Digital Regeneration of Experience Economy Modelling

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Appendices: Modelling and Supporting Recovery of the UK's Experience Economy

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Cover image: Royal Shakespeare Company's (RSC) production "Dream', Photo by Stuart Martin © RSC

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Appendix 1 Defining the Experience Economy from a supply perspective

This appendix can be accessed by clicking on **this link**.

Appendix 2 Full list of Standard Industrial Classification codes included in primary and total Experience Economy

This appendix can be accessed by clicking on **this link.**

Appendix 3 Full project methodology

The project was divided into four separate workstreams as described below, each of which employed a mixed-methods approach including the components as described in Figure 1.

Digital experience production — This workstream explored the role that digital played in supporting Experience Economy (EE) organisations over the period of Covid-19, created case studies of digital production (available on the **Guide to Creating Digital Experience Productions**) and explored the barriers and opportunities for maximising the value of digital experiences in the future.

Digital experience consumption — This workstream focused on the conceptualisation of value from the consumer perspective. It explored consumer perceptions of digital experiences and refined the elements that made these engaging. A round table event facilitated knowledge exchange between digital producers, traditional live experience providers and consumer-facing organisations.

Place-based perspectives on Experience Economy recovery — This workstream engaged with EE organisations in each of three dedicated geographies, selected to represent different types of experience landscape. Workshops were used to unpick and model interactions between experience providers, evaluate the role that digital has played in supporting resilience and in creating the conditions for recovery, and evaluate policy interventions and their implications.

Modelling business scenarios for recovery — This workstream used the data from the three earlier work packages to create a dashboard through which local authorities can view the impacts of Covid-19 on EE organisations and identify actions that can support resilience. View the **UK Experience Economy Dashboard** by clicking on this link.

Project oversight and expert input was provided by a working group of representatives from organisations across the EE. Working group members were: Visit Scotland, Dundee Contemporary Arts, InGAME CRDP, the Northern Ireland Tourism Alliance, Clwstwr Creative R&D Partnership (CRDP), Visit England, Visit County Durham, XR Stories CRDP, Framestore, the London Borough of Barking and Dagenham, the Royal Opera House, Sadler's Wells, the Society of London Theatre, the South East Creative Economy Network, the Arts Development Company, The Mill and consultants Katy Arnander and Anna Jobson. The terms of reference for the working group are included in Appendix 4.

A mixed-methods approach was applied across all workstreams, comprising desk research, and qualitative and quantitative methods, outlined in the following sections.

Appendix 3
Full project methodology

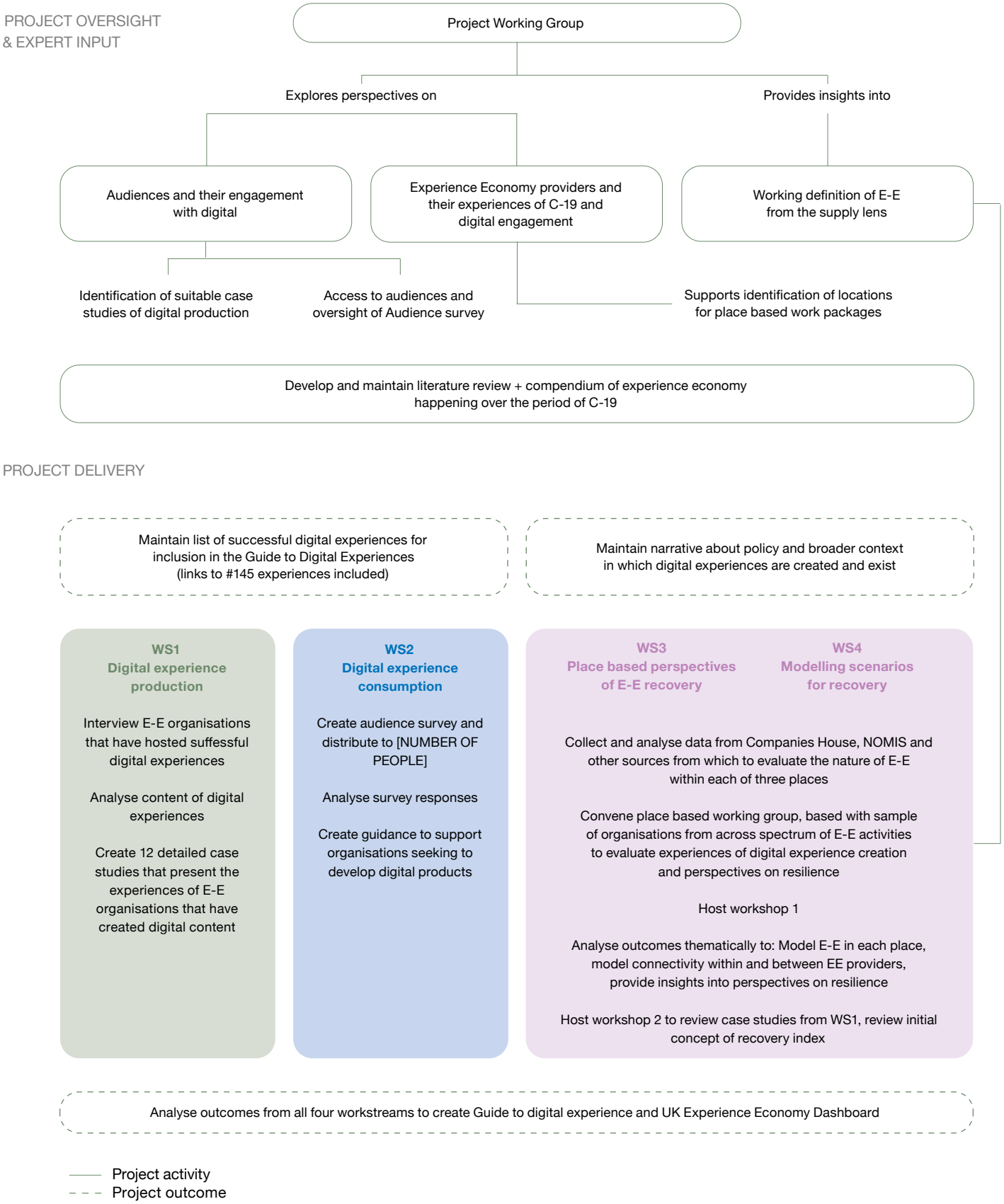

Figure A1

Appendix 3
Full project methodology

3.1 Desk research

Desk research comprised the following activities and the data informs parts 2, 3 and 4 of the main body of this report, as well as being essential for the development of the information in Figure 1 (Compendium of Digital Experience Productions over Covid-19).

- A review of strategy and policy documents targeting EE activities pre and during the pandemic to evaluate responses at national level and within each of three place-based case study locations.

- An ongoing review of digital experiences that became available in the public domain and were identified by working group members, and/or the wide range of press sources that were followed by the project team.

