



GREEN SCREEN ACTION PLAN - FILM LONDON 2020-2021



CONTENTS

Executive Summary	3
Background	6
Policy Context	7
Action 1 - The Grid Project	8
Action 2 – Introducing Innovation	11
Action 3 – Taking Green Screen to Gold	17
Conclusion	20

EXECUTIVE SUMMARY

Green Screen is an Interreg Europe-funded partnership project working across eight EU regions to improve policies and achieve measurable success in reducing the carbon footprint of film and TV production. These industries are a successful driver for growth across Europe, and an important contributor to the creative industries within the European economy.

The Project aims to align the practices of these successful industries, standardise environmental practices and improve regional policies so that sustainable measures for producing films, TV and audiovisual content can be adopted across Europe. Through Green Screen, participating regions will improve policies to motivate and equip productions to adopt sustainable practices and thus reduce CO₂ emissions.

Green Screen runs from 2017 to 2021 and partners include:

- **Film London** (UK) – Lead Partner
- **Bucharest Ilfov Regional Development Agency** (Romania)
- **Flanders Audiovisual Fund** (Belgium)
- **Municipality of Ystad** (Sweden)
- **Municipal Company of Initiatives of Malaga S.A. – Promalaga** (Spain)
- **Choose Paris** (France)
- **Rzeszow Regional Development Agency** (Poland)
- **Slovak Audiovisual Fund / Slovak Film Commission** (Slovakia)

It is funded by the EU's Interreg Europe programme through the European Regional Development Fund. (www.interregeurope.eu/greenscreen)

This Action Plan sets out the vision and proposed actions for Film London to implement during 2020-2021 in order to reduce the carbon footprint of our industry and to achieve policy change.

We are working with the Mayor of London to address specific areas of the Cultural Strategy and the Environment Strategy:

- Air quality
- Green infrastructure
- Climate change mitigation and energy
- Waste
- Adapting to climate change
- Ambient noise
- Low carbon circular economy

Shirley Rodrigues, Deputy Mayor for Environment and Energy said:

"It's vitally important that all businesses in London recognise and help address the climate emergency we are facing and the Green Screen project is a fantastic example of Film London doing exactly that. The Mayor is committed to working with the film industry and the culture sector as they take important action like moving their operations to green energy to reduce their emissions, helping create a more sustainable environment."

This Action Plan has been informed by interregional learning, knowledge exchange, consultancies commissioned, and good practice developed over the last three years. We have identified three key priorities we propose to deliver against in 2020 and 2021. These will contribute to giving London an environmental competitive advantage to sustain investment levels and continued growth.

The Grid Project:

When film & TV productions are filming at a location, productions almost always establish a Unit Base as nearby as possible. The Unit Base is made up of production and technical vehicles to provide facilities such as catering, hair & make-up, costume and toilet facilities. The number of vehicles can vary from eight up to thirty and to provide power to all the vehicles, productions will hire a minimum of two high power diesel generators. Each generator consumes an average of 80 litres of diesel for each 12-hour period of use.

Building on learning from our partner VAF in Flanders, the goal of the Grid Project, is to install high-specification mains powered electrical cabinets at the top three unit base locations in London. This will enable film and TV productions to access electrical energy rather than electricity produced by diesel generators.

In October 2019, we completed a feasibility study working with an Industry Advisory Group, key stakeholders and Arup. Detailed analysis completed by Arup for Victoria Park shows that during 2018 production generators consumed 64,082 litres of diesel and 1,656 litres of petrol. The CO₂ emitted by the generators was 169,556kg. The installation of an electric cabinet powered by green energy would lead to a reduction of CO₂, N₂O and PM to nil.

The following three sites have been identified for the installation of electric cabinets subject to fundraising:

- Victoria Park - Tower Hamlets E9 5HD (Pilot site)
- North Horse Ride, Westminster SW1Y 5AH
- Battersea Park - Wandsworth SW11 4NJ

We have secured pilot action funding from Interreg Europe towards the pilot site in Victoria Park and funding from the Good Growth Fund of the LEAP for funding towards the installation of electric cabinets at all three sites. The project could be adapted for implementation at other sites in London and the UK which are used as filming locations as well as other regions/cities in Europe. The learning from the pilot action will be the first step to realising the Grid Project's potential for wider distribution.

Introducing Innovation:

On behalf of the Green Screen partnership, Choose Paris commissioned consultant Benoit Ruiz to identify innovations that could be transferred to the audiovisual production sector achieving carbon savings and efficiencies. Assessing 2014-2019 EU funded innovations from Horizon 2020, the European Institute of Innovation & Technology (and EIT) working in partnership with the French audiovisual production industry, this research has identified in January 2020, 373 innovations for the entire AV industry supply chain and provided an in depth analysis of 30 of them with regards to the efficiencies – carbon (plus other environmental impacts), technical and economic. This wide data base of low carbon solutions is constantly updated and will be until the end of the project.

