

THE ANATOMY OF A CREATIVE CLUSTER

Inspiration from global creative initiatives

Zanna Creative – July 2019



Dara Dinner – Jaaga.In, Bangalore (Photo © Karthikeyan Gopinathan)

Acknowledgements

We would like to thank Michael Gubbins and the board of the West Midlands Screen Bureau for commissioning this report as part of the British Film Institute's Creative Clusters Challenge Fund initiative supported with National Lottery funding and additional support from WMCA and Birmingham City Council.

Thanks also to the Foreign and Commonwealth Office, British Council, Creative Industries Federation, Clore Leadership Programme and the many contributors from across the world who provided valuable insight for this report.

Suzie Norton, Founder Director

[Zanna Creative](#)

Lead author and international consultation: [Suzie Norton](#)

Author: [Sholeh Johnston](#)

Research: [Lindsay Dunbar](#)

Design: [Alice Underhill](#)



Executive Summary

This report draws together in-depth analysis of five international creative clusters to map The Anatomy of a Creative Cluster – a framework to help support the development of a thriving and future-focused screen cluster in the West Midlands.

Overview of the Case Studies

The creative clusters analysed for this report represent five global regions: Asia Pacific, North America, Latin America, Europe and Africa & Middle East, focusing on Abu Dhabi, Bangalore, Berlin-Brandenburg, Mexico City and Ontario. These thriving creative economies represent different stages of growth and socio-economic, political and environmental contexts. They provide different lenses for understanding the emerging opportunities for creative clusters and how this potential for growth intersects with social, political and environmental resilience and influence at a local, regional national and international level.

Abu Dhabi

Abu Dhabi's creative cluster is an emergent but rapidly expanding ecosystem. The city's ambitious plans are unprecedented in scale and scope, driven by the film and TV sectors and focusing on international partnership and franchising, and it will be the first cluster of its kind in the United Arab Emirates.

Bangalore

This cluster in India's "digital capital" has developed organically over twenty years, catalysed by the millennium IT boom and sustained policy and government investment. India has one of the world's fastest growing digital audiences and Bangalore is capitalising on this with a highly educated population of young professionals, cross-pollination between science, technology and the arts, and a politically progressive reputation.

Berlin

A global destination housing over 20,000 artists and creative businesses, Berlin is building on a rich history of counter-cultural activity. It shares an innovation strategy (InnoBB) with its neighbour state Brandenburg, which supports the creative industries alongside energy, healthcare and future mobility clusters, through an urban-rural, cross-sector "super-cluster".

Mexico City

The Mexican capital's creative cluster centres on a world-class design sector, an established film industry and rapidly growing R&D and innovation sectors, underpinned by a strong indigenous identity and a strong emphasis on social and environmental impact in a polarised city where 43% still live in poverty.

Ontario

One of the most advanced creative clusters in the world, with thriving film, TV, interactive digital media, music, publishing, events and theatre industries, Ontario has achieved consistent investment and support over 20-30 years through solid policymaking, a pro-business environment and world-class research and educational institutions.



Justice: Netflix Original Series
- behind the scenes. Abu Dhabi
(Photo © Image Nation)

Findings

The Anatomy of a Creative Cluster identified in this research includes ten key elements:

1. International Recognition – supporting companies to develop the size and capacity to compete in relevant international markets through underwriting the risk of R&D and providing grant financing; promoting local talent at international events and platforms (physical and digital) in-country and abroad to market products and brokering new relationships.

2. Economic Support – relevant financial mechanisms to support different elements of the creative ecology, for example: tax credits, grant funding, accelerator funding, early-stage and commercialisation equity investment, funded participation at international events, infrastructural funding (workspaces, research institutes, business parks, industry-specific production facilities), and training and professional development.

3. Community Engagement – creating the conditions for communities to benefit from and collaborate with creative clusters in their locale on mutually-beneficial initiatives, celebrating diversity and legitimising local culture, and creating opportunities for local people to access creative education and employment.

4. Festivals and Events – funding and promoting local, regional, national and international events and festivals to showcase talent, promote product sales, enable networking and collaboration, stretch local ambition, feed innovation and bolster tourism.

5. Cross-Sector Collaboration – knowledge sharing, creating meet-ups, events, conferences, cross-sector workspaces, and innovation competitions to support regular networking and nurture fruitful collaborations through space, funding and shared vision and purpose.

6. Urban-Rural Connectivity – reframing the rural as a place of creative possibility by repurposing ex-industrial and farming infrastructure as creative workspace and facilities, providing cheaper workspace for both SMEs and large companies, and facilitating activities to connect people across locations.

7. Individual Leadership – key individuals who are critical to the strategic vision, drive, identity and international influence of a cluster, and leadership development infrastructure to invest in emerging leaders.

8. Physical Hubs – spaces that provide offices, creative facilities and equipment, alongside networking, education, capacity building, investment and profile to individuals and creative companies.

9. Virtual Networks – online networks supporting networking and collaboration locally and internationally, complimentary to in-person opportunities.

10. Artists and Industry Together – creating resilience through the provision of space and funding for and cross-pollination between individual artists and collectives with strong relationships to community, arts and crafts, talent development, sustainable development and artistic markets, and commercial businesses seeking these skills.

In addition to these elements, there is “enabling” infrastructure which are critical to the health of a cluster’s anatomy:

- R&D Partnerships – Academia and Industry Together
- Communications and Branding
- IP Development – Legal Frameworks and Implementation
- Consistent and Committed Policymaking

These ten Anatomy elements and the enabling infrastructure comprise a development framework for new and existing clusters, and an ongoing “health-check” for cluster growth.



1/



Image 1/ 1ShantiRoad, Bangalore
(Photo © Sandeep TK, Bangalore)

Image 2/ Justice: Netflix Original Series - behind the scenes, Abu Dhabi
(Photo © Image Nation)

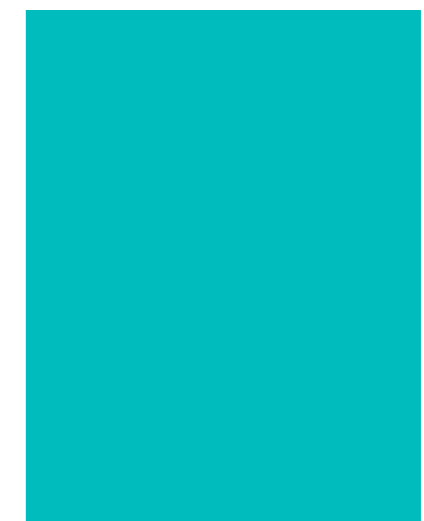
Image 3/ Design House 2018, Mexico City
(Photo © Design Week Mexico)



2/



3/





Diseño Contenido 2018, , Mexico City)
(Photo © Design Week Mexico)

CONTENTS

1.	Introduction	Page 10
2.	Methodology	Page 11
3.	Definitions	Page 14
4.	UK creative clusters – <i>recent policy development</i>	Page 15
5.	A snapshot of the WM Cluster	Page 18-19
6.	Inspiration from global creative initiatives	Page 21
7.	Global overview	Page 22-23
8.	Ontario	Page 24-29
9.	Mexico City	Page 30-37
10.	Berlin	Page 38-45
11.	Abu Dhabi	Page 46-53
12.	Bangalore	Page 54-61
13.	The Anatomy of a Creative Cluster	Page 62-63
14.	Appendices	Page 64

1 Introduction

In 2018, the West Midlands was the second screen cluster in the UK to receive National Lottery funding from the British Film Institute. Since 2016, the BFI has worked to develop a select few screen clusters with world-class potential. Investing in their development is a crucial strand of BFI's UK-wide strategy to help relieve pressure on existing facilities – half of which are based in London. It also helps expand the pool of talent available to industry, creating employment opportunities for people across the UK and making our workforce more diverse and inclusive – a step to tackling the sector's skills gaps.

The British Film Institute made this award through its Creative Clusters Challenge Fund supported through National Lottery funding, with match-funding received from the West Midlands Combined Authority and Birmingham City Council. This project has been running for a year, administered by the West Midlands Screen Bureau, and led by experienced international analyst and consultant Michael Gubbins.

Its core objectives have been to create an active network of engaged businesses from a variety of 'screen' industries, including games, film and television, and to build the foundations which will attract investment and create growth in the creative screen sector. It has mapped the regional sector and created a network, which has come together in a series of cross-sectoral 'Design Labs', which have focused on how to seize the opportunities of a changing global screen economy.

The project has culminated in major research for the West Midlands, which will turn into a set of practical proposals for industry growth in international markets operating across the creative screen industries.

To support this work, Zanna Creative was commissioned to undertake a global consultation drawing upon five distinct creative cluster case studies to develop The Anatomy of a Creative Cluster. These case studies represent creative clusters at varying degrees of maturity, with each providing inspiring examples of creative initiatives. The findings in this report and throughout the WMSB research be taken forward for delivery by a new Screen Industry Body for the region that will become the driver for the screen cluster.