- Collation of the **Compendium of Digital Experience Productions** created over the period of the pandemic.

3.2 Qualitative data collection

Qualitative data was collated via a combination of group and individual interviews and co-creation workshops. The data derived from these sources is included in Section 5 (digital production), Section 6 (digital consumption) and Section 7 (place-based case studies) of this report. Qualitative data collection comprised the activities listed below.

A round table event
A round table event was hosted to support the digital experience and production workstreams. The round tables were hosted in **October/November 2020** and brought together members of the project working group for four collective cross-disciplinary discussions.[1] The discussion considered perspectives on audiences, digital experience production, the way in which digital and physical experiences interface, skills, distribution platforms, monetisation strategies, and collaborative working. The results of these initial workshops were analysed thematically and the information that emerged is presented in Sections 5 and 6 of this report.

Interviews with individuals engaged in digital production
Within the digital production workstream, interviews were hosted with organisations that had created successful digital experiences. The information that emerged was analysed thematically to evaluate barriers and opportunities for digital production (see Section 5 of the report) and also provides the substance of the case studies included on the **DREEm website**.

Place-based co-creation workshops and follow-up interviews
The place-based workstream hosted six co-creation workshops between October 2020 and September 2022. These were designed to analyse the concept of resilience and evaluate the role that national and local policy interventions have played in supporting EE recovery. Working group participants

1 DREEm workshop participants included representatives from UK wide organisations:

were invited to nominate specific geographies (rather than an individual business) to co-host workshops. Three case study areas were selected on the basis that they had different characteristics in terms of the composition of their EE, the relative maturity of the EE, the socio-economic profile of the area and its physical geography. The regional case studies selected were:

- **Dundee**, recognised as the UK's first UNESCO City of Design in 2014, has been using EE activities as a core strand of its programme of urban regeneration. Building on the long-standing and internationally renowned provision from the Dundee Rep theatre and Dundee Contemporary Arts Centre, there has more recently been significant levels of capital investment in EE projects (e.g. V&A Dundee, the Eden Project, a new esports arena). The city has a vibrant cultural sector and ecosystem, including larger organisations and institutions such as the local universities, and also a vast array of creative freelancers. The city has a strong focus on the gaming industry, foregrounded by the **InGAME** Creative R&D Partnership, led by Abertay University as part of the UK-wide £80 million Creative Industries Cluster Programme (CICP) hosted by the Arts and Humanities Research Council. EE industries in Dundee are strongly connected via a range of networks.

- **County Durham** is located in North East England and pre pandemic had been actively engaging heritage, culture and tourism sectors as a part of a strategy to create an economy that draws on but moves beyond its industrial and cultural past. The county has become known for its vibrant and internationally recognised art scene, with the Lumiere festival at its forefront, as well as outstanding landscapes (with an active range of dark sky activities). The strong level of support for EE industries from the local authority (largely through Visit County Durham) has sustained strong connections across activities over the course of the pandemic.

- **The London Borough of Barking and Dagenham (LBBD)** has a relatively small EE. However, the borough is investing in EE-related initiatives and is building on adjacencies to central London, East Bank, Stratford and the Thames Estuary Production Corridor. LBBD was the focus of significant investment in the period before the pandemic, including, for example, revitalising the Dagenham Studios. Ranked fifth in the UK on the index of multiple deprivation (2019), the area is challenged by issues of poverty and social inequality. Pre-pandemic, the local authority was already working at the interface between health and cultural/creative sectors to deliver innovative approaches to enhancing mental and physical wellbeing and these activities were extended over the period of the pandemic.

  Two sets of place-based workshops (six in total, two of which were in person) were delivered with invited EE businesses and organisations from across the three case study locations. **Table A1** provides data about the workshop dates and participants.

- The first set of three place-based workshops was delivered online on Microsoft Teams and supported the project team in evaluating the characteristics and connectivity within and between each of the regional EE industries, as well as providing insights into changing perspectives about the role of

digital as a means to engage audiences during and post pandemic. A brief presentation was used to set the context and an interactive whiteboard was used to understand how experience organisations worked collectively over the period of the pandemic.

- The second set of three place-based workshops were delivered in person in Dundee and Durham, and online on Microsoft Teams in LBBD. This set of workshops facilitated discussions about how and if audiences had engaged with digitally generated experiences and platforms over the period of the pandemic, the changing landscape for digital experience creation and development, as well as evaluating the policy and strategic responses that had emerged during the pandemic.

- These workshops also invited participants to review the likely outcomes of the Local Authority Toolkit, and began a discussion about how and if this could support policy-makers in tracking recovery and resilience. Brief presentations to set the context were made.

- Workshops were also complemented by one-to-one interviews with key stakeholders, ensuring a balanced contribution from across the EE, and these added more depth to the interactive workshop activity. **Table 2** provides a list of all the follow-up interviews that were conducted with selected stakeholders.

The data collected at the co-creation workshops was thematically analysed, through a manual and iterative process, encompassing data reduction, data display and conclusion drawing. The process of thematic analysis involved synthesis of data in relation to codes, making comparisons between identified themes and drawing conclusions from the findings. Codes emerged from the data through an inductive process and frequently recurring codes were then clustered into themes. The analysis was conducted on the data collected in each of the three case study locations. While the overarching themes were the same across the three case studies, sub-themes were identified through the data analysis to unpack what these themes meant in specific locations. The key findings from the place-based workshops are included in **Section 7** of the main report.

	London Borough of Barking and Dagenham (LBBD)	Dundee	Durham
Workshop 1 date	26 May 2021	16 June 2021	22 September 2021
Workshop 1 mode	Online	Online	Online
Number of people invited	45	53	55
Number of people attending	12	14	10

Appendix 3
Full project methodology

	London Borough of Barking and Dagenham (LBBD)	Dundee	Durham
Workshop 2 date	21 January 2021	12 November 2021	12 January 2022
Workshop 2 mode	Online	In person	Online
Number of people invited	45	65	20
Number of people attending	10	8	5

Table A1: Dates of all the workshops and summary of the participants.

	London Borough of Barking and Dagenham (LBBD)	Dundee	Durham
Stakeholders engaged in follow-up one-to-one interviews	• London Borough of Barking and Dagenham • Arebyte Gallery • Arc Theatre • Studio Wayne McGregor	• University of Dundee • Dundee Contemporary Arts • Muckle Studios • VisitScotland	• Beamish Museum • Raby Castle • Durham University • Avenu 6

Table A2: Interviews with individual stakeholders.

3.3 Quantitative data collection and analysis

Quantitative data collection activities were essential to the audience survey (supporting the development of the audience information that is now included in the Guide to Digital Experiences). Quantitative data is also essential to the creation of the UK Experience Economy dashboard and provided insights into the nature of connections within and between EE providers in the place-based case studies.

