Development of Manchester's Digital Sector, Manchester City Council, 12th September 2012

³³ Tallinn Film Wonderland studios to open in 2022, *Screen Daily*, 26th November 2019

media and TV & film production', suggesting this funding may be easier to access if the project can demonstrate that it is building or developing an ecosystem.³⁴

Indeed, the press release also offers a summary of The Sharp Project's objectives in relation to the ERDF:

'The Sharp Project understands it is important to create an ecosystem on site which allows growth and development, as companies collaborate as well as compete with each other for business.

To enable this The Sharp Project carefully select companies who offer complimentary [sic] or additional services which will allow creative companies to develop their skills and support their businesses to grow for example, legal expertise in intellectual property, venture capital funding or specific to sector training.

Allowing the youth to develop in the digital sector is also a goal. SharpFutures is a social enterprise that supports young people into employment in the creative digital sector by offering a range of interventions including Apprenticeships, Work Experience and Volunteering. This programme nurture [sic] the transition into work, whilst responding to the fluctuating needs of creative digital businesses.'

³⁴ 'The Sharp Project: Enhancing creative collaboration', European Commission, 5th October 2015
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9. RECOMMENDED SPECIFICATION

This chapter sets out SPI's recommended specification for the studio facility. While the different site options would dictate the particular specifications and arrangements, the sizes we set out below reflect the anticipated demand in Croatia and can be followed regardless of which site is being considered.

9.1. Stage Sizes

Productions generally will use the largest space that their budget will allow, or failing that, what is available. To maximise capacity, stages should be 15,000 sq ft at the lowest (an exception could be made here for the proposed B-grade studio – see Chapter 7), but some larger stages will be needed. For Croatia, a studio larger than 30,000 sq ft would likely be too large and might have to be sold at a lower rate than other spaces to attract productions.

These are large stages that will deliver sound shooting capability (a stage is considered soundproofed when an internal acoustic performance of NR25 can be achieved). Sound stages are predominantly used by two production types, feature film and high-end television, both of which benefit from a range of ancillary facilities onsite.

From our research, we have formed the view that a studio in Croatia will need to have capacity for two TV drama or film productions shooting simultaneously. These productions would be mid- to high-budget productions (but not tentpole Hollywood productions) and would each generally use three stages, or between 70,000 sq ft and 100,000 sq ft of stage space.

Consequently, the ideal studio in Croatia would have between five and six sound stages. We recommend the following composition of six stages, ranging from 15,000 sq ft to 30,000 sq ft (total 115,000 sq ft):

- 1 x 30,000 sq ft
- 2 x 25,000 sq ft
- 2 x 20,000 sq ft
- 1 x 15,000 sq ft

These stages will require sufficient internal clear working height between 40-50 ft to allow an appropriate size of build and lighting rigs.

At any studio it is beneficial to have one large, flexible space that can split in two, so elephant doors (which permit the space to be split into two) may be advisable for the largest stage. From the studio's perspective this allows capacity to attract larger productions, but if not possible, two spaces for smaller productions.

The design of the stages is reliant on construction method, internal treatment, correct choice of doors, and mechanical/electrical services, etc.

These stages will all need the necessary support facilities, listed in Chapter 9.2. For a studio operator, having support facilities for each stage avoids productions being forced into constructing film sets on stages along with other working departments. This also mitigates health and safety risks.

9.2. Additional Facilities

Studios and stages must have sufficient facilities attached to them to provide the necessary areas to support the production:

1. Workshops, to be used for set and prop construction, will require almost as much space as the studios themselves – assume 80% additional space (92,000 sq ft)

2. Production support offices of varying sizes, to be used by various production departments, as well as dressing rooms and crowd facilities will require around 50% additional floorspace (58,000 sq ft)
3. While this will take time to develop, we recommend having space to create a 'vendor village' where local rental companies and suppliers can be based
4. Catering (kitchens and canteen facilities)
5. Security (entry control)
6. Studio management facilities
7. Points 3 to 6 on this list could require 75,000 sq ft.

A rule of thumb is that for each sound stage, an average of 70 car parking and 10 truck parking spaces would be relevant. If a production requires a large number of extras, buses or other transport to the facility should be arranged. Additional prioritised parking should be available at key vendor offices, but these will follow standard ratios for such buildings.