The results of this consultancy were launched during SATIS (November 2019) in Paris and in London during Focus (December 2019). During 2020-21 we will work with our key stakeholders and industry to promote and foster uptake of the innovations by industry. For the next two years, our innovation work will focus on five steps:

- **Convince** the various parts of AV industry that it is easy and cost-efficient to go green. This awareness will be raised through bespoke programme.
- **Rally** AV industry pioneering companies to implement some of these solutions.
- **Assess** these proofs of concepts (POCs), in real time
- **Communicate** the testimonies/economics and environmental results of these POCs to relevant stakeholders to encourage uptake.
- **Support** the industry supply chain engaging with Location Managers and rental companies in London to maximise the implementation of innovations and solutions offered.

Taking Green Screen to Gold

The Green Screen Environmental Programme was developed by Film London and Greenshoot using the principles and framework of ISO140001 and learnings of the BS 8909 - but bespoke for the filming industries. The philosophy which underpins each of the three levels (Green, Silver and Gold) is to help the filming sector to grow and collaborate with the programme.

The Green level of the programme was launched in 2016. The methodology behind the Silver level was developed as part of our Interreg Europe project in 2019 and initially being piloted on Season 3 of The Crown, through Left Bank Pictures. Informed by learning from our Green Screen journey, the Silver level requires additional tracking including energy and fuel tracking as well as waste and single use plastic bottles. The final step is to scope and develop the Gold level, which will represent full sustainability in 2020, and for productions to go through the programme in 2021.

Endorsements

"The Green Screen project is an exciting innovative initiative which supports the ESIF Operational Programme activities in London. The aims are aligned with Priority Axis 2 increasing competitiveness and Priority Axis 4 to support the action to move England's economy towards a low carbon model by reducing the levels of Green House Gas (GHG) emissions and enhancing the energy efficiency of businesses which impinges on all territories across the country."

Pat Muotto Project Manager, City Intelligence Unit, Greater London Authority

"The Greater London Authority fully endorses the Green Screen – Film London Action Plan. The Action Plan will help deliver the Mayor of London's Culture Strategy which sets out to make London one of the most film-friendly cities in the world. The Mayor has also pledged to make London carbon neutral by 2030. Film London has a strong track record of driving forward innovation in the film sector. This Action Plan will deliver systemic change with positive social, economic and environmental impacts."

Adam Cooper Principal Policy Officer, Culture & Creative Industries, Greater London Authority

BACKGROUND

"The Environment and the Economy are really both two sides of the same coin. If we cannot sustain the environment, we cannot sustain ourselves."

Wangari Maathai (Kenyan Environmentalist and Nobel Prize Winner 2004)

The London film and TV industry is currently booming: it has been growing steadily over the last two decades. Across London's 33 local authorities, the overall volume of filming in 2019 looks to be up 18% on 2018, nearing 17,000 filming days. Our environmental sustainability work delivered through Green Screen is key to supporting and maintaining these levels of filming.

The commercial and cultural strength of the UK's production sector is grounded in international confidence in the excellence of UK crews, the quality of the UK's state-of-the-art studios and facilities, our film-friendly locations, the expertise provided by the British Film Commission which is funded to deliver on inward investment and the attractive fiscal environment created by the Government's generous and reliable screen sector tax reliefs. This winning combination continues to cement the UK's reputation as the global destination of choice for film and TV production as well as making exportable films and television programmes.

From iconic landmarks to seemingly indistinct woodland, London's range of locations is rivalled by none and although London is often used to represent itself, it has also been put to good use as a double for other parts of the world such as the US, Russia and many European countries.

Film London set up and manages the London Filming Partnership of over 500 stakeholders – local authorities, organisations and agencies, landmarks and locations as well as industry – to facilitate filming across the capital and ensure that London remains film-friendly.

Film London estimates that 75% of UK film and TV production takes place in and around London and the demand for suitable locations has never been greater. The unprecedented volume of production presents us with significant challenges also with regards to social and environmental sustainability. The competitiveness and the ongoing economic success of our industry will also rely on how we address these challenges going forward.

POLICY CONTEXT: OPERATIONAL PROGRAMME AND THE MAYOR OF LONDON'S CULTURE AND ENVIRONMENT STRATEGY

At the beginning of the Green Screen project, Film London set out to address the European Regional Development Fund (ERDF) Operational Programme for England, 2014-2020. Priority Axis 4 of the policy instrument is, 'Supporting the shift towards a low carbon economy in all sectors and investment'. Priority 4b is, 'Promoting energy efficiency and renewable energy in enterprises'.

Over the last three years, Film London has been working with the Operational Programme as well as the Mayor of London's Culture team and Environment team and has explored funding opportunities through the Operational Programme:

Though it will not be feasible for Film London to access funding from the current Operational Programme to support the activities of its regional Action Plan, we will continue to work with the Operational Programme to ensure that the Programme is aware of the progress and the outcomes of this project and that our project outcomes could potentially still impact the Programmes and benefit existing projects.

The Mayor of London's Environment Strategy, published in 2018, sets out ambitious aims for London to be a zero-carbon and zero waste city by 2050, with energy efficient buildings, clean transport and clean energy. The Mayor aims for London to have the best air quality of any major world city by 2050, going beyond the legal requirements to protect human health and minimise inequalities.