Audience survey data
An online survey of audience engagement with digital experiences and their perceptions about willingness to pay for those experiences was developed and distributed via project partners. In total, the survey was circulated via the project partners to 2,000 potential respondents and 889 completed questionnaires were received.

Quantitative data to map connectivity within and between EE organisations

The initial research and definitional work for the EE indicated that connectivity was a key characteristic of resilience strategies. We have, therefore, computed and modelled connectivity between EE sectors in general and for each of the three place-based studies (in Section 7 of the report). This modelling involved the following steps.

Information gathered on connectivity during the first workshop and follow-up interviews was analysed. Participants at these events were invited to utilise an online whiteboard (Miro software was used for this purpose) to capture the connections that they had with other EE organisations and to rank the relative importance of those connections for their organisations pre- and during the pandemic (represented as colours). For each place, we first encoded the links and strength of connections using a custom-developed piece of software, for which the user interface is shown in Figure A1.

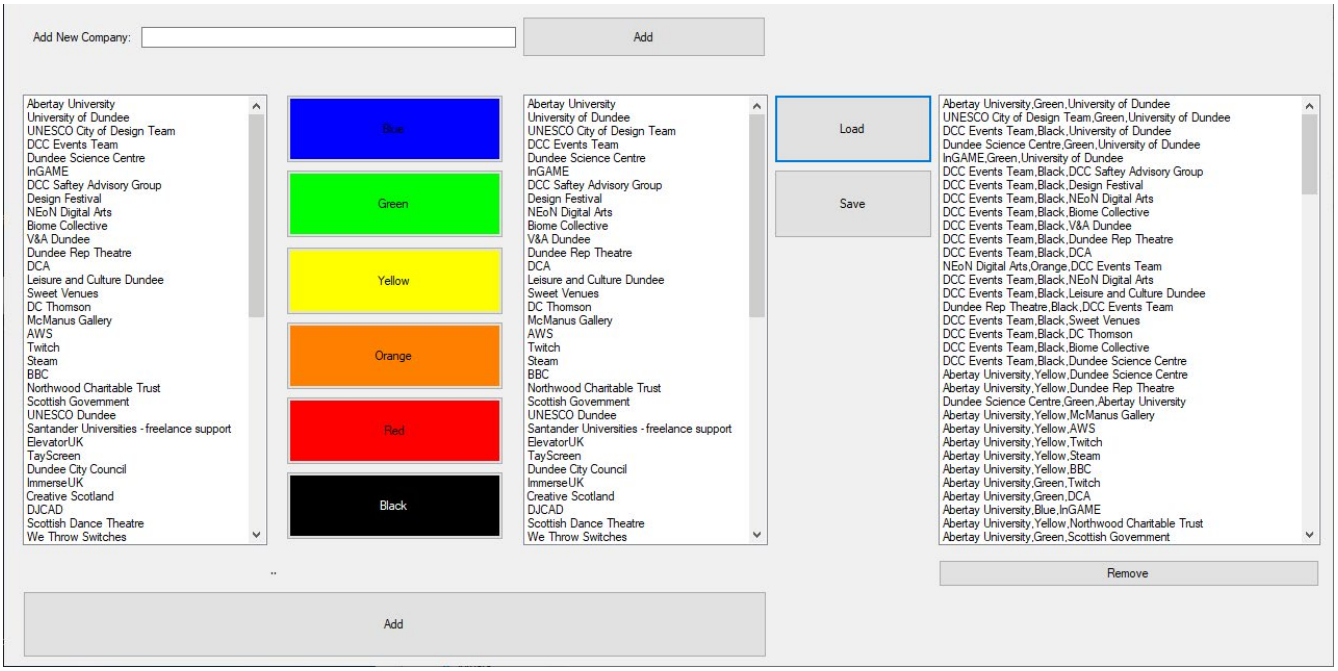

Figure A2 — Custom software to assess the strength of connectivity between EE sectors.

Note: For the workshop activities, blue was used to indicate the strongest connections and red the weakest, with intermediate colours representing linear steps of strength. Black indicated uncertainty as to the strength of the connection. When the workshop outcomes were coded and translated into Figures 13, 16 and 19, we chose to represent the strength of connections by the more commonly used heat scale with red indicating the strongest and blue the weakest connection.

This resulting list was converted into a list of connections between Standard Industrial Classification (SIC) codes using the following method. First, each company was replaced with its SIC code, located from Companies House data, then a numeric value was assigned to each of the colours.

Colour	Value
Blue	1
Green	0.8
Yellow	0.6
Orange	0.4
Red	0.2
Black	0.5

Table A3 — Value attributed to connections on the Miro board

This then resulted in a list of $SIC \rightarrow Value \rightarrow SIC$ that specifies the connections between SIC codes, and the strength of the i'th connection. The resulting values were then combined into a list of connections between and within sectors using the following method for each element in the list of connections between SIC codes:

- Compute which sector each of the SIC codes lies in.
- Add the value to an accumulated matrix of strength of connections $(Sector_i \rightarrow Strength_{i,j} \rightarrow Sector_j)$
- Add 1 to a matrix of numbers of connections observed $(Sector_i \rightarrow Number_{i,j} \rightarrow Sector_j)$
- Normalise the strength of connection $(\overline{Strength_{I,J}})$ by the number of observed connections $(\overline{Strength_{I,J}} = \frac{Strength_{i,j}}{Number_{i,j}})$.

These steps produce an adjacency matrix that can be directly visualised as a graph. By summing and normalising all the adjacency matrices for all places, an average connectivity graph can be created. The figures below show the three matrices for Durham (top to bottom: strength of connection, number of connections, normalised strength of connections):

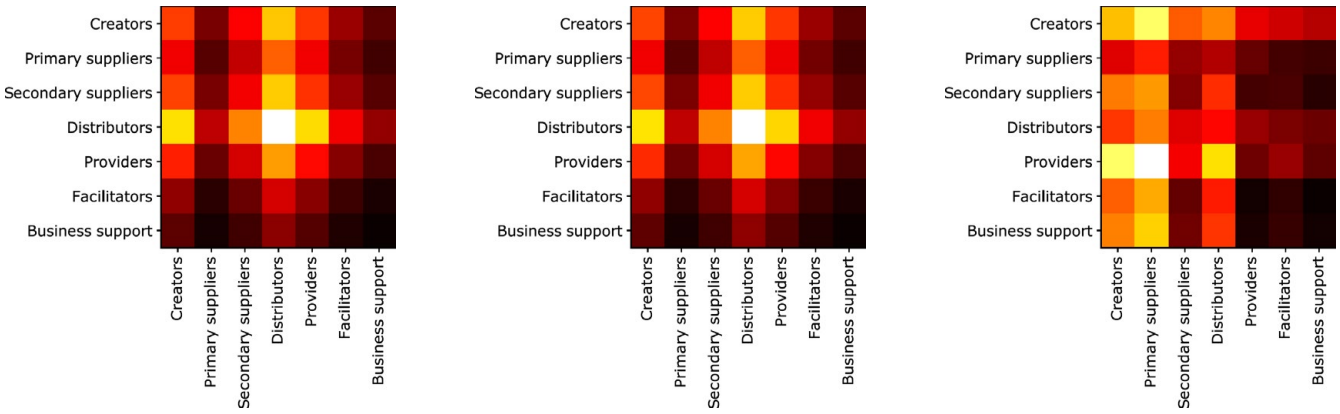

Figure A3 — Normalised connectivity matrix

These connections were then converted into visuals that demonstrate connectivity, using a radar chart for each of the three place-based workshops and the UK as a whole. These charts are visible in Section 7 of this report and **The UK's Experience Economy:** Towards a Working Definition from the Supply Perspective in the Context of the Covid-19 Pandemic (2022) paper that is an accompaniment to the main body of work (Appendix 1).