At this stage, SPI do not recommend including separate water filming facilities, though subject to demand the stages could include covered shallow tanks.

9.3. Backlot

In addition to stages, workshops and the necessary office and artist facilities required by a production, thought should also be given to provision of a 'backlot' for exterior set build and shooting, catering facilities for non-shooting crew and the provision of suitable space for key vendors such as lighting, grip, consumables, camera etc.

It is therefore advisable to secure a parcel of land that will allow for all activities within a single plot. It is generally accepted that an area of 30-50 acres is a suitable starting point for this sort of build, but this is usually more dependent on the land available. Where possible, further land should be available for a phased expansion should business levels dictate.

10. FINANCIAL PROJECTIONS

This chapter presents SPI's estimated financial projections for the recommended studio specification in Croatia as set out in Chapter 9. It should be stressed that, as outlined in the brief for this project, these projections are for operational income and expenses and do not take into account any capital expenditure, which for a new studio development would represent the largest cost.

The financial projections cover the first five years of the facility's operations, but do not include any capital expenditure assumptions or any costs of finance.

10.1. Assumptions

SPI's financial projections utilise three main inputs:

- The **studio specification**, i.e. the size of the stages and other spaces
- **Income variables**, including the rental rates for different spaces, expected occupancy, and income inflation
- **Operational expenses**, including the annualised costs of staffing and maintaining the studio, insurance, and equipment.

These are explored in further detail in the following sub-chapters.

10.1.1. Studio Specification

The financial productions are for a studio specification matching the one set out in Chapter 9, and are not specific to any of the site options explored for this Study.

The studio specification used for the financial model comprises the following:

- **Stages** – total 115,000 sq ft
 - 1 x 30,000 sq ft
 - 2 x 25,000 sq ft
 - 2 x 20,000 sq ft
 - 1 x 15,000 sq ft
- **Workshops** – total 92,000 sq ft
- **Offices** – total 58,000 sq ft

In Chapter 9 we recommend 30-50 acres of **Backlot**, but as these projections are based on a generic specification rather than a specific site we opted to use a generic backlot with no specific size, let at a flat rate rather than per sq ft (this is detailed in 'Income Variables' below).

10.1.2. Income Variables

The key income variables are the rates charged for different lettable spaces at the facility. For our model, the lettable spaces were categorised as Stages, Workshops, Offices, and Backlot.

We estimate that a studio facility in Croatia could charge the following rates:

- **Stages** – €0.80 per sq ft/week
- **Workshops** – €0.40 per sq ft/week
- **Offices** – €0.60 per sq ft/week

The **Backlot** is modelled as a single unit, as the size would vary according to the chosen site. For the projections, we assume that a Backlot could be let for €9,500 per week.

These prices were reached through consultation with the Studio 2020 investor team and are known by the SPI team to be comparable with studio rates at other European facilities.

For comparison, a public report focusing on the UK's studio offer estimated that purpose-built studios in Greater London were letting stage space for around £1 per sq ft/week, and that in

some cases this amount would be charged for repurposed warehouses of moderate quality.³⁵ At time of writing, €0.80 per sq ft/week would equate to £0.71 per sq ft/week, representing a good cost saving on prime UK rents which would be expected.

The income from the different spaces at the facility are, in the model, multiplied by the expected occupancy percentage. We expect that once the studio is up and running, it will reach an 80% occupancy within five years. For the first few years, we assume it will operate at a lower occupancy, as follows:

Table 10: Projected Occupancy Levels

Year 1	Year 2	Year 3	Year 4	Year 5
40%	60%	70%	75%	80%

Over the modelled period we project an income inflation of 2% year on year.

10.1.3. Operational Expenses

The model accounts for the operational expenses of running a studio facility, which we split into seven groups: business rates, insurance, utilities, security, marketing, management/finance, and cleaning.

For a studio of the specified build size, we estimate the annual costs of each of these areas to be as follows:

Table 11: Projected Operational Expenses, Annualised

Expense	Annual amount
Business rates	(€ 500,000)
Insurance	(€ 500,000)
Utilities	(€ 450,000)
Security	(€ 300,000)
Marketing	(€ 450,000)
Management/finance	(€ 860,000)
Cleaning	(€ 300,000)

In total we estimate the Year 1 operational expenses to amount to (€3,360,000), and thereafter subject to 2% inflation year on year.