Film London's Action Plan will make a contribution to, 'the shift towards a low carbon economy' and address the priorities of the Mayor's *London Environment Strategy* (2018) through:

- The feasibility study of the Grid Project has demonstrated that CO₂, N₂O and PM can all be reduced to zero.
- The innovation work offers potential in terms of energy efficiencies, carbon mitigation as well as economic efficiencies.
- Taking the Green Screen Environmental Programme to Gold will contribute to helping productions reduce their carbon footprint.

The GLA has been supportive of the feasibility of Film London's Green Screen work and the Grid project was referenced in the Mayor's Culture Strategy for London (2018):

"Filming in the capital also has an environmental impact. Film London, the Mayor's strategic agency for film, is partnering with Good Energy and the film industry, to undertake a pilot to supply renewable energy at 12-unit bases for film & TV productions. Currently, these generators consume 24,000 litres of diesel per week. This scheme could generate 768 tonnes of carbon savings per week."

The Grid Project will directly impact film production companies and potentially organisers of events and festivals. Wider environmental and economic benefits will be generated for the local community and the film production supply chain.

ACTION 1 - THE GRID PROJECT

Background:

According to the World Health Organisation, London has some of the highest levels of air pollution in Europe. The pollutants of greatest concern are nitrous oxide N₂O and tiny particles (particulate matter – PM). Filming on location currently requires extensive use of diesel generators which are a strong emitter of both of these in addition to carbon (CO₂). Due to the high volume of filming days at each of the three unit base locations, these are amongst the most polluting in the capital. To sustain levels of production, it is crucial that we identify sustainable practices and solutions.

With the introduction of the Ultra Low Emission Zone (ULEZ) in 2019 and the expansion of ULEZ in October 2021, there is also a risk that it may no longer be possible to use diesel generators. This means that the Grid Project could make an important contribution to the 'future-proofing' of the film industry in the capital.

Description of the Action:

The aim of the Grid Project will be to reduce CO₂, N₂O and PM emissions at three of the most frequently used film production bases in London.

Since the completion of the feasibility study on Victoria Park in East London, Film London has focused on raising funds and secured a Pilot Action Grant to support the testing of the Grid Project model at an initial site in Victoria Park. We have also secured funding from the Good Growth Fund of the LEAP (Mayor of London) which will help roll out the Project to two further sites.

The Pilot Action will enable Film London and its stakeholders to test various aspects of implementation including any issues relating to installation and day-to-day management of the cabinets, security, technical maintenance, procurement of services and invoicing of productions. Liaison with industry stakeholders will continue throughout and user feedback will be a central factor in the evaluation of the pilot action.

The results of the pilot will inform the roll-out of the Grid Project to an additional two sites. Battersea Park and North Horse Ride / The Mall (subject to funding being secured). This would consolidate its added value as a concrete example of good practice which could be extended to further sites in London and adapted for use in other European cities which host film and TV productions.

Inspiration from Green Screen Interregional learning:

The concept for the Grid Project was inspired by a presentation by the Flanders Audiovisual Fund (Green Screen P5) during the GS 'learning workshop' in Brussels in November 2017. Tim Wagendorp from VAF explained the way in which some Flemish film and TV productions were using portable electric cabinets to plug into the national grid.

In March 2018, the case study of Buck was produced, a Flemish comedy series for Ketnet TV, which had achieved a 93% reduction in carbon emissions and had saved over €20,000 by using an alternative power source on location. Buck had received funding and sustainability coaching from P5.

As the filming had taken place in a single location (a rented house in Keerbergen, Flanders), the crew was able to install a temporary electrical distribution box to access a power supply. This approach offered many advantages over the use of traditional diesel generators due to the fact that it:

- was much cheaper than using a traditional generator - the 'rent' of the cabinet was approximately €15 per month and the production then had only to pay for the electricity it consumed
- allowed the production to choose a green electricity provider (a renewable energy source)
- reduced CO2 emissions and air pollution by avoiding the use of the fossil fuel (usually diesel) which would be needed to power a traditional generator.
- produced much less noise
- was more efficient – no electricity was wasted
- was more user friendly: the production only needed to 'plug and play' - there was no need to re-fuel a generator

By using a mix of energy supplies from the local grid (1.93 tons of CO2 over 11 days), the distribution box (0.28 tons of CO2 over 60 days), and a generator (0.23 tons of CO2 over 2 days), Buck's alternative energy strategy generated total emissions of only 2.44 tons of CO2. Using a generator for the entire shoot (73 days) would have generated 38.1 tons of CO2. This represents a total carbon saving of **93%**.

VAF shared with Film London the contact details of the suppliers in Flanders. Film London then embarked on the planning of the feasibility study for the Grid Project.

Stakeholders/other players involved:

Film London is leading the Grid Project and it has support from the Mayor's Office, the GLA, the relevant London borough councils for the initial target sites, Royal Parks, Transport for London and key industry stakeholders. The Project is supported by an Industry Advisory Group (IAG) which consists of eight established Location Managers, Unit Managers and Facilities Captains.