Quantitative data about the size and scale of the EE

- Data on the number and characteristics of EE operators across UK local authorities in England, Scotland, Wales and Northern Ireland was collated (including specific data for each of the three place-based case studies). This data comes primarily from government sources and the project team have sought to ensure longevity of the data in the Local Authority Toolkit by populating it only with data that is both in the public domain and updated by external agencies at least annually.

- Data about the number of active EE enterprises that are recognised by official government datasets (mainly those that are registered to pay VAT/PAYE) was sourced from Nomis, a service provided by the Office for National Statistics (ONS) that provides access to up-to-date UK labour market statistics from official sources. Data was computed by summing the numbers of companies for all the SIC codes in scope from the Nomis data.

The source of information for each of the data sets included in the UK Experience Economy Dashboard is listed below:

- Data about the number of active EE companies registered at Companies House was derived from the register of UK businesses hosted by Companies House.[2] This was computed by summing the number of companies from Companies House that have a SIC code in scope.

- Data about the number of active EE companies paying VAT/PAYE as represented by Nomis[3] was computed, similar to the total active EE companies, by summing the number of companies from Nomis that have an SIC code in scope.

- Data about primary EE companies as a proportion of all companies registered was calculated as follows: the percentage of companies with EE SIC codes as a percentage of all companies registered within each local authority post code. The list of SIC codes in scope is included in Appendix 2.

- Data about representation of EE companies by sector was derived from Companies House and categorises businesses according to their wider sectoral representation (as defined by DCMS and illustrated in the figure in Section 2.2 of the main report. When reading this pie chart, it is important to note that some company types fall into more than one category. For example, museums (SIC 91020) fall into the tourism, cultural, and creative sectoral groupings.

2 Companies can list up to four SIC codes when they register at Companies House. 86% of all businesses include only one SIC code when they register. Businesses with more than one SIC code are allocated to the first SIC code they list only
3 https://www.nomisweb.co.uk/

- Data about the estimated annual turnover of all EE companies was derived from Nomis datasets. Data in Nomis is presented in turnover bands as follows: 0 to 49, 50 to 99, 100 to 199, 200 to 499, 500 to 999, 1,000 to 1,999, 2,000 to 4,999, 5,000 to 9,999, 10,000 to 49,999, 50,000+ (thousands). The data presented demonstrates the full range of information included in the bands and the solid line represents the mean turnover computed by multiplying the number of companies in each band by the midpoint of the band (except the maximum, which uses the base value), and summing these over all SIC codes in scope. The upper estimate is computed using the maximum value for each band and, similarly, the minimum value is computed using the smallest value in each band.

- Estimated employee count across all EE companies was derived from Nomis data sets. Data in Nomis is presented in employee bands as follows: Micro (0-9), Small (10-49), Medium (50-249), Large (250+). The data presented demonstrates the full range of information included in the bands and the solid line represents the mean cumulative employee count computed by multiplying the number of companies in each band by the midpoint of the number of employees in each band (except the maximum, which uses the base value of 250), and summing these over all SIC codes in scope. The upper estimate is computed using the maximum value for each band, and similarly the minimum value is computed using the smallest value in each band.

- The estimated distribution of freelancers across all EE sectors. This data is derived from several sources: EMP14: Employees and self-employed by industry from the ONS, and estimates of the population for the UK, England and Wales, Scotland and Northern Ireland from the ONS and Companies House data. As the data is given at different granularities (i.e. Companies House data can be computed per local authority, and the freelancers data is national per top level SIC code (T), the estimate of freelancers seeks to bridge these granularities into an estimate per area. We make the assumption that the number of freelancers in a region is correlated with the population of that region (pop). The estimate for the number of freelancers (F) in a sector (S) in a local authority (LA) can then be computed as $F(S, LA) = \sum_{i}^{|T|} F(i) \frac{pop_{LA}}{pop_{UK}} \left[\frac{\sum_{j}^{N_{EE}} ll_{SIC}(i,j)}{\sum_{j}^{N_{Total}} ll_{SIC}(i,j)} \right]$, where $ll_{SIC}(i,j)$ is an indicator function that returns 1 if the j'th company has a SIC code in the i'th top level SIC code and 0 otherwise, $F(i)$ is the number of freelancers in a top level SIC code from the ONS data, N_{EE} is the number of EE companies in the total authority, N_{TOTAL} and is the total number of companies in the local authority.

- The operating age of EE companies over the previous 36+ months was calculated from Companies House data by summing the number of companies whose incorporation date fell within a set of six month blocks, i.e. $0A_t = \sum_{i}^{N} ll(i,t)$ where the summation is over all N companies with **SIC codes** in scope, and computes the number of companies with an operating age that falls within a time period $t \in [t_{min} \ldots t_{max}]$ (t_{min} and t_{max} being the minimum and maximum of a six month period respectively) where $ll(i,t)$ is an indicator function which returns 1 if the incorporation date of the i'th company is in the range $[t_{min} \ldots t_{max}]$ and 0 otherwise.

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Full project methodology

We also use a number of indicators to understand the current state of the EE within a local authority, and to allow for comparisons between local authorities. As each indicator has different units and substantially different magnitudes, this makes naive comparison difficult. Therefore, we compute z-scores for each indicator: $ZScore = \frac{x-\mu}{\sigma}$, where x is the indicator of interest, μ is the average value of that indicator computed nationally, and σ is one standard deviation of the indicator, again computed nationally. This has the properties that a score of 0 is the national average, and by definition half of the local authorities will have less than the average score, and half higher. This means local authorities can be compared between each other and compared to the wider region.

The following table lists the indictors, how they are computed, what data sources they use, and the rationale for each indictor. This table uses the following symbols: N_x refers to the number of companies with some attribute x, subscript EE means 'relevant to the Experience Economy' as per the SIC code definition, subscript $Total$ means the total number of the quantity, the subscript CH refers to data coming from Companies House and the subscript $NOMIS$ mean that data is coming from Nomis.