10.2. Projections

The financial projections generated for the Study are provided in detail on the following page:

³⁵ Sites, Camera, Action!, Lambert Smith Hampton, 2018

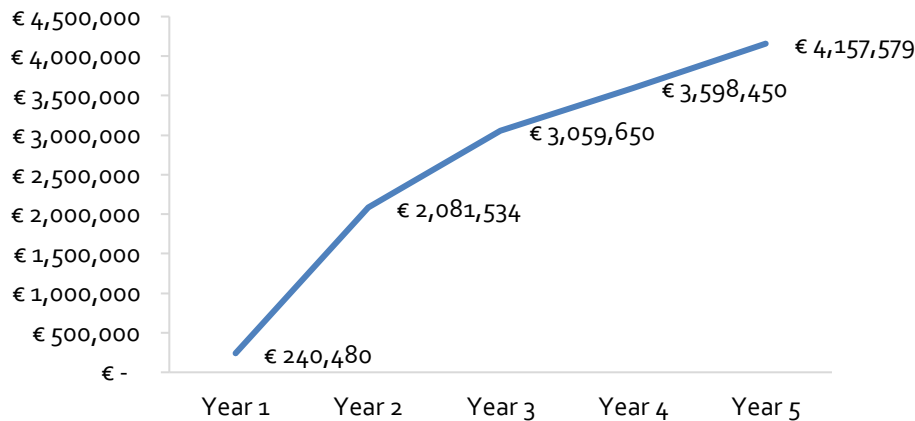
Table 12: Income/Expenses Projections

Income		Year 1	Year 2	Year 3	Year 4	Year 5
Stages		€ 1,913,600	€ 2,927,808	€ 3,484,092	€ 3,807,614	€ 4,142,684
Workshops		€ 765,440	€ 1,171,123	€ 1,393,637	€ 1,523,046	€ 1,657,074
Offices		€ 723,840	€ 1,107,475	€ 1,317,895	€ 1,440,271	€ 1,567,015
Backlot		€ 197,600	€ 302,328	€ 359,770	€ 393,178	€ 427,777
Total		€ 3,600,480	€ 5,508,734	€ 6,555,394	€ 7,164,109	€ 7,794,551
Expenses						
Business rates		(€ 500,000)	(€ 510,000)	(€ 520,200)	(€ 530,604)	(€ 541,216)
Insurance		(€ 500,000)	(€ 510,000)	(€ 520,200)	(€ 530,604)	(€ 541,216)
Utilities		(€ 450,000)	(€ 459,000)	(€ 468,180)	(€ 477,544)	(€ 487,094)
Security		(€ 300,000)	(€ 306,000)	(€ 312,120)	(€ 318,362)	(€ 324,730)
Marketing		(€ 450,000)	(€ 459,000)	(€ 468,180)	(€ 477,544)	(€ 487,094)
Management/finance		(€ 860,000)	(€ 877,200)	(€ 894,744)	(€ 912,639)	(€ 930,892)
Cleaning		(€ 300,000)	(€ 306,000)	(€ 312,120)	(€ 318,362)	(€ 324,730)
Total		(€ 3,360,000)	(€ 3,427,200)	(€ 3,495,744)	(€ 3,565,659)	(€ 3,636,972)
Surplus/(Loss)		€ 240,480	€ 2,081,534	€ 3,059,650	€ 3,598,450	€ 4,157,579
Cume		€ 240,480	€ 2,322,014	€ 5,381,664	€ 8,980,115	€ 13,137,693