Two partners will be involved in the delivery of the Pilot Action: the London Borough of Tower Hamlets, The Film Office (which provides/manages filming services for Tower Hamlets). Due to their involvement in the original feasibility study (to which Good Energy also contributed £3,500), ARUP and Good Energy are part of a wider stakeholder group and will provide technical advice in this capacity.

Timeframe:

Subject to successful fundraising, it is anticipated that pilot action would commence in the second semester of 2020. This would involve procuring relevant contractors, obtaining planning permissions, putting partnership agreements with respective local authorities and film offices in place and ordering the first cabinet for the pilot site in Victoria Park.

During the third semester of 2021, it is anticipated that the cabinet in Victoria Park will be open to bookings from industry and the pilot site will be actively marketed and promoted in partnership with key stakeholders. Learning from the pilot site will inform next steps and, subject to successful fundraising, the cabinets for the two further sites will be ordered. The installation of the cabinets in the two additional sites is anticipated to take place in 2021 with both sites opening for bookings by industry in February 2022.

Film London will manage the cabinets and work closely with all partners to deliver and ensure their smooth operation: this includes all the component procedures such as billing production companies for the use of the power from the cabinets.

Costs and Funding Sources

€148,902 of funding (including Film London match of 15%) has been raised through an Interreg Europe Pilot Action grant. We have secured further funding from the Mayor of London's Good Growth Funding (through the London Economic Action Partnership – LEAP) towards the roll out the Grid Project to two additional sites: Battersea Park and North Horse Ride. The Good Growth Fund has a match requirement of 50% and we still need to raise further funds.

Film London has identified and carefully assessed the key risks, and mitigating actions to minimise these risks and ensure successful delivery of the project have been put in place. This includes working in partnership with an electrical engineering company.

The learnings of the pilot, will then inform the roll-out of the Grid Project to the two additional sites, in Battersea Park and North Horse Ride. To support this roll-out, Film London will need to source additional funding: in particular it will investigate opportunities offered by Mayor's office funds as well as Trusts & Foundations. Wider generalisation of the model will be achieved by the proactive implementation of the dissemination strategy.

Impact and link to policy improvement targets:

The Grid Project will make a significant contribution in general terms to the Operational Programme objective which relates to 'the shift towards a low carbon economy' and will address the Mayor of London Environment Strategy and Culture Strategy. The feasibility study has demonstrated that CO₂, N₂O and PM can all be reduced to zero by working with a renewable energy provider which is 'assurance certified' (i.e. in relation to meeting the standard of zero CO₂, N₂O and PM emissions).

The outcome of the Grid Project will be the embedding of a model for sustainable film and TV production into the ERDF strategy, which is consistent with its overall regional goals for the environment. Film London will keep the ERDF Unit at the GLA informed of progress on the pilot action throughout its implementation.

Film London explored applying for ERDF funding for the Grid Project (which is very much consistent with the priorities of the programme). The final round of ERDF funding opened during the summer of 2019. However, the minimum threshold for bids was £1m: the requirement for a 50% for match finding contribution was not feasible for a small charity such as Film London. Instead, the Interreg Europe Pilot Action grant will support the testing of the model (as set out above). However, the ERDF would not have been compatible with the Interreg Pilot Action funding.

We also investigated The Mayor of London's Energy Efficiency Fund (MEEF). a £500m investment fund which was established by the Greater London Authority (GLA) to help London to achieve its ambition of becoming a zero carbon city by 2050. The MEEF (which itself has an ERDF component) is operated by the Amber Infrastructure Group and seeks to address market failures in London's low carbon sector by providing flexible and competitive finance to enable, accelerate or enhance viable low carbon projects across London. Film London explored with the Amber Infrastructure Group funding for the Grid Project.

Though the AIG were very interested in funding the project, the MEEF is a loan fund. The ROI assessment which was undertaken with Arup demonstrated that a loan was not a realistic option: the Grid Project will not generate a profit and it would hence not be able to meet the interest repayments on the loan

How the implementation of the action will be monitored:

At the outset of the pilot action, Film London will put in place an evaluation framework which will take account of the following key areas:

- Technical issues: e.g. relating to installation, operation, security and maintenance of the cabinet
- Process issues: e.g. relating to ease of access for users, invoicing and billing, general procedures.
- Outcomes: Achievements against targets

The user experience will underpin the above: this will be assessed via a survey implemented by Film London. Data will be collected and reviewed regularly: productions will require an access code from Film London – Film London will invoice the productions for the energy used and will be able to collect data through the invoicing process.

ACTION 2 - INTRODUCING INNOVATION

The aim of the Innovation work is to offer the audiovisual production sector potential innovative and technological solutions that will mitigate carbon, generate energy and economic efficiencies.

Background:

At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal, legally binding global climate deal. The agreement sets out a global action plan to put the world on track to avoid dangerous climate change by limiting global warming to below 2 degrees C.¹ Preventing climate change is one of the European Union's main priorities. The EU is focusing on developing and sharing strategies to address these concerns, including the reduction of greenhouse gases.