2 Methodology

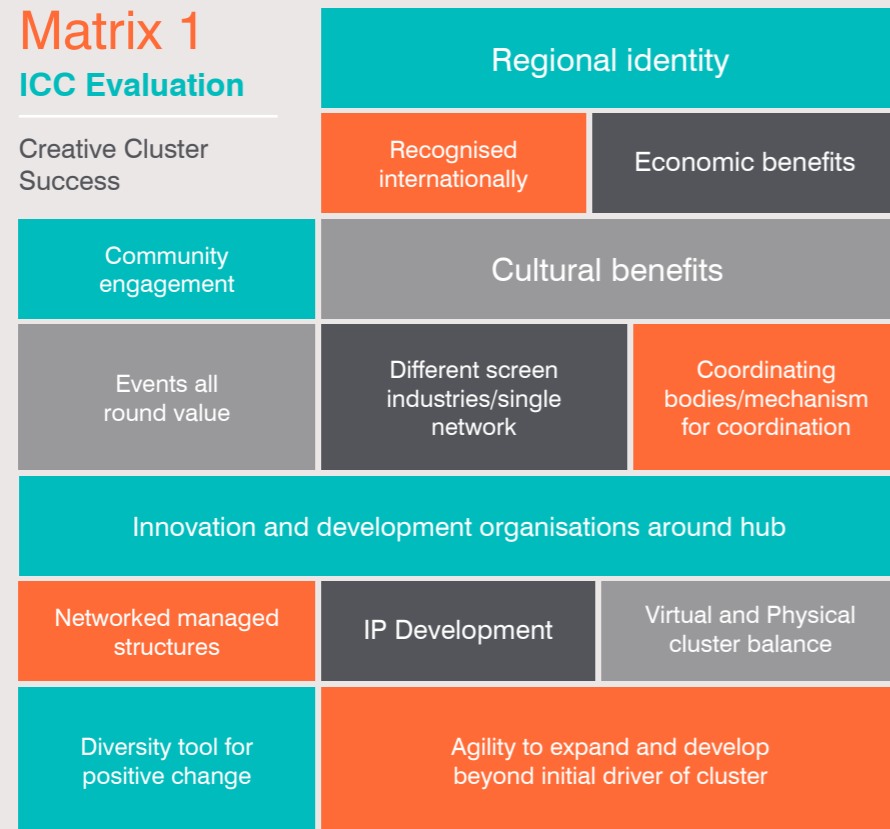
This report has identified five case studies, one from each global geographic region: Asia Pacific, North America, Latin America, Europe and Africa & Middle East.

The case studies are selected on the basis that they reflect creative clusters at various stages of development, each with interesting creative initiatives that collectively provide the individual elements required to create The Anatomy of a Creative Cluster.

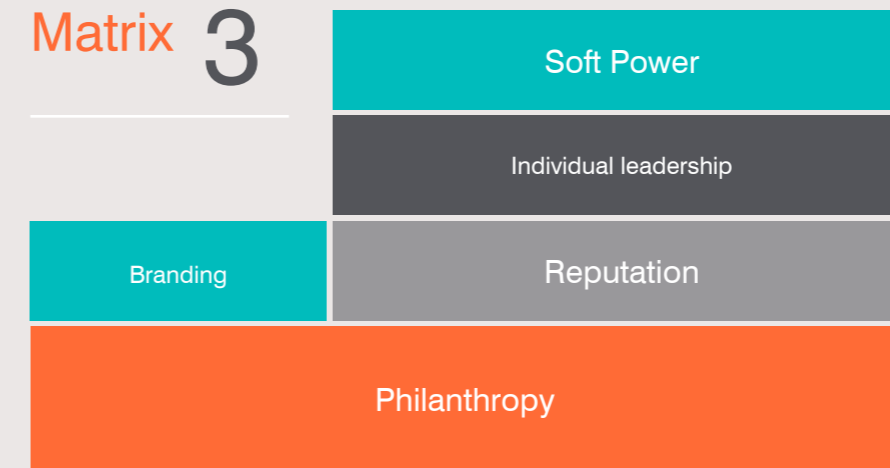
This report offers an overview of disparate global creative clusters at different stages of maturity and each with varying data collection methodologies, which makes comparison of data problematic. Where possible, the latest data from each cluster has been sourced, and we are grateful to those cluster leaders releasing unpublished reports and data for use as source material for this report.

To identify the five case studies, and to enable subsequent comparison, we developed a series of matrices comprising elements within creative clusters. We identified an initial long-list of 10 global creative clusters, with the final five selected based on their collective diversity, stages of maturity and geographic location.

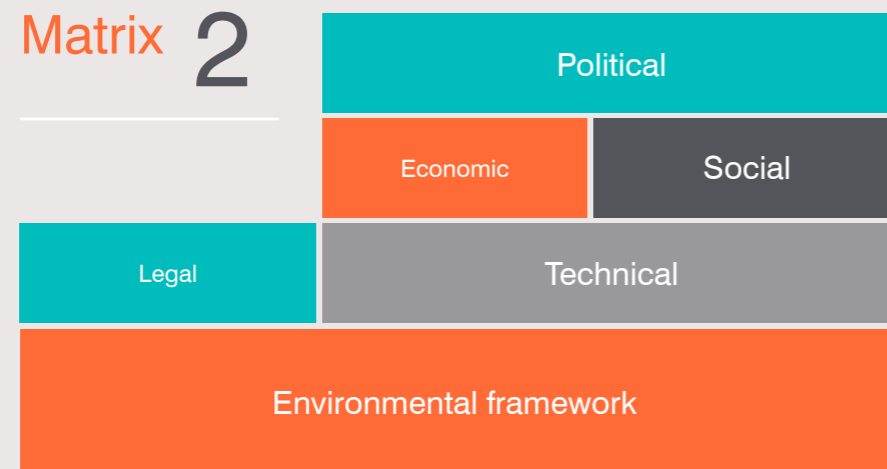
Matrix 1 ICC Evaluation



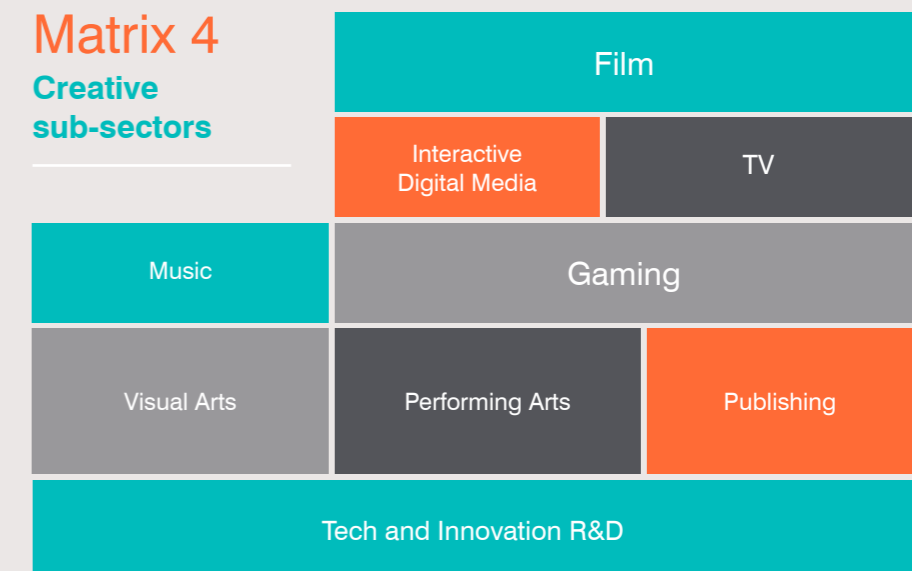
Matrix 3



Matrix 2



Matrix 4 Creative sub-sectors



We also used a variety of research methods, with both primary and secondary sources.

- Data from the West Midlands and national UK agencies, internal reports and published sources.
- Literature review, taking in both UK and international sources.
- First person interviews and email correspondence with UK agencies.
- First person interviews with international agencies, creative cluster leaders, practitioners and business owners in each of the five cluster areas.

1/ De Propris, L. and Hypponen, L. (2008) Creative Clusters and Governance:

2/ <https://creativeconomy.britishcouncil.org/guide/hubs-clusters-and-regions/>

3/ <https://www.gov.uk/government/publications/creative-industries-mapping-documents-2001>

3 Definitions

Creative Clusters

There are numerous ways to define a 'creative cluster'. The nature of creativity and geographic clustering means there is no one-size-fits all definition for clusters; much depends on local context, soft power and other intangibles, such as brand identity.

Professor Lisa De Propris ¹, University of Birmingham, defines creative clusters as places which brings people together:

1. A community of 'creative people' who share an interest in novelty, but not necessarily in the same subject.
2. A catalysing place where people, relationships, ideas and talents can spark each other.
3. An environment that offers diversity, stimuli and freedom of expression.
4. A thick, open and ever-changing network of inter-personal exchanges that nurture individuals' uniqueness and identity.

In this report, given the global context, we use John Newbiggin's definition for the British Council ²:

"Clusters' describe a group of related or mutually-dependent businesses and resources that are grouped together in a neighbourhood or part of a city although the cluster may be a virtual network that is dependent on good internet connectivity rather than physical proximity".

Creative industries

DCMS define the creative industries as "those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property ³".

This report is particularly focused on the screen sectors within the creative industries, which we defined as film, television, games, animation, high-end TV, VFX, immersive tech and those businesses directly in the screen sector supply chain.

4/ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664563/industrial-strategy-white-paper-web-ready-version.pdf

5/ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/649980/Independent_Review_of_the_Creative_Industries.pdf

6/ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/695097/creative-industries-sector-deal-print.pdf



4 UK creative clusters

Recent policy developments

The creative industries are now firmly recognised as key drivers for economic and cultural growth in the UK, with national policy developments over the last few years supporting this sector. Whilst it has long been established that London is a global creative powerhouse, the impact of creative clusters outside of England's capital is now also recognised.