Indicator	Rationale	Data source(s)	Method of computation
Total employees in EE-related jobs	More employees could mean a thriving EE, with the caveat that there is more job risk	Nomis	$\frac{Employees_{EE}}{Employees_{TOTAL}}$
Cumulative turnover of EE-related sectors	More turnover could mean a thriving EE, with the caveat that there could be more financial risk	Nomis	$\frac{Turnover_{EE}}{Turnover_{TOTAL}}$
EE business birth rate	Indicates renewal and links to networks	Companies House	OA_t where $t=[0.12]$ being the 12 previous months
EE businesses mean number of operating years	EE consisting of newer companies may indicate either rapid growth or limited longevity of EE companies	Companies House	$\frac{\sum_i^{N\,CH} A(i)}{N_{CH}}$ where $A(i)$ is the age of the I'th company
VAT and/or PAYE-paying businesses	Indicates established and surviving companies, and shows longevity of the EE businesses	Nomis and Companies House	$\frac{N_{NOMIS}}{N_{CH}}$

Indicator	Rationale	Data source(s)	Method of computation
Number of stay and day visitors versus number of residents	Incoming spend, with the caveat that the data lags by 18 months	VisitBritain, Tourism NI, ONS	$\frac{Visitors}{Residents}$
Resident spend on EE activities per year	Indicates residents' interest in experiences, with the caveat that this is extrapolated from a regional picture	Companies House, ONS	$\sum C(i)\alpha\left[\frac{\sum_j^{N_{EE}} ll_C(i,j)}{\beta}\right]$ where C is the set of resident spends, $ll_C(i,j)$ is an indicator function that returns 1 if the j'th company has a SIC code associated with the i'th spend and 0 otherwise. α is a scaling constant that scales this spend to be yearly and β is a constant that contains the average number of companies in local authorities
Staying visitor spend per 24 hours	Another estimate of incoming spend, again with the caveat that the data lags by 18 months	GB Tourist Annual Report	From report
Prevalence of digital businesses	Estimate of digital capacity in the local authority	Companies House	Inner product of a vector containing the number of companies in each primary EE sector and a weight vector of digital for each sector: $\begin{bmatrix} N_{Creative} \\ N_{Digital} \\ N_{Cultural} \\ N_{Tourism} \\ N_{Sports} \end{bmatrix} \begin{bmatrix} 0.9 \\ 1 \\ 1 \\ 0.5 \\ 0.5 \end{bmatrix}$ The weight vector is heuristically estimated

Table A4 — Computation method for indicators included in recovery index

3.4 Limitations of approach

The following limitations should be borne in mind when reviewing the results of this research.

Generalisability of results

- Due to Covid-19, a small number of people participated in the workshops, and follow-up interviews were necessary. In particular, the initial ambition was to involve more freelance and SME creators and producers of (digital) experiences. However the workshop participants were mostly large organisations and supporting institutions. Linking to freelance communities was

challenging. These limitations mean that the results of the workshops require further testing to assess generalisability.

Testing of recommendations and digital tools

- We also acknowledge that the digital tools would benefit from further testing with the targeted local authorities and businesses in order to assess usefulness.

- There is scope for assessing the impact of the outputs of this project after a certain period of time from its development and implementation; however, this would require a timeframe, team and resources wider than those available for this project.

- We have, however, tested some of our digital tools with potential users and received positive feedback.

Shortcomings of SIC codes as a mechanism for measuring the EE

- Covid-19 has highlighted for the first time significant issues regarding the EE — establishing the position of the EE and significant challenges faced during Covid-19 — exacerbated by a number of outdated mechanisms including SIC codes. The SIC code system is widely used to quantify sectoral inputs within economic GVA studies. However, it has been noted by others (NESTA, 2018;[4] Organisation for Economic Co-Operation and Development, 2020[5]) that the SIC system has limited applicability for wider creative and cultural sectors.

- Limitations noted by these projects and our own are listed below.
  - The SIC system was initially introduced in the UK in 1948. Although there have been subsequent updates (most recently in 2007), many of the codes are more suited to an economy focused on manufacturing rather than service industries, complicating the identification of organisations engaged in the delivery of services (such as the development of AI technologies) and much less experiences.
  - SIC codes divorce the goods and services created by businesses from the public administration and support activities that are often essential to the delivery of those goods or services.
  - SIC codes allow only for the measurement of economic inputs/outputs rather than value.
  - SIC codes are typically self-selected by company directors at the point in which they register a business with Companies House, the Charity Commission and/or HMRC. Businesses make a judgement on the best fit for their operation and can select up to four codes. Thus, a company that operates both a bar and a food takeaway service may enter the SIC code for both these activities. It is important to note also that a business that changes operating mode (e.g. that starts operating as a hotel and then switches to self-catered apartments) may not update its SIC code.
  - The coding system captures data for all legally constituted organisations (including the self-employed) but excludes those who fall below

4 NESTA (2018) Creative Nation: How the creative industries are powering the UK's nations and regions. Available at: https://media.nesta.org.uk/documents/creative_nation-2018.pdf
5 OECD (2020) Webinar: Coronavirus (COVID-19) and cultural and creative sectors: impact, policy responses and opportunities to rebound after the crisis. Available at: https://www.oecd.org/cfe/leed/culture-webinars.htm#CCIs

the personal income tax threshold — up to £12,570 in 2021/22 (HM Government, 2021).

- The SIC system includes 74 codes (within specific business sub-sectors) that start with 'Other' for activities not elsewhere classified. This lacks specificity.
- The system is not well equipped to capture the nuance between what might be considered a service and an experience. For example, a board-game café might be registered as 56102, coffee bar, room or saloon (unlicensed), or 56102, tea room or shop (unlicensed), but not be identified as 93290, other amusement and recreational activities N.E.C. (not elsewhere classified).
- SIC codes do not have obvious and logical categories to include: 1) the activities of organisations tasked with the management of place — this includes destination marketing organisations, Local Enterprise Partnerships, growth hubs; 2) the activities of consumer-facing booking platforms such as Eventbrite, Airbnb, Booking.com; 3) the activities of those engaged in innovative digital development, including VR and AI.
- There are notable exclusions from the classifications — especially organisations that operate in the informal economy or those that are units of businesses registered overseas (and pay neither VAT nor PAYE salaries in the UK). These are significant and can include large swathes of activity, e.g. operators of Airbnb-style accommodation. In Barking and Dagenham, for example, the Nomis dataset reported in March 2021 that there were 10 accommodation establishments, but TripAdvisor lists 7, Hotels.uk.com 8, and Airbnb 223.