In the light of these priorities and the fact that film and television productions account for significant carbon dioxide emissions², the Green Screen partners have worked to address carbon footprint reduction within the audio-visual production sector and to support productions to achieve greater environmental sustainability. The audio-visual production industry impacts on the environment through many areas with key ones being transport, waste, catering and energy. At the same time, these industries are a successful driver for growth across Europe and an important contributor to the creative industries within the European economy.

The innovation work commissioned by the French Partners – Choose Paris – has identified a number of potential solutions to the above challenges.

Description of the Action

Consultant Benoit Ruiz has been commissioned by Choose Paris to identify innovations that could be transferred to the audiovisual production sector achieving carbon savings and efficiencies. The work covers five phases of AVP industry chain: Pre-production, Production, Postproduction, Broadcast and Data exploitation, across the 25 following areas detailed on the following page.

¹ In addition, in 2015, the UN set out 17 sustainable development goals to end poverty, protect the planet and ensure prosperity for all as part of a new sustainable development agenda. Each goal has specific targets to be achieved over the next 15 years: <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

² Green Screen partners have varying figures for carbon emissions and each production is different in their potential level of CO2 output. This output is often related to budget levels and creative choices. The following figures reflect the carbon emissions of partner regions:

- VAF (Belgium) quotes that a typical feature film accounts for 73 tons of CO2 the equivalent of the annual emissions of 10 households.
- Ecoprod in France quotes carbon emissions of ca 150 tonnes or a one-hour TV show episode (fiction) and 200 tonnes per feature film.
- In the UK the carbon emissions quoted range from 50 to 95 tons for a micro-budget feature (below £1m) to mid range productions (£25m plus) up to 2750 tons of CO2 and tentpole productions emitting up to 3500 tons of CO2.

	Steps	Process Type	Application Area	No. of identified Innovations
1	Production, Postproduction	Air Purification/ Monitoring	Indoor & outdoor e.g. set construction workshop	7
2	Production, Broadcast	Audio/Video/Data Transmission	Live events	5
3	Broadcast	Distribution	IPTV (e.g. BBC) and OTT (e.g. Netflix)	11
4	Entire Supply Chain	Building	Construction & maintenance	11
5	Entire Supply Chain	Building	On-site energy generation	17
6	Entire Supply Chain	Building office/ studio	HVAC & lighting management	28
7	Entire Supply Chain	Catering	Base camp, office, studio, food packaging	15
8	Production, Postproduction	Cloud	Configuration for post production & animation	5
9	Production	Costume, makeup & cleaning	Office, studio & location	9
10	Entire Supply Chain	Energy management/ storage/back-up	On-site: office & studio	18
11	Production	Energy harvesting to power	Electronics, IoT, RFID, trucks	3
12	Production	Lighting	On set/studio/cyclo	5
13	Entire Supply Chain	Logistic	Location/set/ warehouse	10
14	Entire Supply Chain	Materials	Raw, marketplace, information/exchange	16
15	Production	Off-grid power supply	Location shooting	16
16	Preparation	Office preparation & production productivity	Tracking, meetings & travel management	13
17	Entire Supply Chain	IT on premise optimisation	Render farm, nodal, server-room/edge data centre	49
18	Entire Supply Chain	Safety & well-being	Workforce	5
19	Production	Set construction	Studio & location	12
20	Entire Supply Chain	Transport	Passenger cars, light duty vehicle, heavy duty vehicle	12
21	Entire Supply Chain	Vehicle & maintenance	APP, drones fuel, parking, pollution mitigation, smart devices	15
22	Entire Supply Chain	Waste management	Preparation, production, postproduction	6
23	Production, Broadcast, Postproduction	Web/APP eco-design	Architecture & coding optimisation	46
24	Entire Supply Chain	Workflows	Pipeline	22
25	Production, Postproduction	Workflows	Processing	17

The result of this in-depth analysis offers:

- quantified carbon mitigation
- and productivity gains as well as cost savings opportunities for the audiovisual supply chain

The results of the consultancy were launched during SATIS (November 2019) in Paris and subsequently in London during Focus (December 2019). This marked the beginning of our engagement with key stakeholders and industry to explore how we can best generate take up by the industry of these innovative technologies to mitigate carbon impact going forward.

We will continue working with Benoit Ruiz and our French partner Choose Paris to maximise to promote the innovations and the opportunities for our industry to understand the benefits they offer – in terms of carbon savings, energy efficiencies as well as economic savings.

This will be delivered through a bespoke programme that we will be developing as a result of our consultation with key stakeholders and industry. Building on our initial meetings in December 2020, our next step will be: for Benoit Ruiz to hold some further meetings with our industry sector. This was originally planned for the end of March to coincide with the London Games Festival and to facilitate engagement with the Games sector. As a result of the Covid crisis, the London Games Festival took place in a reduced format online and Benoit participated. We are now planning a next series of meetings for the autumn of 2020.