The growth of creative 'hotspots' across the UK in cities such as Edinburgh, Cardiff, Bristol, Leeds and Manchester encouraged the government to prioritise support for the creative industries in its 2017 Industrial Strategy ⁴, which positioned the sector as central to addressing the five 'Grand Challenges' facing the UK: Artificial Intelligence; Future Mobility; Clean Growth and Ageing Society.

Subsequently, Peter Bazalgette in his 2017 *Independent Review of the Creative Industries* ⁵ recommended a new 'Creative Clusters Fund, to accelerate regional growth and create models that can be passed on to other creative clusters and sectors. Industry should work with a small number of universities and existing creative clusters on a flexible, modular 'Creative Leaders' scheme to cultivate a network of highly-skilled cluster leaders around the UK'.

Bazalgette's review informed the 2018 *Industrial Strategy: Creative Industries Sector Deal* ⁶, which included a commitment to investing in UK creative clusters through a £64m Arts and Humanities Research Council (AHRC) programme to deliver eight partnerships between universities and creative businesses across the UK, creating 900 business-led collaborations, 360 jobs and 65 new businesses, backed by a national Policy and Evidence Centre.





5 A snapshot of the WM Creative Cluster

£4BN+ IN GVA

**9,975 CREATIVES
ENTERPRISES**

48,800 jobs plus 40,000 further creative jobs in non-creative industries

**UK'S FIRST LARGE
SCALE 5G TEST BED**

HOME TO BBC3 &

*Largest Jewellery, Crafts
& Designer Maker
Cluster outside London*

BBC ACADEMY

Silicon Spa cluster



Silicon Spa - Coventry & Warwickshire has a globally significant gaming cluster which is one of the largest in the UK. The cluster employs over 2500 highly skilled people, equating to over 15% of the UK total in games development.

The Silicon Spa cluster is anchored in the heart of Royal Leamington Spa a vibrant regency town and stretches out to the surrounding areas of Southam and Warwick. Uniquely, 75% of the digital media companies in the area are gaming companies, where a more typical share would be 5-10%.

With an established history in game development spanning 30 years, the local area can call upon a uniquely skilled talent pool drawn by the presence of key industry names including Codemasters, SEGA and Ubisoft.

Currently there are more than 50 studios operating within the Silicon Spa area and over 80 across the area of Coventry and Warwickshire.

The West Midlands' creative cluster is well positioned in 2019 to build on its networks, collaborations and sector specialisms to become a central driver to the growth of the UK's creative economy.

NESTA recently defined the Birmingham and the region as a 'Creative Challenger' ¹⁰ cluster alongside Bristol, Newcastle, Sheffield, Edinburgh and Cardiff. These clusters are defined as having recently gained creative specialisation and have diverse ecosystems with some high-growth firm presence.

In May 2019 the West Midlands was the first region in the UK to launch its Local Industrial Strategy, with the creative industries cluster now positioned within one of four high growth sectors: Future of Mobility; Data-Driven Health and Life Sciences; Modern Services; Creative Content, Techniques and Technologies ¹¹.

The WM screen sector ¹² is recognised as a key driver the wider creative cluster, with a new industry-led screen industry body being launched in October 2019 to help catalyse this growth.

^{7/} Creative Economy Mapping Study for GBSLEP <https://gbslep.co.uk/resources/reports/creative-economy-mapping-study>

^{8/} <https://gbslep.co.uk/local-industrial-strategy>

^{9/} CWLEP figures June 2019

^{10/} <https://www.nesta.org.uk/report/creative-nation/>

^{11/} <https://gbslep.co.uk/local-industrial-strategy>

^{12/} Defined as film, television, games, animation, high-end TV, VFX, immersive tech, influencer/vlogger, branded content and those businesses directly in the screen sector supply chain



6 Inspiration from global creative initiatives

This report aims to provide inspiration from global creative initiatives to help inform the emerging creative cluster ecosystem and structures in the West Midlands.

We have identified five case studies, one from each global geographic region: Asia Pacific, North America, Latin America, Europe and Africa & Middle East.

The case studies are selected on the basis that they reflect creative clusters across various stages of development, each with interesting creative initiatives that collectively provide the individual elements required to create *The Anatomy of a Creative Cluster*.

North America

- Third-largest CCI market
- US\$620b (28% of global revenues)
- 4.7 million jobs (16% of total jobs)

ONATRIO

- Geographic size: 1,076,395 km²
- Population: 13,448,494 ¹⁶
- Proportion aged 0–14 (%) 16.4
- Proportion aged 15–64 (%) 66.9
- Proportion aged 65+ (%) 16.7 ¹⁷

BERLIN

- Geographic size: 891 km²
- Population: 3,613,495
- Proportion aged 0–17 (%) 15
- Proportion aged 18–64 (%) 65.7
- Proportion aged 65+ (%) 19.3

Europe

- Second-largest CCI market
- US\$709b of revenues (32% of the global total)
- 7.7 million jobs (26% of all CCI jobs)

MEXICO CITY

- Geographic size: 1,485 square km²
- Population: 21,671,908
- Proportion aged 0–14 (%) 27.6
- Proportion aged 15–64 (%) 65.9
- Proportion aged 65+ (%) 6.5

Latin America

- US\$124b in revenues (6% of CCI global market)
- 1.9 million jobs (7% of total CCI jobs)

Asia-Pacific (APAC) ¹³

- World' largest CCI market
- US\$743b of revenues (33% of global Total)
- 12.7 million jobs (43% of CCI jobs worldwide)

BANGALORE

- Geographic size: 709 km²
- Population: 11,882,666 ¹⁴
- Proportion aged 0–14 (%) 22
- Proportion aged 15–64 (%) 73.5
- Proportion aged 65+ (%) 4.5 ¹⁵

Africa and the Middle East

- US\$58b in revenues (3% of the total)
- 2.4 million jobs (8% of total CCI jobs)

ABU DHABI

- Geographic size: 972 square km² ¹⁸
- Population: 1,452,057 ¹⁹
- Proportion aged 0–14 & Proportion aged 65+ (%) 18 ²⁰
- Proportion aged 15–64 (%) 82 ²¹

13/ Cultural and Creative Industries (The first global mapping of cultural and creative industries) December 2015. CISAC – the International Confederation of Societies of Authors and Composers

14/ <http://worldpopulationreview.com/world-cities/bangalore-population/>

15/ https://www.icmr.nic.in/sites/default/files/reports/Bangalore_Ann.pdf

16/ <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hlt-fst/pd-pl/Table.cfm?Lang=Eng&T=101&SR=1&S=3&O=D#map-popup>

17/ <https://www.fin.gov.on.ca/en/economy/demographics/census/cenhi16-3.html>

18/ https://en.wikipedia.org/wiki/Abu_Dhabi

19/ <http://worldpopulationreview.com/world-cities/abu-dhabi-population/>

20/ <https://www.scad.ae/Release%20Documents/Explore%20Abu%20Dhabi-english.pdf>

21/ <https://www.scad.ae/Release%20Documents/Explore%20Abu%20Dhabi-english.pdf>

8 ONTARIO

Ontario creative industries account for almost half of Canada's creative industries GDP overall. ²²

Ontario's creative cluster job growth is double that of other Ontario industries - 38.3% compared with 17%. ²³

Ontario is the leading province for film and television production in Canada, contributing \$2.3 billion in production expenditures. ²⁴

Ontario's interactive digital media (IMD) sector consists of 929 companies, generating \$1.66 billion of revenue in 2017 on expenditure of \$1.40 billion, for an implied profit margin of 31%. ²⁵

Ontario has one of the most advanced creative clusters in the world, with thriving film, TV, interactive digital media, music, publishing, events and theatre industries. Ontario has achieved this through consistent investment and sector support over the last 20-30 years, underpinned by a solid policy infrastructure focused on nurturing the creative industries as a major growth market.

Ontario presently enjoys political stability, with an understanding from municipal to federal government of the importance of the creative cluster in the province's economic growth, quality of life and global stature. The cluster is supported by an open, world-leading economy, pro-business environment and world-class research and educational institutions. It is known as the best country in the G20 to do business (Forbes & Bloomberg), with the soundest banking system in the world (WEF). Ontario's social conditions are buoyed by the most highly-educated workforce amongst OECD countries and it is a proudly multicultural society.

Canada's standing in the international political and economic spheres means that Ontario's creative cluster can exercise 'soft power' internationally. Relationship-building and the positioning of Ontario's Creative Cluster as a key global player has been led by individuals, bolstered by innovation hubs and entrepreneurial SMEs, cemented by the brand reputation of well-established companies, and sustained by supportive policy frameworks and funding mechanisms.

Central to the growth of Ontario's creative cluster is the economic development agency Ontario Creates. Established in the 1990s and initially branded the Ontario Media Development Corporation, Ontario Creates is an agency of the Ministry of Tourism, Culture and Sport. Under the dynamic leadership of Karen Thorne-Stone, Ontario Creates offers a toolkit of bespoke support for creative businesses, including administering tax credits, development funds and support grants. [See Inspirational Cluster Initiative 2: Economic Incentives]

Over and above business support, the agency facilitates innovation by stimulating production, format innovation and collaboration. It places a strong emphasis

on stimulating partnerships between the public and private sectors, acts as a catalyst for R&D programmes and promotes Ontario as a world-class leader. Critically, Thorne-Stone has also enabled the agency to develop flexible approaches to supporting the cluster to evolve as the industry itself evolves.