Despite these limitations, the comprehensive nature of the data combined with the fact that **SIC codes** can be viewed for specific geographies mean that it is the best proxy currently available to provide a baseline of the range of EE activity in the UK. Therefore, the approach taken within this project overcomes the critiques of the concept of EE that largely relate to a lack of frameworks through which it can be operationalised at a policy level. By defining which industries play a role in EE delivery and analysing their connectivity, meaningful policy interventions can be designed, and a new lens provided for use by the UK industry when evaluating the skills required, and, with this research in particular, the digital skills and provision required to sustain businesses that have experiences at their core. It also provides important insights into the significance of experiences in bringing customers back to venues and place, following a pandemic, and, as such, adds context to town-centre generation and associated narratives.

Appendix 4 The DREEm Working Group Stakeholders, and terms of reference

4.1 Role

The DREEm research team sought to engage with a wide range of stakeholders from across the UK over the various stages of project development. Engagement occurred via workshops (online due to Covid-19, and latterly in person as restrictions lifted), one-to-one interviews, and in themed round tables. The following list details participants who engaged in one, or more of these activities.

DREEm Stakeholders & Participants

	Participant name	Role	Organisation	Location
1	Anna Jobson	Consultant	Anna Jobson	London
2	Michael Lynas	Group Content & Creative Director	Ambassador Theatre Group	UK wide
3	Natalie Smith	Education Director	Arc Theatre	London
4	Nimrod Vardi	Founder and Creative Director	Arebyte Gallery	London
5	Helen Marriage	Artistic Director, Artichoke, and Curator, Lumiere	Artichoke	London
6	Melanie Sensicle	Director	Avenue Six	Newcastle
7	Yvonne Kelly	Principal and CEO	Barking & Dagenham College	London
8	Sally Dixon	Assistant Director Partnerships & Communications	Beamish Museum	County Durham
9	Malath Abbas	Creative Producer	Biome Collective	Scotland
10	Marcel Baettig	Founder and CEO	Bow Arts	London
11	Wayne Trevor	Network Project Manager	Citizens' Alliance Network	London
12	Prof. Justin Lewis	Director Clwstwr	Creative Cardiff	Wales
13	Jane Shaw	Director	Create North	North of England
14	Sara Pepper	Director of Creative Economy	Creative Cardiff	Wales
15	Vicki Sutton	Project Manager	Creative Cardiff	Wales
16	Ashley Smith-Hammond	Creative Industries Officer	Creative Scotland	Scotland
17	David Tan	Head of Modelling	DCMS	London

Appendix 4
The DREEm Working Group Stakeholders, and terms of reference

	Partcipant name	Role	Organisation	Location
18	Edwin Poon	Economic Advisor — Arts, Heritage & Tourism	DCMS	London
19	Harman Sagger	Head Economist — Arts, Heritage & Tourism	DCMS	London
20	Joe Bohoslawec	Statistician — Media & Creative Industries	DCMS	London
21	Thomas Warren	Economic Advisor — Arts, Heritage & Tourism	DCMS	London
22	Prof. Anita Taylor	Dean of School of Design & Informatics	Duncan of Jordanstone College of Art & Design	Dundee
23	Prof. Chris Rowland	Professor of 3D Visualisation	Duncan of Jordanstone College of Art & Design	Dundee
24	Claire Dow	Principal Events Officer	Dundee City Council	Scotland
25	Beth Bate	Director	Dundee Contemporary Arts	Scotland
26	Liam Sinclair	Executive Director/Joint Chief Executive	Dundee Rep	Scotland
27	Lorraine Lemon	Head of Business and Operations	Dundee Science Centre	Scotland
28	Rebecca Duncan	Head of Development	Dundee Science Centre	Scotland
29	Andrew Usher	Visitor Experience and Enterprise Director	Durham Cathedral	Durham
30	Pam Hill	Head of Visitor Experience	Durham Cathedral	Durham
31	Alison Clark	Director Durham 2025	Durham County Council	Durham
32	Richard Dowson	COO	Durham County Council Cricket Club	Durham
33	Ged Matthews	Durham 2025	Durham University	Durham
34	Ladan Cockshut	Senior PDRA, Creative Fuse	Durham University	Durham
35	Liz Waller	Director of University Library and Collections	Durham University	Durham
36	Jess Hunt	Director	East Durham Creates	Durham
37	Tommy Ting	Technology Production Manager	Framestore	London
38	Alex Mann	Policy Officer, Thames Estuary Production Corridor	Greater London Authority	London
39	Arman Nouri	Policy Officer, Thames Estuary Production Corridor	Greater London Authority	London

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The DREEm Working Group Stakeholders, and terms of reference

	Participant name	Role	Organisation	Location
40	Sam Miller	Artistic Director	Green Shoes Arts	London
41	Deborah Chapman	Artist, Film maker, Director	How it Felt	Dundee
42	Prof Gregor White	Dean of School of Design & Informatics	InGAME CRDP, Abertay University, Dundee	Scotland
43	Sean Taylor	Project Director InGame	InGAME CRDP, Abertay University, Dundee	Scotland
44	Prof. Joseph De Lappe	Professor of Games & Tactical Media	InGAME CRDP, Abertay University, Dundee	Scotland
45	Katy Arnander	Consultant	Katy Arnander	London
46	Ann Marie Pena	Head of Culture	London Borough of Barking and Dagenham	London
47	Pye Nyunt	Head of Insight & Innovation, Strategy & Participation	London Borough of Barking and Dagenham	London
48	Tamara Horbacka	Cultural Policy and Commissioning Manager	London Borough of Barking and Dagenham	London
49	Billy Gartley	Head of Cultural Services	Leisure and Culture Dundee	Scotland
50	Stephanie Crowe	Research Director	Muckle Studios, Dundee	Scotland
51	Paul Kaynes	Chief Executive	National Dance Company Wales	Wales
52	Saoirse Anton	Touring and Projects Officer	National Dance Company Wales	Wales
53	Donna Holford-Lovell	Director	NEoN, Dundee	Scotland
54	Matthew Jarratt	Partnership Manager	North East Cultural Partnership	North East
55	Dr Joanne Stuart	CEO	Northern Ireland Tourism Alliance	Belfast
56	Nat DeFriend	Deputy Chief Executive Officer/ COO	Participatory City	London
57	Lena Smith	Library Project Manager	Pen to Print	London
58	Mathew Russell	Executive Director	Queens Theatre-Broadway	London
59	Julie Biddlecombe-Brown	Curator	Raby Castle	Durham