As part of our next phase of activity relating to this Action we will present the innovations to the British Film Commission's Business Sub-Group of the Board. This will allow us to explore interest at national level and to involve other non-London based businesses with this area of our work.

We intend for this work to be rolled out through bespoke engagement. We will need to assess at each point before we can decide on next steps. We are committed to this work as we see the unique potential of this work achieving carbon and financial savings. However, the ultimate implementation of these innovation will require investment from industry and we anticipate for this to take time.

This will be delivered through the four phases of the innovation part of our action plan and we will need to assess at each stage our progress before we can decide on next steps:

- **Convince** – December 2020 to December 2021

A bespoke programme that we will be developing as a result of our consultation with key stakeholders and industry. Building on our initial meetings in December 2020, our next step are: for Benoit to return for some further meetings with our industry sector in the autumn of 2020.

We are looking for the next phase of engagement during early autumn when we will present the work to the British Film Commission's Business Sub-Group of the BFC Advisory Board. This will allow us to explore interest at national level and for other non London based businesses to engage with the work. Ideally at this stage we would have identified pioneers companies for the next phase.

- **Rally** – January 2021 to July 2021

We intend for this work to be rolled out through bespoke engagement and dedicated consulting with pioneering companies in order to implement some solutions that cover the entire supply chain.

We are committed to this work as we see its unique potential to achieve carbon and financial savings. However, the ultimate implementation of these innovations will require investment from industry and we anticipate for this to take time. We will closely follow the implementation phase in order to analyse and transcribe the proofs of concepts (POC) in the next phase.

- **Assess** – July 2021 to October 2021

This phase will be conducted in parallel; we will inform each step of the implementation by measuring the productivity, economic and carbon mitigation gains whilst also acknowledging the challenges.

At the end of the evaluation we will have an outline of applications as well as certified economic and environmental results. Each evaluation according to the technology and its application will lead to the creation of a methodology and a protocol which will be described in detail in the evaluation report.

- **Communicate** – November 2021 to December 2021

The assessments will be available on the Green Screen website but also be disseminated to the relevant stakeholders and during trade shows, like Focus in December 2021 and the final project conference in 2021 which we anticipate would involve contributions from pioneering companies.

- **Support** – January 2020 to December 2021

Following the Futureproofing Film in London presentation at Focus, we will be working our consultant Benoît Ruiz engaging with Location Managers and rental companies in London to maximise the implementation of innovations and solutions offered.

Inspiration from Green Screen Interregional Learning:

Benoit Ruiz presented the first phase of his research at our Learning Day in Rzeszow. Assessing 2014 - 2019 EU funded innovations from Horizon 2020, European Institute of Innovation & Technology (and EIT) and working in partnership with the French audiovisual production industry, this piece of research has identified 373 innovations - TRL 8-9 i.e. on or close to the market and provided an in-depth analysis of 30 of them with regards to the efficiencies – carbon (plus other environmental impacts), technical and economic. The new EU common classification system defines environmentally sustainable economic activities and these innovations have been categorised in accordance with this. Benoit Ruiz delivered a further detailed presentation at our Steering Group Meetings in Malaga and Ystad. His work has been inspirational and offers exciting market ready opportunities, if we are successful in generating an uptake by our industry.

Stakeholders / other players involved:

We have identified two key groups of stakeholders – at the regional / London level, we anticipate working closely with the Mayor's Office and GLA. At a national level, we will be working with the British Film Commission and will present this work to a sub-group of their Board in the Summer of 2020. Beyond this the key stakeholders and players are our industry. We have started engagement with trade bodies, key studios and companies in December 2019. The intention was to set up the next round of meetings for late March 2020, but in the current situation this has been moved to September. We will approach environmental charities in the creative industries such as Julies Bicycle to gauge their interest in this work for other creative industry sectors, such as music.

Timeframe:

Further to the launch of the work at Focus in December 2019, we anticipate gradual process of marketing and promoting the innovation work. Some initial milestones had been identified, such as the London Games Festival in March-April 2020, and a presentation to the British Film Commission Board in June or July 2020, but, in light of the current situation, the engagement will start again in September 2020. We anticipate that much of the work will be bespoke and further steps will depend on the interest we generate in our initial engagement with key industry partners.

Costs & Funding Sources

We anticipate that we will need to raise approx. £10k pa to secure some of Benoit Ruiz's time and to resource the programme of engagement. The British Film Institute (BFI) has recently joined other arts organisations in voicing their commitment to the Culture Declares Emergency. We will explore with our core funder as to whether we can apply for additional resources and also look to specific climate action funds that are becoming available as well as Trusts and Foundations. Beyond this intervention, any businesses interested in taking up some of the innovations will need to invest their own funds themselves in the implementation.

As highlighted above, we have explored applying for ERDF funding to support this work but the combination of a minimum budget of £1m and the match requirement of 50% have meant that we were not able to submit an application.