10.3. Analysis

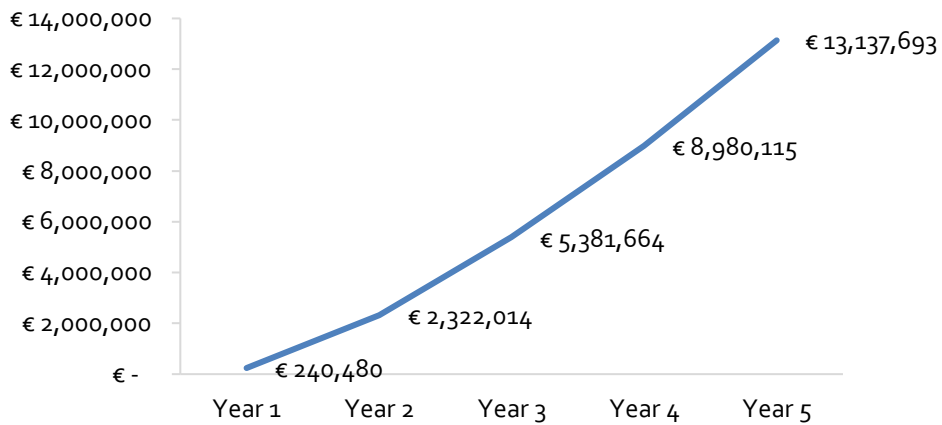
Our projections find that the studio would be commercially viable and able to make a substantial income, even at relatively low occupancy levels in the first years. The annual surplus/(loss) and cumulative surplus/(loss) are shown in the following charts:

Figure 11: Projected Annual Surplus/(Loss)



Source: Olsberg•SPI

Figure 12: Projected Cumulative Annual Surplus/(Loss)



Source: Olsberg•SPI

We expect the large surplus shown above to be substantially offset by capital costs, which although not modelled here (capital expenditure estimates were outside the scope of this Study) will result in large annual costs of finance.

It should also be noted that the potential impact of the Covid-19 pandemic on the business case has not been modelled. Rather, we assume that if a facility is developed in Croatia, by the time it opens the impact of Covid-19 will be substantially reduced and will not affect the business case.

11. POTENTIAL ECONOMIC AND OTHER BENEFITS OF A NEW STUDIO

The screen production sector (particularly feature films and TV drama series) is recognised globally as a unique and powerful driver of economic development impacts, and automatic production incentives have played a key role in stimulating this success.

11.1. Gross Value Added

Screen productions generate substantial amounts of economic expenditure, which is distributed widely across the industry's workforce, locations, local producers, service and rentals companies and a wide variety of other suppliers and businesses. These benefits are evidenced by solid, quantitative metrics such as Gross Value Added or Gross Domestic Product.

Other key metrics that evidence economic benefits include Additionality (identifying the increased national economic activity attributable to a specific investment or initiative) and Return on Investment (measuring direct inflows and outflows of funds to the national treasury).

11.2. Inward Investment

The majority of this beneficial activity is funded by foreign producers through inward investment, thereby generating important currency inflows. This flow of funds phenomenon is a key driver in the growth of a healthy, diverse and well-rounded production sector, by contributing to strong balance of payments at a national accounts level.

We estimate that each public (incentive) investment in a foreign-financed screen production leverages three or four times the amount invested in private sector inward currency flows for the same project.

Furthermore, because this foreign-generated production activity is clearly additional (it would not have taken place in the absence of the incentive) the treasury revenues generated by the screen production through tax and other similar receipts are normally sufficient to more than offset the incentive when it is paid out.

Such structures are therefore not usually a drain on central government finance budgets, because the incentive is only provided to the production many months after the expenditure has been made, and treasury revenues collected

11.3. Job Creation

Screen production is also a great stimulus for job creation, generating freelance employment as well as full-time positions. Such jobs are also well remunerated when compared with other sectors³⁶.

Screen production jobs are of high strategic value to governments because they are mobile, highly skilled and require great creativity. Indeed, many of these roles require such individualistic expertise that they can be considered far less at risk from artificial intelligence and robotics than most other manufacturing activities: they are "jobs of the future".

11.4. Impact on Other Creative Industries

Many nations have come to realise the substantial economic and other benefits to be derived from the expansion of the fast-growing creative industries. They have become key contributors to economic growth and are the focus of a variety of initiatives to stimulate the development of the creative economy.