Appendix 4
The DREEm Working Group Stakeholders, and terms of reference

	Participant name	Role	Organisation	Location
60	Annette Mees	Head of Audience Labs — Audiences and Media	Royal Opera House	London
61	Kate Wyatt	Creative Producer	Royal Opera House	London
62	Lindsey Glen	Head of Policy and Strategy	Royal Opera House	London
63	Terry McGrath	Director of Media and Audiences	Royal Opera House	London
64	Sarah Ellis	Director of Digital Development	Royal Shakespeare Compnay (RSC)	Stratford upon Avon
65	Ankur Bahl	Director of Digital Stage and Studio	Sadler's Wells	London
66	Jane Macpherson	Director of Marketing and Sales	Sadler's Wells	London
67	Sarah Price	Head of Locomotion	Science Museum Group/ Locomotion	Durham
68	Hannah Gagen	Advocacy Manager	Society of London Theatre (SOLT)	London
69	Sebastian Cater	Head of UK Theatre & Workforce Development	Society of London Theatre (SOLT)	London
70	Sarah Dance	Co-Chair	South East Creative Economy Network (SECEN)	Kent
71	Di Gate	Director	Stick Theory	North East
72	Joseph Pine	Co-founder	Strategic Horizons LLP	USA
73	Daryl Branch	Executive Director	Studio 3 Arts	London
74	Jasmine Wilson	Director of Learning and Engagement	Studio Wayne McGregor	London
75	Sarah Stafford	Associate Assistant Vice Principal	Sydney Russell School	London
76	Sarah James	CEO	The Arts Development Company	Dorset
77	Liz Fisher	Operations Director	The Auckland Project	North of England
78	Ged Grimes	Composer and Musician	The Bard's Tale	Scotland
79	Alessandro Pula	Head of Experience Europe	The Mill Visual Effects Company	London
80	Jarrad Vladich	Executive Producer-Emerging Technologies	The Mill Visual Effects Company	London
81	Emma Southworth	Creative Producer	The Royal Ballet & The Royal Opera House	London

Appendix 4
The DREEm Working Group Stakeholders, and terms of reference

	Participant name	Role	Organisation	Location
82	Susie Batey	Area Manager	Tyne & Ware Archives Museum	North East
83	Kurt Janson	Director	UK Tourism Alliance	London
84	Dr Lauren England	Baxter Fellow in Creative Economies	University of Dundee	Scotland
85	Leonie Bell	Director	V&A Dundee	Scotland
86	Jayni Gudka	CEO	Unseen Tours	London
87	Lucy Jenkins	Director of Culture and Heritage	Ushaw Historic House	Dundee
88	Claire Eva	Director, Audiences and Media	V&A Dundee	Scotland
89	Dr Jen Ballie	Design for Business Research Manager	V&A Dundee	Scotland
90	Karen Rushton	Borough Archivist, Valence House Museum	Valence House Museum	London
91	Leeanne Weswood	Curator	Valence House Museum	London
92	Amanda Tutin	Account Assistant	Visit County Durham	Durham
93	Michelle Gorman	Managing Director	Visit County Durham	Durham
94	Ross Calladine	Head of Business Support	Visit England	Basingstoke
95	Guðrið Højgaard	CEO	Visit Faroe Islands	Faroe Islands
96	Caroline Warburton	Regional Leadership Director: Perth & Kinross, Fife, Dundee and Angus	Visit Scotland	Edinburgh
97	Jenni Steele	Film and Creative Industries Manager	Visit Scotland	Edinburgh
98	Ridell Graham	Director of Industry and Destination Development	Visit Scotland	Edinburgh
99	Alessandra Alonso	Founder and CEO	Women in Travel	London
100	Damian Murphy	Director	XR Stories Creative R&D Partnership, led by University of York.	York

4.2 Working group role

The working group committed to participating in a minimum of three meetings and/or workshops over the 18 month period of the research project. The working group provided invaluable advice and guidance to the project team in developing and delivering the project outcomes. Working group members periodically assisted the project team in collecting primary research data (e.g. by supporting circulation of survey questionnaires to the constituents), sharing their own experience, and contributing toward the research

outcomes, ensuring the relevance, value and utility of the research overall to the intended end users. Over and above these activities, individual working group members agreed to support specific project activities by, for example, working with the project team to develop models or prototypes that can support emerging practice.

4.3 Working group attendees

Working group participants were drawn from across the extent of the Experience Economy (EE), including organisations and individuals who are engaged in, and have expertise in the following sectors: Creative; Visitor; Gaming; Film; Cultural; Heritage, and the various aspects of Digital Production. While mindful of the significant challenges Covid-19 posed to EE businesses across the UK, the project team have maintained engagement with approximately 100 SMEs from the three Place based case studies. The team conveys sincere thanks to all the contributors for their invaluable insights during this particularly challenging period of time.

4.4 Meetings

We anticipate three meetings minimum over the 18-month course of the project. Participants can join physically or dial in remotely. Notice and papers will be circulated in advance of each meeting and a summary of key outcomes/actions from each meeting will also be circulated within two weeks.

4.5 Benefits of participating

The working group will be managed in such a manner as to encourage networking among and between members (both within and outside of the group), and support the building of new links and connections. Sharing of practice and relevant opportunities will be encouraged, as well as an exchange of experiences at the digital/physical interface.

Working methods
Working group participants are asked to participate in good faith, providing information in a way that is open, honest, and dedicated to a constructive conversation that respects the interests of all participants. Participants are asked to strive for effective dialogue. To facilitate this, all meetings will be hosted according to the Chatham House Rule, meaning that participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed. Unless explicitly agreed in advance, none of the working group members may speak for the entire working group.

Should working group participants choose to issue a joint statement or communique regarding their meeting, it must be discussed during the session.

Any request to share information discussed at the meetings or by subsequent emails must be agreed with the working group.