The cluster has a clearly defined growth strategy in place with priority six pillars - Developing private investment and financing; Developing a global presence and market expansion; Fostering innovation and digital transition; Developing a strong ecosystem; Developing skills and leadership infrastructure and Fostering industry-government collaboration.

The cluster is underpinned by up-to-date copyright and intellectual property legislation ²⁴, and Statistics Canada's Canadian Culture Satellite Account (CSA) documents the vital purpose that intellectual property serves in the cultural industries' economic value chain. ²⁵

Ontario is a dynamic, multicultural province. With more than 162 languages spoken in Toronto alone. The creative cluster capitalises on this diversity by presenting itself as a gateway to the world, a place where any country can do business. Ontario's creative cluster recognises both the social and economic benefits of an inclusive and diverse creative sector, and this is prioritised with sector and audience-specific initiatives, designed to achieve both public value and a more diverse workforce on the content-creation side. Ontario Creates' OMDC Film Fund now has a diversity enhancement element which provides an additional \$4.5 million films that meet the provincial definition of diversity.

International profile and market opportunities are nurtured through capacity building initiatives, like the Toronto Festival of Authors' International Visitors Programme. Modelled on similar models in other countries, the IVP connects influential foreign publishing professionals with Canadian authors, agents, editors and publishers, and even the broader reading public. The Programme also operates as an informal rights fair, providing Canadian authors, publishers and agents an unprecedented opportunity in securing international rights and distribution deals.

The Toronto International Film Festival is also one of the most important film markets and festivals in the world and a champion of innovation.

Ontario's creative cluster is fed by world-class research and talent from technology institutes including OCAD University, York University's 3D Film Innovation Consortium, the Canadian Film Centre, and Sheridan College Screen Industries Research and Training Centre partnership, which are all incubating cutting-edge technologies.

Sector- and place-specific initiatives are also creating the conditions for innovation and digital transition. \$5

million is being invested in the MaRS Discovery District, a major R&D and commercialisation accelerator that is engaged with digital media and the creative industries. The 3D FLIC (3D Film Innovation Consortium) is a model for applied research and development that will expand the capacity for stereoscopic 3D cinema production in Ontario.

The cluster focuses on building a strong creative ecosystem by facilitating geographic clustering of complementary industries and cross-industry collaboration, supporting access to expertise, skills development, finance, business and research networks, and knowledge transfer.

DOCShift: Real Stories to Multiple Platforms is creating business opportunities for Ontario filmmakers and new media producers, merging skill sets and innovative interactive documentary genres. MaRS: a range of high-value services that help high-growth companies succeed, and access to the MaRS ecosystem – a curated community of entrepreneurs, investors, corporates, academics and government partners.

Collaboration and partnerships are nurtured through a mixture of co-working spaces, R&D labs and programmes, networks and events. Coworking Ontario supports the network of spaces. The Adjacent Possibilities in art+energy project of the Studio Y fellowship program of MaRS (a registered charity) is bringing artists and energy entrepreneurs together to reframe how climate change is considered. ²⁶

Ontario Creates supports a range of cross-sector collaboration initiatives. Page To Screen is a one-day B2B event promoting screen adaptations of Canadian books by matching 24 publishers with 45 screen producers. Six option deals came out of From Page to Screen in 2017-18. The Academy Award-nominated The Breadwinner was optioned out of an earlier edition of the event.

NXNEi is a new event for digital creators, tech entrepreneurs and new media producers at the NXNE Festival and Conference, focused on integrating musicians and the music industry with the interactive world.

^{22/} http://www.mtc.gov.on.ca/en/creative_cluster/creative_cluster_report.shtml

^{23/} <https://www.ontario.ca/document/environmental-scan-culture-sector-ontario-culture-strategy-background-document/sector-profile-cultural-industries>

^{24/} The Copyright Modernization Act (Bill C-32) was introduced into the House of Commons in 2010 to update the system of rights and obligations that govern the use of intellectual property in Canada.

^{25/} <https://www.ontario.ca/document/environmental-scan-culture-sector-ontario-culture-strategy-background-document/sector-profile-cultural-industries>

^{26/} https://d2khazk8e83rdv.cloudfront.net/books/mtcs_environmental_scan_of_the_culture_sector_en_0.pdf

C ANATOMY OF A CREATIVE CLUSTER 1: INTERNATIONAL RECOGNITION

ONTARIO'S INDIE GAMES SECTOR

DrinkBox Studios in Toronto is one of many leading indie games companies helping to garner international recognition for Ontario's creative cluster. The cluster's gaming industry expenditures nearly doubled between 2015 and 2017 to \$522 million, and the number of jobs in that sector increased 52% to 3,800. ²⁷ Over 90% of the revenue earned by Ontario's IDM companies is export revenue; United States (37%) and Continental Europe (34%) are the largest markets. ²⁸

Founded by Chris Harvey, Ryan MacLean and Graham Smith by DrinkBox has built its international reputation over 11 years to become a globally competitive business, exporting flagship products including the multi-award winning, globally critically acclaimed metroidvarnia action performing game series Guacamelee!

The support framework within the creative cluster has been critical to DrinkBox's success. Initially a 'bootstrapped' business, DrinkBox was able to scale rapidly through Ontario Creates investment, with access to games tax credits, grant funds, marketing support and vital development funds to underwrite the risk of prototyping new products.

The Canada Media Fund provided critical investment for Guacamelee! which meant DrinkBox was able to retain 100% IP on the product, rather than selling to a publisher, enabling the studio to maintain independence and retain vital resources.

DrinkBox was then able to start to compete in the global marketplace bolstered through Ontario Creates Global Market Development Fund, proving 50% costs to travel to international markets such as Gamescon in Germany. DrinkBox was also featured by Ontario Creates at international market events hosted to promote Ontario's creative cluster.

Ontario's Universities such as Sheridan College and the University of Toronto run access to talent programmes for games studios, with showcasing days which act as informal job interviews, where DrinkBox was able to secure highly skilled new talent.



²⁷ http://www.ontariocreates.ca/Assets/Communications/Year+in+Review/2017-18/YIR18_Tagged_EN_SECURED.pdf

²⁸ <http://www.ontariocreates.ca/Assets/Research/Research+Reports/Measuring-Success-2019-Report/Measuring-Success-2019-Report-ENGLISH.PDF>

Image 1/ DrinkBox Studios Team, Ontario (Photo © DrinkBox Studios)

Image 2/ Guacamelee! 2 (Photo © DrinkBox Studios)

C ANATOMY OF A CREATIVE CLUSTER 2: ECONOMIC SUPPORT

ONTARIO'S COMPANY SUPPORT INITIATIVES

Critical to the success of Ontario's creative cluster is a robust, stable and long-term approach to economic support for creative businesses. The creative cluster is responsive to government investments and support services targeted to key needs – from tax credits, to support for attending international marketing events, to flexible early-stage financing – and these early investments have yielded tangible results. Examples include:

Ontario Creates administers the Ontario Production Services Tax Credit (OPSTC), which is credited with establishing Ontario as a globally recognised centre of excellence for film and television service production. ²⁹ Over 2,361 products and productions have received tax credits of \$747 million, generating \$14 billion in Total Project Value. ³⁰

The Canada Media Fund (CMF) is a hugely successful internationally recognised financial initiative which fosters, develops, finances and promotes the production of Canadian content. It is structured to guide Canadian content towards a competitive global environment and has introduced several innovative funding initiatives to facilitate access to investors. The Accelerator Partnership Pilot Program (A3P) is designed to provide access to digital media accelerators, which assist digital media companies with mentorship and to access markets and capital.

The Business Growth Initiative is the government's new economic strategy to fast-track Ontario's knowledge-based economy by tapping into the creativity, education and skills of the people. The strategy will commit \$650 million over the next five years and leverage Ontario's highly-skilled workforce to compete through innovation.

Ontario is home to a large private investment community, but one that has yet to fully identify and develop investment opportunities in the creative cluster. Loan and venture capital financing are difficult to obtain in Canada, and many IDM companies in particular face challenges with accessing early-stage financing.

To bridge this gap, there are several funding programmes designed to nurture private investment: The \$90 million Ontario Venture Capital Fund will match private sector investment and increase the level of venture capacity activity in the province with the guidance of professional venture capitalists. The Emerging Technologies Fund will provide \$50 million a year over five years to co-invest in companies in three high-potential sectors – including digital media and information and communications technology. ³¹

^{29/} http://www.mtc.gov.on.ca/en/creative_cluster/cluster_report_driving_innovation.shtml

^{30/} http://www.ontariocreates.ca/Assets/Communications/Year+in+Review/2017-18/YIR18_Tagged_EN_SECURED.pdf

^{31/} http://www.mtc.gov.on.ca/en/creative_cluster/cluster_report_driving_innovation.shtml

Image 1/ Ontario Film Commission at Ontario Creates hosts 2019 Regional Film Forum (Photo courtesy of Ontario Creates © Queens printer for Ontario, Canada 2019)

Image 2/ Ontario Creates International Financing Forum TIFF 2018 (Photo courtesy of Ontario Creates © Queens printer for Ontario, Canada 2019)



9 MEXICO CITY

Mexico was the Official World Design Capital in 2018

Design industry alone generates US\$ 41.93 billion ³²

The creative and media industries account for 7% of Mexico's GDP ³³

In the last five years Mexican films received 127 international awards, including Best Director at Cannes Film Festival ³⁴

Mexico City is one of the most important cultural and financial centres in the Americas, a city that has fought hard for its own constitution, democratic powers and aspirational vision. The city is highly polarised in socio-economic terms, with pockets of great wealth but also 43% of the population living in poverty. ³⁵

Mexico City's creative cluster has grown out of this backdrop and is reflected in the mosaic of creative expressions and the subcultures it incubates – from its historical centre, Zócalo, a UNESCO World Heritage Site that traces Mexico City's history from the founding of Tenochtitlan, through 20th century art nouveau and art deco architecture and museums, to its present day reputation as a centre for technology innovation.