Screen sector production is a potent driver of activity in many other creative industries such as design, fashion, publishing, music, performing arts, advertising, marketing, and digital. A

³⁶ According to data from the Motion Picture Association the American film and television industry salaries are 47% higher than the national average for direct jobs in total, and 65% higher for direct production jobs.

recent analysis shows that screen productions drive a substantial amount of activity in the other creative industries. Analysis of a group of sample projects showed that between 38% (film) and 47% (television drama) of production expenditure benefits these other creative sectors.³⁷

11.5. Screen Tourism and Soft Power

There is strong evidence underlining the beneficial impact that screen production has on tourism globally. Indeed, screen production is a major tourism motivator, and aligns with wider trends such as experiential travel and the influence of social media on tourism. For example, one in six out-of-state visitors to Northern Ireland went there because of the influence of *Game of Thrones*, and *Game of Thrones* visitors contributed more than US\$61 million to Northern Ireland's economy in 2018.³⁸

Screen production also generates soft power benefits and enhances national branding, connecting global audiences to a jurisdiction's locations, stories, way of life and character in a way that can be both powerful and authentic.³⁹

The branding of a nation or region's people, society or culture can also have a strong influence beyond tourist visit decisions. It often generates positive impacts with citizens and residents who tend to experience a stronger "bonding" to their nation or region as a result of their enjoyment of the screen content.

11.6. Talent Development and Knowledge Transfer

A key attribute of any nation or region is its human capital and for the screen production sector this correlates with the talent of the individual practitioners, technicians, creatives and other professionals working in it. Screen production is a modern, adaptable and vivid mode for the expression of views, stories and opinions.

The talent that works in the sector have flexible and growing career opportunities, at home and abroad. The talent pool has high level, adaptable and modern skills and this can be seen in many corners of the world, with an increasing focus on technical talent development (VFX, animation and immersive reality) as well as traditional writing, directing, producing, performing and other vocational skills

11.7. Developing Creativity and Innovation

The normal production process of devising and making screen content employs a large number of creative endeavours, from initially writing the screenplay or teleplay through to all the forms of creative activity referred to in the discussion of the creative economy above. In addition to the traditional areas, there continue to be huge developments in and opportunities for creativity and innovation in screen production and post-production, delivered by digital innovations of all types.

³⁷ Film and the Creative Economy: How Film and Television Drama Productions Grow the Creative Industries, Olsberg•SPI, 31st July 2017

³⁸ Game of Thrones tourists spent €58m in North last year, The Irish Times, 22nd April 2019

³⁹ According to a British Council survey (As Others See Us 2014), 17% of foreign respondents said that UK films contribute to making the UK an attractive destination for business and leisure visitors. This report underlines the importance of soft power: 'In a multipolar, hyperconnected world, a country's power is increasingly measured by its ability to inspire and attract citizens of other nations to take an interest in its national story, enjoy its passions, and ultimately respect its values, ideas and aspirations.'

12. ABOUT OLSBERG•SPI

Olsberg•SPI provides a range of expert consultancy and strategic advisory services to public and private sector clients, specialising in the worlds of film, television, video games and digital media. Formed in 1992, it has become one of the leading international consultancies in these dynamic creative screen industries.

With its trusted insight and track record the firm has a diverse client base that includes:

- Multi-national public authorities
- National governments, including economics, finance and culture ministries
- National film institutes and screen agencies
- National tourism agencies
- Regional and city development agencies and local authorities
- Studios and facilities companies
- Independent companies at all points of the screen business value chain
- National and international broadcasters
- Trade associations and guilds
- Training and skills development organisations
- Publishers and conference organisers.

SPI has expertise in all areas of the fast-moving global creative sectors, and the firm's services span:

- Strategy and policy development for the creation and management of healthy and sustainable national and regional screen sectors
- Advising on the creation and implementation of fiscal incentives for the screen industries
- Research projects on all aspects of the value chain – including mapping and economic impact studies
- Developing, and assessing the value and impact of, tourism linked to a nation or region's film and television output
- Film commission feasibility studies
- Business development for content companies
- Strategic development of studio facilities, including business planning
- Acquisition and divestment advice for owners of SMEs
- Evaluations of publicly funded investment schemes
- Creating prospectus-style funding proposals
- International cost comparisons for film and television productions
- Advising on inward investment and exports for national and regional public bodies
- Identifying and measuring the cultural value of a productive screen sector
- Providing strategic advice for existing screen commissions, including business and marketing plans