Anticipated issues for programme management

The innovation work is a very new area for Film London to embark on and our role will be that of a facilitator and broker. We can only introduce our stakeholders and industry to this body of research and the individual technological innovations and the solutions they offer. We cannot guarantee uptake but will work closely with our industry and stakeholders to support as best we can the transition of our industry to innovative products that offer environmentally sustainable solutions and economic efficiencies.

Impact and link to policy improvement targets

The carbon savings and energy efficiencies generated by the respective innovations are significant. Hence, if any of these innovations will be adopted by industry, they are guaranteed to deliver important environmental benefits and contribute directly to the 'the shift towards a low carbon economy'.

How the implementation of the Action will be monitored

Film London will record the introductions we facilitate, collect feedback from industry and stakeholders to report back to Interreg Europe and to inform the next steps to maximise take up of these innovations.

ACTION 3 – TAKING GREEN SCREEN TO GOLD

The aim of Taking Green Screen to Gold is to give productions a complete set of tools to achieve sustainability on set. This will lead to carbon savings, reduced waste as well as economic savings.

Background:

Film London recorded in 2018 ca. 17,000 filming days in London, an 18% increase on the previous year. We deliver filming in London through our London Filming Partnership comprising 570 partners – local authorities, Metropolitan Police, Transport for London, key organisations and agencies as well as industry. London Filming Partners are committed to the principle of film-friendliness and welcoming productions. This means filming needs to be sustainable for its residents and businesses. The carbon footprint of our audiovisual industry is significant as set out above.

The Green Screen Environmental Programme was developed by Film London and Greenshoot with the green level of the programme being launched in 2016. The name of the London Programme inspired the name for our Interreg Europe application in 2016. The Green Screen Environmental Programme is based on the principles and framework of ISO140001 and learnings of the BS 8909 but has been customised to meet the needs of the filming industries. The philosophy which underpins each of the three levels (Green, Silver and Gold) is to help the filming sector to grow and collaborate with the programme. Productions start with Green, the first level uses the 'PLAN – DO – ACT' checklist to enable the user to understand that small changes can have big impacts. This is coupled with key mandatory elements: employment of a green runner, no use of polystyrene in catering, no vehicles lying idle and a comprehensive recycling programme. The aim is for the companies to reach a level which qualifies them to be certified.

Description of the Action

The methodology for the Silver Level was introduced in 2019 and was initially being piloted with Season 3 of The Crown, through Left Bank Pictures. It demands more from the whole production, and the engagement of every crew member within a points-based system: the company must achieve a minimum score of (85) in order to obtain the certificate. The learning from the Green Screen partnership has informed the development of the Silver level includes an additional three mandatory elements and online tracking:

1. Eliminating plastic water bottles by providing water coolers and personal canisters and / or asking crew to bring water canisters from home.
2. Distributing call sheets, MOs and RAs electronically.
3. Completing the silver level tracking form including energy and fuel tracking, waste and single use plastic bottles

The final part of our plan is to develop the Gold level, which will represent full sustainability. There is still much to accomplish and moving forward it is our ambition to scope a 360 degree circular Gold model for achieving full sustainability. Moving to Gold will involve:

- The incorporation of actions to achieve a positive social impact
- Air pollution
- Community programmes and legacy
- Sector and national legislation compliance
- Carbon offsetting for those productions that reach a level of sustainability & want to balance their carbon but requesting emissions through forestry and good governance.

The Green Screen Environmental Programme offers productions a road map and framework enabling them to conform to a required level of environmental sustainability. Producers and senior management commit to:

- an environmental policy,
- a recycling programme,
- an energy reduction campaign
- selected additional environmental reduction strategies that will reduce their productions' environmental impact and increase resource efficiency.

For the Gold level, we will build on the learning of the Green Screen workshops and staff exchanges, and will take this to the next level, offering productions a programme of sustainability and tangible mitigation of its carbon footprint.

It is worth noting here how sustainable development is interpreted: This should meet the needs of the present without compromising the ability of future generations to meet their own needs. It is not about fixing industry and current working practices overnight: instead it is about achieving a sustained improvement over a period of time. For any action or development to become sustainable, it needs to be able to work in the long term. It also has to consider the balance between the three pillars of sustainability – economic, environmental and social. Green Screen seeks to address these pillars of the programme and the Gold level will represent the completion of the programme.

In 2020-21 we will also focus on the uptake of the Green Screen environmental programme by productions and its promotion and adoption by local authorities and key filming partners.

Inspiration from Green Screen Interregional Learning:

There have been many aspects of the Green Screen journey that have inspired our Green Screen Platform journey.

A key example is the practice of our French partner – Choose Paris. The staff exchange in Paris in 2018 was incredibly motivating and informative. We will be adopting their Eco-Prod Guidelines to become part of our Code of Practice: Film London's guide to filming in London. This will be published in early 2020 and will sit alongside our Green Screen Environmental Programme.

Another specific example is the learning which was shared by our Flemish partner VAF, at our first learning day in Brussels in 2017. VAF's work in environmental sustainability is anchored in the United Nation's Sustainable Development Goals which VAF uses as their moral compass. This has influenced our own thinking of sustainability and how we align our social sustainability work through our Equal Access Programme with our environmental sustainability work and the Gold level of the Green Screen Environmental Programme should be reflective of both aspects.