The new tech developments are in sharp contrast to the region's villages and self-constructed mountain communities, the canals of Xochimilco and indigenous arts, crafts and rituals.

The creative cluster recognises its importance to that whole ecosystem. It centres on a world-class design sector, an established film industry and rapidly growing R&D and innovation sectors, but its work is underpinned by a strong sense of history, society and the wider impact of the creative and cultural industries.

^{32/} <https://en.unesco.org/creative-cities/mexico-city>

^{33/} <http://www.promexico.gob.mx/documentos/folletos-sectoriales/creative-industries.pdf>

^{34/} <http://www.promexico.gob.mx/documentos/folletos-sectoriales/creative-industries.pdf>

^{35/} <https://theconversation.com/mexico-wants-internet-access-for-all-getting-everyone-online-could-reduce-poverty-too-104206>



CDMX: Place of Possibility

The city has a strong creative brand, CDMX, which stands for Ciudad de México (Spanish for Mexico City) used visibly at all levels from policymakers to individual creatives, creating a strong sense of identity and belonging. The creative industries are the fifth most important sector in Mexico, just behind aerospace, food, agriculture and automotive, accounting for 7% of GDP. ³⁶

Mexico is a powerhouse of film production, much of it centred in the capital city, and is one of the top five film markets in the world. It produces on average 120 films and documentaries each year. ³⁷ Government incentives have helped open markets and create jobs. ³⁸ The Mexican film industry has an impressive international reputation, bolstered by its proximity to Hollywood, where Mexican talent, including directors Guillermo del Toro (Pan's Labyrinth), Alejandro Gonzalez Iñárritu (Babel) and Alfonso Cuarón (Harry Potter and the Prisoner of Azkaban); and actors Salma Hayek, Gael García Bernal (The Motorcycle Diaries, Babel) and Diego Luna (Milk) have become well established.

Mexico produces more than 100 000 hours of television every year, with Mexican telenovela's being a wildly popular export distributed to over 100 countries, translated into more than 30 languages and watched by over a billion people. ³⁹

Mexico City's creative cluster growth is supported by a rapidly expanding innovation and R&D sector. In 2018, it ranked as the 73rd best place for innovation among 500 cities across the world. This is 11 positions higher than the year before. ⁴⁰ There are 1,235 start-ups and tech companies in Mexico City (as of 2017) which drew down US \$295,263,418 funding in 2016-17. ⁴¹

Education has been a major driver for the digital creative economy with local universities churning out 130,000 new engineers every year. This growth in local talent and skills is unlikely to slow with over half of Mexico City's population under the age of 20 and university enrolment having tripled over the last few decades. Proximity to tech hubs like Austin and Los Angeles allows entrepreneurs to maintain close business ties with the States. ⁴² Low costs combined with less competition offers easier access to

venture capital and ready availability of talent, making Mexico City an ideal place for companies to position themselves for the Spanish-speaking market.

A wide range of tech start-ups have established themselves in the city in recent years, including Linio, Conekta, Konfio and Bitso, as well as companies like Amazon and Drayson Technologies. ⁴³ Many of these have congregated in the districts of Roma, Juarez and Condesa, where co-working spaces, such as Startup Mexico, WeWork, The Pool, COW Coworking and Capital Coworking foster collaboration, networking and capacity building through events, space and networks. ⁴⁴

SAP has set up a Startup Focus Program ⁴⁵, which helps local-area entrepreneurs get up and running, and notable accelerators include Startupbootcamp, Tec Lean, Telefonica-owned Wayra Mexico, and NXP Labs. Several of these provide international connections – Numa has acceleration programs in eight cities globally, and MassChallenge has a presence in the US, Switzerland, the UK, and Israel.

The two main areas of interest that the city is helping push forward in terms of technological advances are public transportation and environmental-related tech and public/private partnerships are key – for example, Mastercard has partnered up with Mexico City to help its public transit payment system become cashless. ⁴⁶ Mexico is also the first country in Latin America to pass a law regulating FinTech (financial technologies), thus unlocking the potential of blockchain technologies to solve entrenched problems relating to political transparency and financial inclusion.

Bridging the digital and cultural industries are spaces like the Digital Culture Center – a physical and virtual space for the public and devoted to researching the cultural, social and economic implications of the everyday use of digital technology. It is a forum for communication, artistic creation and the entertainment, whose objective is to encourage the awareness of what it means to live in a world where we are, at once: "users" and "creators" of digital culture. ⁴⁷ Interactive digital media is also a growing sector, with many international links. ⁴⁸

The Mexican Government offers 21 support grants of various kinds for the creative industries. ⁴⁹ The Centro Mexicano para la Filantropía (Mexican Center for Philanthropy or CEMEFI) was founded in 1988 to encourage a more philanthropic culture in Mexico and a wider understanding of the term. ⁵¹ For film in particular, the government offers industry tailored financial incentives, such as VAT refunds, and the ProAV fund for productions made and billed in Mexico. Foreign investors and producers with high-impact film and audio-visual productions are attracted by the combination of low costs, highly-skilled creative talent and technical staff, international experience and world-class locations. ⁵²

The Mexican government has been pushing for business expansion across the creative cluster over the last few years, handing out US \$658 million to entrepreneurs in 2014, which resulted in 6,000 new companies, with a strong focus on innovation and tech. By the year 2050, Goldman Sachs is predicting that Mexico City on its own will be the fifth largest economy in the world. The number of registered VC funds has jumped from 14 in 2012 to 45 today. ⁵³ 500 Start-ups is a major player with investment in over 150 start-ups in Latin America. ⁵⁴

ProMexico is the Mexican Government institution that promotes the export of Mexican products, internationalisation and attraction of foreign investment, and facilitates creative industry policy, development and investment through its 29 national and 48 international offices.

Alongside the cluster's international events and festivals, co-working spaces and hubs, such as Platoon, support the ongoing development and promotion of designers.

Networks like the Maker Library Network which provides a library of knowledge on creative economies, and the UN's Creative Cities Network provide networking, capacity development and inspiration at local and international levels.

IP rights are protected through the Mexican Institute for Industrial Property (IMPI) and copyright is protected through Indautor (an initiative of the Mexican Government). ⁵⁵

The British Council has a huge influence on the development of the creative cluster, drawing in investment and facilitate collaboration, knowledge exchange and travel for creatives between the UK and Mexico. Fuelling the creative industries with new talent and leadership is Sabero Creativo, a training programme of 12 seminars that supports the professionalisation of creative projects, particularly citizen-centred projects that aim to positively impact society.



^{36/} <http://www.promexico.gob.mx/documentos/folletos-sectoriales/creative-industries.pdf>

^{37/} <http://www.promexico.gob.mx/documentos/folletos-sectoriales/creative-industries.pdf>

^{38/} https://www.wipo.int/wipo_magazine/en/2012/06/article_0003.html

^{39/} <http://www.promexico.gob.mx/documentos/folletos-sectoriales/creative-industries.pdf>

^{40/} <https://placebrandobserver.com/mexico-city-performance-brand-image-reputation/>

^{41/} <https://www.pymnts.com/tech-center/2017/tech-center-mexico-city-tech-scene-rises-up/>

^{42/} <https://thenextweb.com/contributors/2018/10/19/an-entrepreneurs-guide-to-mexico-citys-tech-scene/>

^{43/} <https://www.pymnts.com/tech-center/2017/tech-center-mexico-city-tech-scene-rises-up/>

^{44/} <https://thenextweb.com/contributors/2018/10/19/an-entrepreneurs-guide-to-mexico-citys-tech-scene/>

^{45/} <https://www.forbes.com/sites/sap/2016/11/30/how-mexico-city-became-a-hotbed-for-startups/#282292ba5d76>

^{46/} <https://www.pymnts.com/news/2017/mexicos-capital-city-push-digital-payments-via-mastercard/>

^{47/} <https://www.mexicoescultura.com/recinto/66596/en/digital-culture-center.html>

^{48/} <https://www.topinteractiveagencies.com/digital-directory/latin-america/mexico/>

^{49/} Mexico Creative Industries report: <http://www.promexico.gob.mx/documentos/folletos-sectoriales/creative-industries.pdf>

^{50/} <https://www.cemefi.org/cemefi/informacion-institucional.html>

^{51/} <https://revista.drclas.harvard.edu/book/philanthrop-y-mexico>

^{52/} http://ffm.promexico.gob.mx/en/Film_Friendly_Mexico/Incentivos_y_Financiamiento

^{53/} <https://www.pymnts.com/tech-center/2017/tech-center-mexico-city-tech-scene-rises-up/>

^{54/} <https://thenextweb.com/contributors/2018/10/19/an-entrepreneurs-guide-to-mexico-citys-tech-scene/>

^{55/} <https://www.indautor.gob.mx/>



Mexico City (Photo © Getty Images)

C ANATOMY OF A CREATIVE CLUSTER 3: COMMUNITY ENGAGEMENT

REIMAGINING THE CITY

As a sprawling megalopolis that reaches well beyond its administrative limits, the connection has been made between place-based regeneration and creative industry investment. The city has created and established a new cartography for the creative community to strengthen its role as both citizen and contributor to the city.