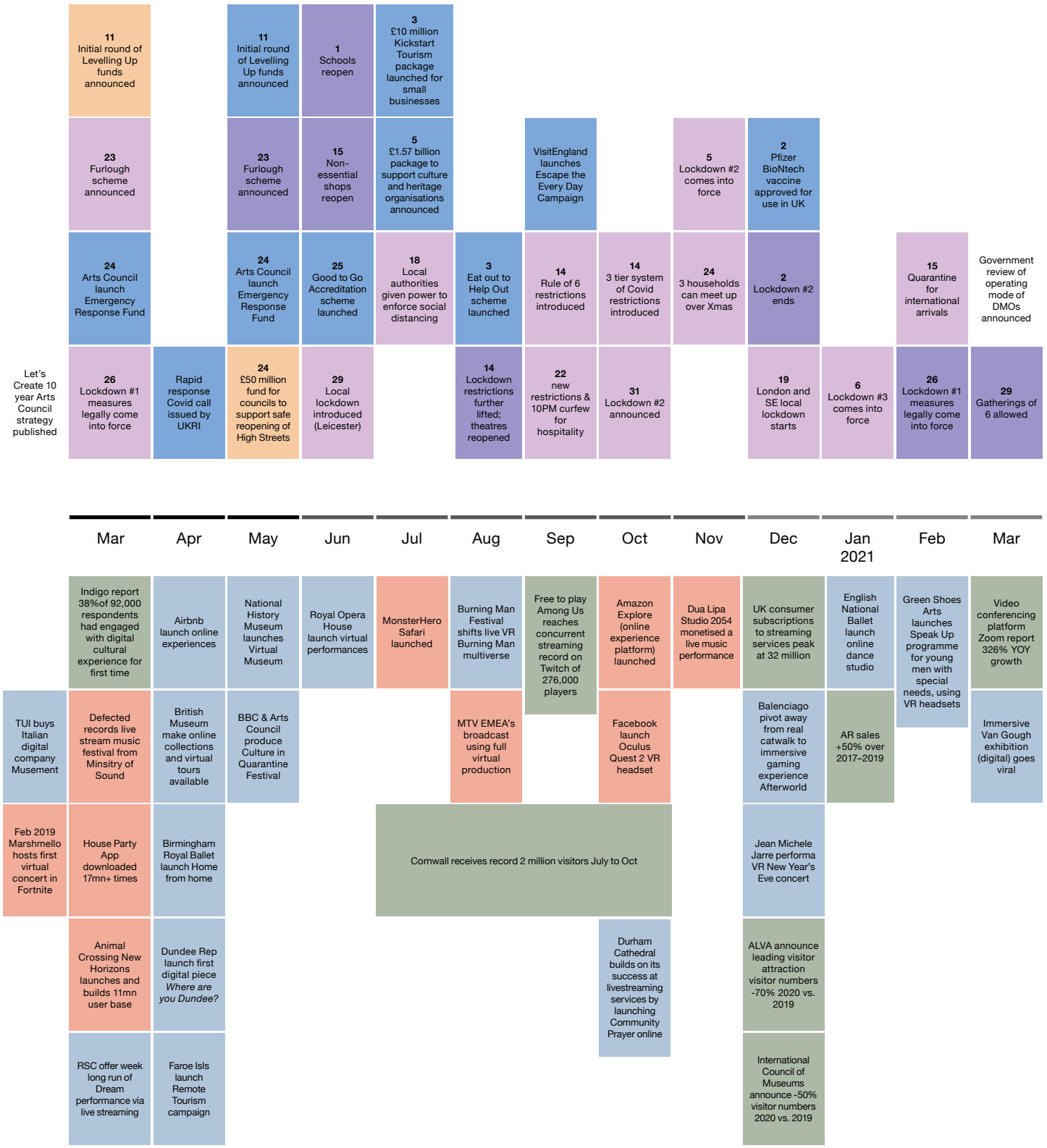
Appendix 5 Compendium of Digital Experience Productions included in the Guide to Creating Digital Experience Productions

A spreadsheet with a full list of the Digital Experiences that were reviewed by the project team can be accessed by clicking on **this link.**

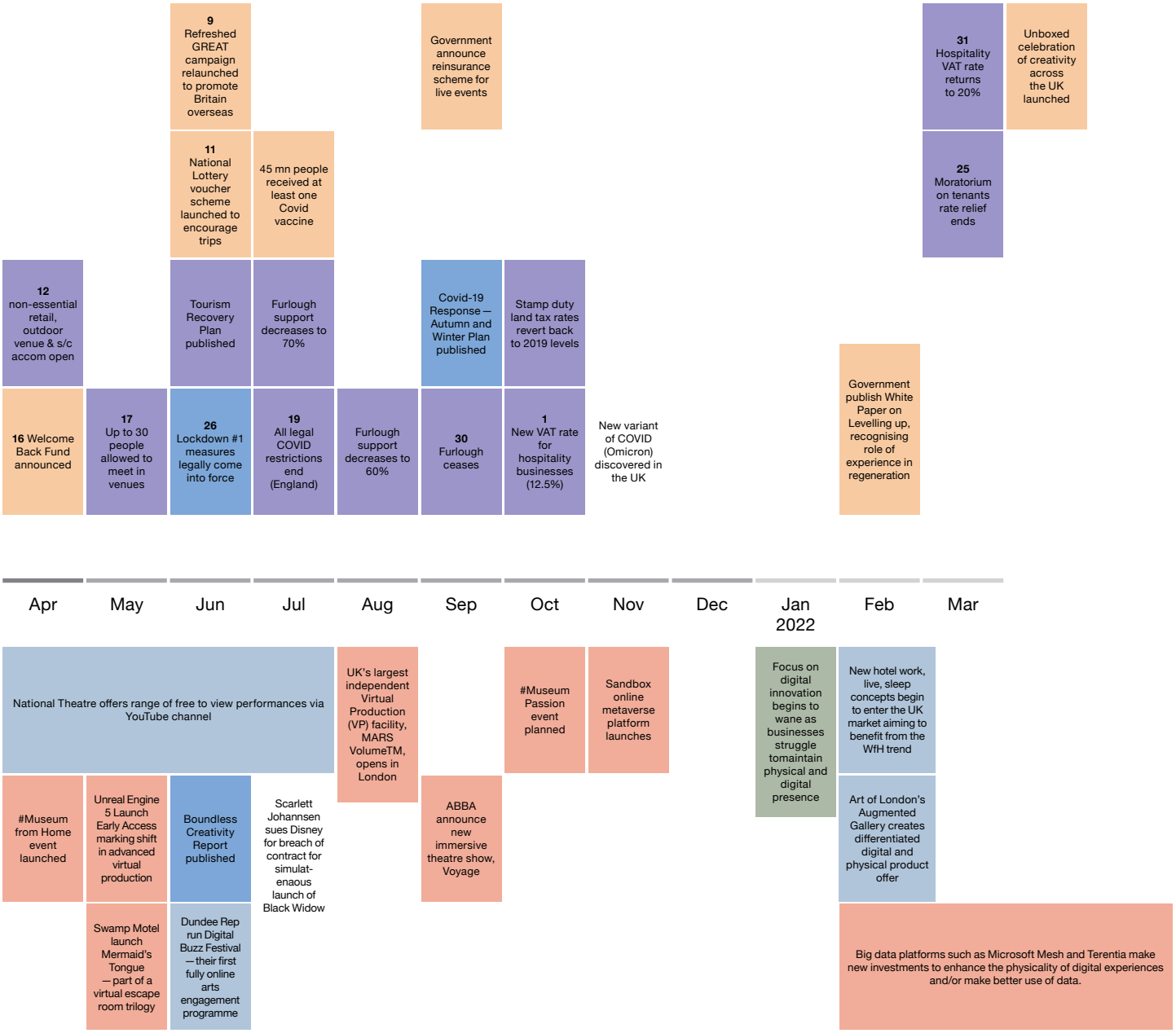
Appendix 6 Production Case studies

This appendix can be accessed by clicking on **this link.**

Appendix 7 Policy Progress Timeline



Appendix 7
Policy Progress Timeline



- Policy measures introduced to limit spread of Covid 19
- Policy measures to reduce spread of Covid-19 lifted
- Introduction of initiatives to support economic survival of experience sectors
- Strategies/policies designed to support recovery
- Flag ship activities at the digital/physical experience interface
- Flagship activities engaging physical experience providers in the digital space
- Data demonstrating changes in consumer experience preferences