Stakeholders / other players involved

Greenshoot, an environmental consultancy for film and television is our partner in the Green Screen environmental platform. The Mayor's Office and the GLA remain key stakeholders for all our activities including this Action. Other stakeholders will be our London Filming Partnership – London's 33 local authorities, key agencies and organisations as well as our industry who all work together to facilitate filming in London.

Timeframe

We anticipate scoping the Gold level during the first semester of 2020 and, subject to fundraising, for the Gold level to be developed during the second semester of 2020 and piloted during the third / fourth semester of 2020.

Costs & Funding Sources

We estimate the cost of scoping and developing the Gold level to be between £10,000 and £15,000 and we will need to raise these funds. We are seeking to secure grants from trusts and foundations.

Anticipated issues for programme management:

Beyond the challenge of raising the funds, we do not anticipate other issues. The Green level of the Green Screen Environmental Programme went live in 2016, the Silver level in 2019. We have been working in partnership with Greenshoot since 2014; there is now a track record of over 300 productions certifying through the Green or Silver Level of the Green Screen Environmental Programme and we anticipate a continued uptake by industry of all three levels.

Impact and link to policy improvement targets:

By the end of October 2019, 305 productions had been certified through Green Screen, and more than 10,000 crew had worked on these productions. 156 of these productions were shot in London and these achieved an average carbon reduction of 16.8% across the London Local authorities.

The above has already contributed directly to the achievement of our original policy target of contributing to the 'the shift towards a low carbon economy' (reference the Operational Programme). The Green Screen Environmental Programme is also included in the Mayor of London Culture Strategy 2018: Film London has also produced an online resource to encourage productions to take practical steps to lower their environmental impact. The development of the Gold level of the Green Screen Environmental Programme completes this online training platform.

As highlighted above, we have explored applying for ERDF funding to support this work but the combination of a minimum budget of £1m and the match requirement of 50% have meant that we were not able to submit an application.

How the information of the action will be monitored

All productions that register and certify through the Green Screen Environmental Programme are monitored by Greenshoot and the latter provides us with the analysis of the productions that have certified through the programme. Greenshoot has been assisting the filming industries carbon footprint since 2009. Measuring, monitoring and analysis are key to Green Screen's environmental management system. Records and evidence of the productions' achievement are analysed against objectives set out within the programme's environmental action plan and uploaded to Green Screen as evidence of the activity. Departmental points, through a tracking system along with reporting enables a clear and transparent reporting system. It is important to note that carbon reduction percentage figures are approximate. However, Greenshoot has carried out carbon calculations on over 50 productions of all sizes and budgets and can therefore, with the correct information, make educated estimates as to any production's emissions.

CONCLUSION

This Action Plan outlines some ambitious and challenging targets and we are excited to embark on our next stage of our Green Screen journey. The Green Screen project has given us many opportunities working closely with key stakeholders and industry in addressing environmental and social sustainability.

Our Green Screen environmental programme sits alongside our Equal Access Network (EAN) programme. The EAN has been set up with one mission in mind- to help people get in, stay in and return to the film and TV industry. We particularly target under-represented groups by working with training providers, charities and foundations across London to help their trainees/alumni and to achieve change in our industry. One of the learnings from our Green Screen partners is that quite a few link their sustainability work increasingly to the United Nations Sustainable Development Goals (SDGs), using them as a moral compass. In Film London, we have focused on one hand on our social sustainability through a range of programmes and in particular EAN. Alongside this work we have developed our environmental sustainability focus delivered through Green Screen. Since our Conference and Round Table in Malaga, we are increasingly using the SDGs as a point of reference to embed our diversity and inclusion as well as our environmental sustainability work across everything we do.

Beyond the more practical aspect of working with productions, Film London is very aware of the cultural role it has to play and the contribution it can make to a shift towards sustainability. Acting as an ambassador and driving change through content, productions can positively influence and inspire audiences and their behaviour.

The role of culture in terms of providing leadership and being a change maker was one of the key themes of our Conference and Round Table in Malaga in 2019 with interesting contributions from experts from across our partnership. This is one of learnings we take forward into our next phase. Beyond these concrete actions we will continue to champion sustainability – environmental and social – as part of our fabric and an integral part of how we choose to deliver for our industry in the capital.

"Arts and culture make a vital contribution to the creation of a more inclusive and more confident society. They have the power to delight, educate, stimulate and inspire and, at a time of increasing division and inequality, we need their influence more than ever. As the IPCC report emphasises, the response to global warming must cover every aspect of life. We need action within the commercial sphere and engagement from the public. Artists and arts organisations can shape conversations about the environment. They can challenge and be provocative, both informing and opening our minds."

Sir Nicholas Serota (Chair - Arts Council England)

Contact for this Action Plan:

Daniela Kirchner
Film London
The Arts Building
Morris Place
London N4 3JG

Email: Daniela.Kirchner@filmlondon.org.uk
Tel: **020 7613 7676**