Mexico City Government has recently initiated a Resilience Strategy, as part of the global cities research network, Sustainable Cities Collaboratory.⁵⁶ The Resilient Strategy is an all-embracing process in which various stakeholders, sectors and vulnerable groups work together to combat the major challenges of the 21st century and advance public policies that contribute to strengthening the city's adaptive capacity. The Urban Toys project is a great example: a public competition encouraging children to participate in the design of their own play environment, with a view to re-activating underused public spaces located in proximity of high densities of young population.

Under the leadership of Mayor Miguel Ángel Mancera and cultural leader Gabriella Gómez-Mont, a 'Laboratory for the City'⁵⁷ (2013-2018) was formed with a multi-disciplinary team of architects, filmmakers, social scientists, designers, editors, urban planners and developers who could pool their expertise and passion for the city to generate civic innovation.⁵⁸

A flagship project was Mapatón, the world's first crowdsourced public experiment to help the local government solve the challenge of mapping thousands of informal city bus routes. Coordinated by the Lab, 12 organisations, including government offices and NGOs, as well as residents, academics and games creators, joined forces to design a city-wide gaming app that encouraged citizens to win prizes whilst mapping their routes. Over 4,000 participants mapped thousands of routes in two weeks for less than US \$15,000.⁵⁹ Its success captures the best of Mexico City's USP – affordable, collaborative, ambitious, highly skilled, socially-engaged and led by imagination.

The Lab highlights the importance of consistency in long term political support, particularly in the transference between different political 'champions'. The Laboratory has closed, coinciding with the end of Mayor Mancera's term in office, and this highlights the importance of sustainability frameworks that exceed the influence of political figures.

⁵⁶ <http://www.citiescollaboratory.org/about/>

⁵⁷ labcd.mx/

⁵⁸ <http://creativecities.eiu.com/>

⁵⁹ <https://www.oecd.org/governance/observatory-public-sector-innovation/innovations/page/mapaton.htm>

C ANATOMY OF A CREATIVE CLUSTER 4: FESTIVALS AND EVENTS

DESIGN FESTIVALS

The cluster's design and creativity sectors sit at the heart of the city's social development strategy. Currently the design industry generates US\$ 41.93 billion of the city's total income and employs 68,254, generating career opportunities as well as US\$229,134 in turnover. ⁶⁰ In 2018, Mexico City was granted the title of World Capital of Design by the International Council of Societies of Industrial Design (ICSID) for its stand-out innovation in architecture, industrial, graphic and fashion design, and its commitment to positive social, environmental and cultural impact for all citizens. ⁶¹

Underpinning this international accolade is the city's world-renowned design festivals and events programmes. Abierto Mexicano de Diseño (Mexican Open Design), Design Week Mexico and City Mextrópolis.

These festivals and events provide an international showcase for the growth of this creative cluster sub-sector, a physical and virtual celebration and marketplace for the city's creative businesses. Supporting events are organisations which steward the development of Mexico's design sector. Designaholic.mx has been promoting the work of Mexican and international designers since 2008, covering Design events at an international level; and organisations like What Design Can Do (WDCD), based in Amsterdam, connected Mexico City into a collaborative international programme demonstrating the social power of design through annual events in Amsterdam, São Paulo and Mexico City. ⁶²

⁶⁰ <https://en.unesco.org/creative-cities/mexico-city>

⁶¹ <http://www.brandinthecity.com/en/mexico-city/>

⁶² <https://www.whatdesigncando.com/>

Design Week Mexico 2018 (Photo © Design Week Mexico)



10 BERLIN

10 per cent of the sales revenues in Berlin's economy was generated by creative industries ⁶³

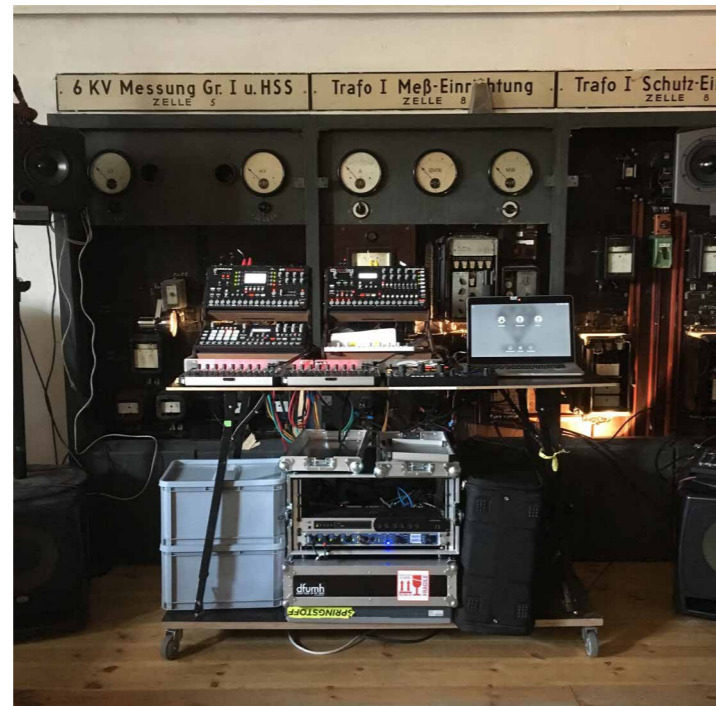
Sales revenues generated by Berlin's creative economy have increased by 56 per cent (+7.3 billion Euro) since 2009 ⁶⁴

One in six companies in Berlin is a company working in the creative industry ⁶⁵

Berlin-Brandenburg cluster has more than 200 creative businesses, with Germany's largest gaming cluster ⁶⁶

Berlin has long been a global destination for creative businesses, with the German capital region offering ideal conditions to support a thriving creative cluster ecosystem. A social 'melting pot' with a rich history of countercultural activity has led to a thriving artistic, cultural, and creative scene. Approximately 20,000 professional artists live and work in the German capital. ⁶⁷

Berlin is the first and only State in Germany to form a strategic innovation partnership with the neighbouring federal state Brandenburg. This joint approach to supporting the creative industries cluster, alongside the energy, healthcare and future mobility clusters, has created an urban-rural, cross-sector 'super-cluster'.



^{63/} <http://digital-bb.de/en/home>

^{64/} <http://digital-bb.de/en/home>

^{65/} <http://digital-bb.de/en/home>

^{66/} <https://www.tatsachen-ueber-deutschland.de/en/chapter/culture-media/innovative-creative-industry>

^{67/} <https://www.berlin.de/sen/kultur/en/cultural-policy/>

^{68/} <http://www.innobb.de>

^{69/} <https://www.kulturfoerderpunkt-berlin.de/nc/foerderprogramme/stiftungen/>

^{70/} https://projektzukunft.berlin.de/fileadmin/_migrated/news_uploads/KWB13_Inhalt_engl.pdf

^{71/} https://www.berlin-partner.de/fileadmin/user_upload/01_chefredaktion/02_pdf/02_navi/21/Strategie_Smart_City_Berlin_en.pdf

InnoBB

The State of Berlin and its neighbour Brandenburg launched their Joint Innovation Strategy, also known as 'InnoBB', in 2011, with €33.7 million total investment to date. ⁶⁸ Aimed at linking the capital region's business and R&D sectors to the international innovation community, InnoBB focuses on five clusters: Life sciences and healthcare, Energy technology, Mobility (including transport and logistics), ICT, media and creative industries and Photonics (including microsystems technology).

The strategy aims to improve the competitiveness of both regions and, while each cluster has its own operational management structures, they collaborate across state borders, driving cross-regional plans with international ambitions.

Central to growth of the cluster are highly-specialised sector intermediaries supporting physical and virtual networks and hubs. Media-net Berlin-Brandenburg networks more than 450 creative businesses, establishing cross-sector and cross-state collaborations. Working with academic institutions, business and policy-makers it contributes to shaping the economic framework conditions for the cluster. MediaTech Hub Potsdam in Brandenburg provides a physical hub for digital media and digital engineering. Medienboard BerlinBrandenburg is the focal point for the TV and film industry, overseeing film funding, locations and other production services. VRBB combined the cluster's expertise in AR and VR, alongside major studios such as Studio Babelsberg and UFA LAB, there are 15 film, TV and research institutes within the association.

The InnoBB cluster offers a range of funded programmes for businesses:

- ProFIT provides R&D funding.
- Mikrokredit Brandenburg offers support for small and medium-sized enterprises, start-ups and companies' successors, as well as young entrepreneurs in the form of loans at low interest rates.
- Gründung innovativ supports start-ups with innovative business ideas.

The cluster is also supported by buoyant public/private investment and philanthropy initiatives. Creative sector businesses can apply to the microloan programme at the Investitionsbank Berlin (IBB). The federal state of Berlin has a €30 million Venture Capital Fund Creative Industries to support the sector. State and EU supported funding is bolstered by more than 92 philanthropic trusts and foundations, providing grant funding to the arts and culture. ⁶⁹ However, access to funding, whether in the form of loans or state-funded incentive programmes, is still one of the main challenges of creative sector businesses. ⁷⁰

In addition to InnoBB, Berlin-Brandenburg is also part of the Cross Innovation EU project, a collaboration between 11 cities promoting collaborative and user-driven innovation across sectoral, organisational, technological and geographic boundaries. It connects the Berlin-Brandenburg creative clusters to relevant international opportunities for collaborative innovation. Berlin also has a Smart City Strategy ⁷¹ which explores the opportunities to analyse real-time data that is being made possible by the proliferation of digital communications technologies.

Collaboration

Building on this activity, incubators, accelerator programmes and sector forums organise local, regional, national and internationally-focused events year-round. Sector-led (rather than state-led) accelerators and incubator spaces are run by both multinationals and German businesses, including Axel Springer Plug and Play, Beyond 1435, Hub:raum, The Family and Microsoft Ventures Accelerator

Co-working

There's a strong co-working ethos which facilitates networking and an abundant number of meet-ups and events. Key spaces include Betahaus, Factory, Mindspace, Silicon Allee and Ahoy Berlin, as well as virtual clusters and networks such as Creative Cities Berlin and Creative Brandenburg which connects digitally to provide contacts, funding, events and consultation opportunities.



VICTORASH

Fostering Innovation

Germany's major universities are mostly concentrated in the capital region, creating the conditions for knowledge transfer and quality research and development to feed innovation processes.

Alongside the many leading universities and private institutes, several key initiatives are supporting innovation, R&D and IP development. Project Zukunft, an initiative of Berlin's Senate Department for Economics, Technology and Research provides an annual budget of €1.5 million for infrastructure development projects including competitions and landmark creative sector events.⁷² 'Zukunftsorte' sites like Berlin Adlershof, which houses incubators; the natural sciences campus of the Humboldt University and other non-university research institutions; and the Biotech Park Berlin-Buch, play an important role in attracting future industries and technologies as well as offering opportunities and physical space for innovative ideas and creativity.

Events

Berlin's global standing is enriched by major international media and communications festivals and trade shows, including the A-list Berlin Film Festival and European Film Market, Transmedia, Mitte Media Festival and Disrupt Berlin.

Multinational media giants, such as Nokia, Mozilla and Viacom International are based in the city. And start-ups like SoundCloud, Wooga, Rocket Internet and Space Ways have grown out of Berlin's thriving digital economy in recent years, cementing a growing reputation as the place to be for ambitious European start-ups.

Counterculture

The sheer diversity of cultural events hosted in Berlin, extending across myriad sectors and genres, is unique in Germany. A vast number of major cultural institutions, creative scenes, international figures and organisations based in Berlin have made the city the 'place to be' at both a national and international level.⁷³

Berlin's club culture has underpinned much of the capital's counterculture ethos and continues to play an important role in the development of artists, co-working spaces and creative collaborations helping to fuel the creative cluster ecosystem. The Club Commission, a membership body for Berlin's clubs, helps government to develop policy, with a new study on the impact of club culture Clubkultur 2019 published later this year.

Berlin's 'MultiKulti' vibe, which has become a global crossroads of cultural exchange and co-habitation, is being challenged by the same trend of gentrification (and increasing costs) that every outward looking creative city faces. On the one hand, Berlin is attracting residents and creative professionals from around the world and, on the other, long-term residents like the Arab and Turkish communities are less integrated with the day to day cultural life of the city.⁷⁴ That said, the multiculturalism of Berlin's social make-up and history is very much part of its DNA, the demographics of its creative workforce and its trajectory. In terms of gender parity, the creative sector has welcomed Dr. Nora O Murchú as the first female creative director of Transmedial in its 33-year history.

Leadership

Leadership development is provided by the Berlin School of Creative Leadership, which partners with major international events and organisations, such as the Cannes Lions Festival, to bring the best of international knowledge, practice and insight to strengthen Berlin's creative talent and vice versa.

^{72/} https://projektzukunft.berlin.de/fileadmin/_migrated/news_uploads/KWB13_Inhalt_engl.pdf

^{73/} <https://www.berlin.de/sen/kultur/en/cultural-policy/>

^{74/} Locating the Creative Class: Diversity and Urban Change in London and Berlin (2016, pdf). Juhnke, Sebastian.

C ANATOMY OF A CREATIVE CLUSTER 5: CROSS-SECTOR COLLABORATION

BARCAMP HEALTH-IT

Berlin-Brandenburg launched in 2011 its first cross-cluster annual Barcamp.

The idea was to create a space for the ICT, Media and Creative Industries Cluster and Health-Tech cluster to collaborate to discuss interdisciplinary ideas, projects and future challenges. Health-IT Barcamp takes the form of an unstructured conference in a relaxed 'coffee-break' style, creating a dynamic, participatory format to encourage all participants to engage and contribute ideas. There's no speak list or fixed schedule - all content comes from attendees, creating a Marketplace of Ideas.

Cluster communities are invited to pitch ideas at the start of the conference to the audience, who vote to create the conference schedule. Conference workshops then take the form of rapid- prototyping, debate and ideas-exchange.

Each conference has a theme relevant to all clusters and is hosted by an organisation relevant to the theme. 2018 saw Immersive Media, Virtual, Augmented and Mixed Reality in the Healthcare Industry. Artificial Intelligence (2019), at the newly opened Berlin Institute for Medical Systems Biology.



BarCamp Health-IT 2018
(Photo © Barcamp Health-IT 2018)

C ANATOMY OF A CREATIVE CLUSTER 6: URBAN-RURAL CONNECTIVITY

SMART COUNTRY

The Berlin-Brandenburg cluster spans a large urban-rural area. Of the 18 districts within Brandenburg, 14 are classified as Landkreise or rural districts. More than €2 million of the InnoBB cluster funding has been specifically dedicated to promoting creative industry networks. ⁷⁵

Finding ways to connect across this urban-rural cluster is an increasingly important issue for millennials working in the city and they have started to look towards the Brandenburg countryside for cheaper business locations and a better quality of life; those working in Brandenburg's creative economy are seeking better connections and market opportunities from within the capitals creative growth hubs.

Brandenburg's Smart Country initiative was launched in 2018, aimed at networking the state's districts towns and villages, such as Bad Belzig or Angermünde, with the capital Berlin. Emerging as a cluster event programme from the Economic Development Agency Brandenburg, the initiative facilitates a range of activities to help connect creative talent and businesses across the whole creative cluster.

This programme includes supporting 'maker-hubs', co-working space and innovation labs. Central to the initiative is the concept of smart villages – these are test fields for new digital hubs in rural areas and where kreativorte or creative spaces are emerging in old manor houses or barn conversions. Virtual hubs such as Creative Places Brandenburg ⁷⁶ are enabling new smart villages to emerge.

Coconat ⁷⁷ in Bad Belzig became a designated smart village in 2018, offering 'workation retreats' for creative talent, enabling a grass-roots creative scene to flourish.

These smart villages create connections across the cluster, they provide the catalyst for creative start-ups and are attractive to younger urban creatives who choose to spend time co-working from these rural centres. They are also potential sites for large global tech locations Google, etc.

Following its initial success, Smart Country is continuing to roll out in 2019/20 with a website soon to be launched to aggregate the activity across the programme.

⁷⁵ https://projektzukunft.berlin.de/fileadmin/_migrated/news_uploads/KWB13_Inhalt_engl.pdf

⁷⁶ <https://www.kreativorte-brandenburg.de/>

⁷⁷ <http://coconat-space.com/life/>



11 ABU DHABI

Abu Dhabi accounts for two-thirds of the approximate \$400 billion UAE economy ⁷⁸

In 2018, Abu Dhabi launched a \$13.6 billion investment programme for start-ups and innovation ⁷⁹

The total value of the foreign trade of creative industries in the UAE was recorded at \$30.7 billion in 2015, and underpinned a 7% increase in non-oil trade activities ⁸⁰

The UAE ranks ninth in the global list of total recorded exports and re-exports of creative goods ⁸¹

Abu Dhabi's creative cluster is a rapidly expanding emergent ecosystem. The nation's ambitious approach to creative industries-led development is unprecedented in scale and scope, and when complete, will be the first cluster of its kind in the United Arab Emirates. Abu Dhabi's first creative industries strategy is currently in development and the cluster hosts a wealth of global creative talent, with leading names from across the creative industries helping support its growth.

Abu Dhabi is the largest and wealthiest Emirate of the UAE. It makes up 87% of the UAE's territory and contributes 65% to GDP and boasts cutting-edge infrastructure and rapid economic growth, with direct flights to the world's major capitals. It is a 24-hour business location, due to its strategic location between East and West and its outward facing ambitions and was voted first in the Arab world for 'ease of doing business' by the World Bank in 2018.

Its business environment uses English as a first language, and it is friendly to start-ups as well as established multi-nationals. New economic plans were announced for Abu Dhabi in June 2018, aimed at accelerating the economic growth of small and medium sized enterprises and entrepreneurs.

^{78/} <https://gulfbusiness.com/abu-dhabi-economy-grows-5-2-2013-slower-expected/>

^{79/} <https://gulfbusiness.com/abu-dhabi-economy-grows-5-2-2013-slower-expected/>

^{80/} http://www.tradearabia.com/news/IND_322328.html

^{81/} <https://www.imagesretailme.com/2017/03/23/latest-news/uaes-creative-goods-industry-growth-curve/>

^{82/} <https://www.uaeinnovates.gov.ae/about-us-parent/innovation-ecosystem>

^{83/} <https://www.numbeo.com/cost-of-living/>

^{84/} <http://www.creative-elements.org/blog-creativepartnerships/2017/7/27/how-can-participation-in-the-arts-empower-uae-youth>

^{85/} <https://www.government.ae/en/media/media>

Context

Since its inception in 1971, the United Arab Emirates has invested considerable wealth from oil-rich land to establish itself as an icon for international innovation and creativity, luxury tourism and business opportunity in record time. The UAE Vision 2021 sets out innovation, science and technology as the pillars of a knowledge-based, highly productive and competitive economy. Human capital is recognised as the key to this growth, and the UAE is ranked top in the world for attracting global talent. ⁸²

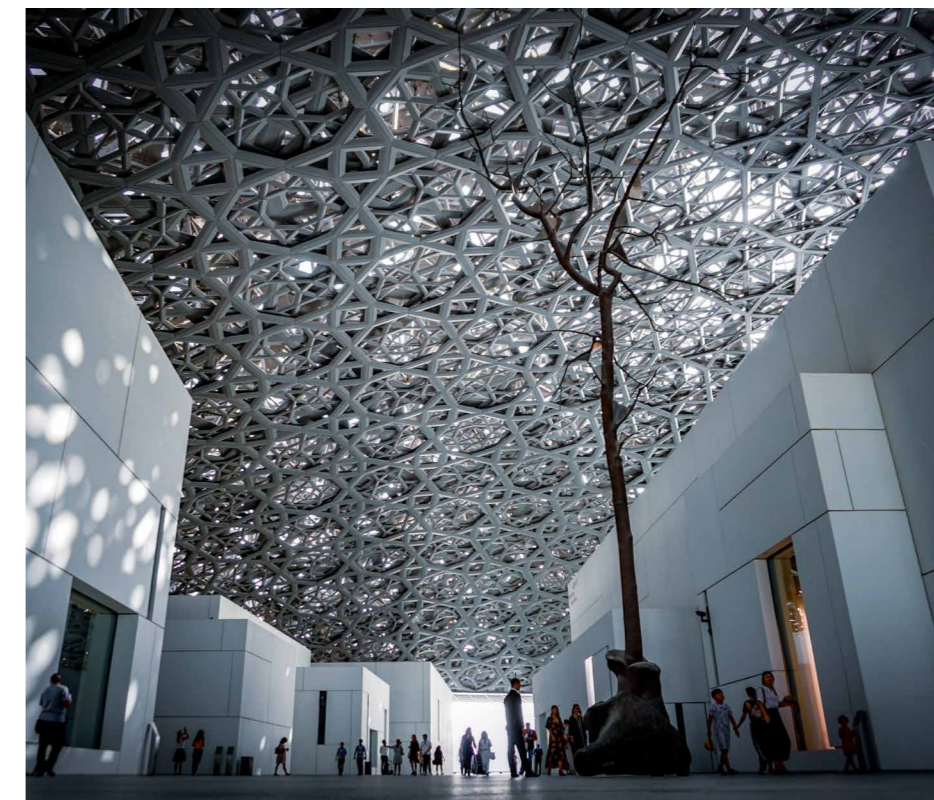
The UAE's creative landscape is unique. The country is home to over 200 nationalities, each with a distinct story and identity to be explored, and invisible talents to be unearthed. Cultural tourism is a major regional priority and Abu Dhabi is a family-friendly environment, ranked the safest city in the world. ⁸³

As the nation's natural resources begin to wane, investing in arts education and creative partnerships is seen as an integral component to safeguarding the country's future. ⁸⁴ Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, launched the UAE Cultural Development Fund in 2018, and there is a Science, Technology & Innovation Policy and an Innovation strategy with complimentary priorities.

This creative industry focus and the investment to realise this vision is being led by the Royal Family, particularly in Dubai and Abu Dhabi, supporting a range of incentives and programmes to attract and retain both international and indigenous talent, with an emphasis on professional development for women to work in the sector.

The National Media Council (NMC) is the federal government body entrusted to oversee and undertake media affairs in the United Arab Emirates on the mainland and in free zones. NMC issues licences to media institutions. The NMC is also mandated to develop the UAE's media policy, draft and implement legislation, coordinate media policy between the emirates in line with domestic and foreign policy. ⁸⁵

The UAE recently launched The Ministry of Possibilities – the country's first virtual ministry – with an aim of shaking up current practices and to help the country become a global power. Its first meeting was held in June 2019 with a focus the next generation of Emirati talent development.



Film and television

Abu Dhabi has emerged in recent years as a vibrant hub for feature filmmakers from Hollywood, Bollywood, Europe and the Middle East, and Sundance has recently added it to its list of locations.

From major productions such as Star Wars: The Force Awakens and Furious 7, to Bollywood hits like Bang Bang and Baby, producing in Abu Dhabi has never been more attractive, thanks to a 30% cash-back rebate from the Abu Dhabi Film Commission for all film and TV formats – the only one of its kind in the region. With an ever-expanding production infrastructure of studios, crew and support companies, Abu Dhabi has been named one of the top international locations for film and television production. ⁸⁶

Locally-driven film education is complemented by international institutions like the New York Film Academy, which established an Abu Dhabi campus in 2007.

Abu Dhabi has also become a hub for regional drama series and lifestyle programmes. Arabic hit show, The Brothers, is filmed in the Emirate, and the Arabic version of Entertainment Tonight is broadcast daily from the studios at twofour54. Iftah Ya Simsim – the Arabic version of Sesame Street – is also produced and exported from Abu Dhabi to rest of the Arab world.

The film commission offers free scouting assistance, sourcing from a diverse range of unique locations, assistance with obtaining shooting permits, visas, script approval and customs clearance, finding award-winning and experienced professional crew and suppliers, and first-class studios and post-production facilities with competitive rates. In 2019, National Media Council, NMC, also launched the National Programme for Supporting Emirati Films, creating set of agreements with the film distribution companies and cinemas in the UAE. ⁸⁷ One of the region's success stories is Image Nation, an award-winning film and entertainment company, which has become renowned for breaking boundaries with its films, TV series, documentaries and entertainment, distributed throughout the world. Its CEO Michael Garin is a leading figure in the drive to grow the Abu Dhabi cluster, formulating a strategy over the last 10 years which has helped to build the business into a global player. It is the first UAE company to have multiple productions streaming on Netflix and work it has supported have been screened at more than 400 international film festivals. It can now boast two Academy Awards, a BAFTA and an Emmy. Its ethos is local talent, international expertise, and to provide inspiration and practical training to the sector through their Arab Film School.

Gaming

The regional online gaming industry is projected expand steadily to more than \$800 million by 2022. 80% of the 200 million UAE Arabs under the age of 25 are tech-savvy gamers and Middle East Film and Comic Con attracted more than 20,000 people across the region. ⁸⁸

Sector development and collaboration

Abu Dhabi's emerging creative cluster is supported by start-up incubators, networks and centres for innovation. These bedrocks of the creative ecosystem are supporting the development and retention of talent, research and cross-sector collaboration. Among important developments are Tandem Al Emarat, which aims to build creative collaborations across the cultural scenes of the seven emirates; and Creatopia, an online portal where creatives can craft online profiles to showcase their work.

Both sector-led initiatives and state departments, focused on creative industry support, provide targeted advice and guidelines for international companies and creatives producing content for the region, to align with cultural and religious standards and values. The National Media Council (NMC), for example, has issued an official advertising guide, which aims to clarify standards for the advertisement industry in the UAE and to protect the public from marketing promotions that do not conform to applicable standards. ⁸⁹

^{86/} <http://advertisementfeature.cnn.com/creativeabudhabi/blockbuster-movies/>

^{88/} <https://www.twofour54.com/en/business-setup/media-opportunities/gaming-animation/>

^{87/} <http://nmc.gov.ae/en-us/Media-Center/Events/Pages/National-programme-to-support-Emirati-films.aspx>

^{89/} <https://www.government.ae/en/media/media>

Rashid and Rajab, Emirati feature film dir. M.Saaed Harib (Photo © Image Nation)



Licensing incentives

The UAE government's Media Zone Authority (MZA) has also waived licensing and registration fees to new companies and new freelancers for their first two years from registration. ⁹⁰ Free zone registered companies can also apply for an additional branch licence from the Abu Dhabi Department of Economic Development ('DED') without the need to have a second additional onshore office or premises. This 'onshore' licence gives businesses commercial freedoms and means they can take part in tenders for government and semi-government entities. ⁹¹

Abu Dhabi aims to support industrial research and development by incentivising automation and renewables for 'large industries' funding university and start-up R&D and promoting R&D regulation. A stretch challenge for the coming decade is to mobilise the creative industries' strength in developing solutions for other sectors, such as mobility and healthcare. ⁹² There has been a considerable focus on innovation for environmental sustainability to date, due to the region's susceptibility to water scarcity, over-exploitation of land and marine resources, invasive species and climate change.

One area in which cross-sector innovation is having a considerable impact is architecture – Dubai, closely followed by Abu Dhabi, is leading on the implementation of architectural technology, testing applications of new innovations which can have ripple effects across society. ⁹³

Culture

Saadiyat Cultural District is a jewel in the region's crown, growing to become a global cultural destination, housing the world's largest concentration of premier cultural brands, including the Louvre Abu Dhabi, Zayed National Museum and Guggenheim Abu Dhabi, all designed by Pritzker prize-winners. ⁹⁴ This high-end ambition is entirely in keeping with Abu Dhabi's luxury image. Abu Dhabi also stewards the UAE's first UNESCO World Heritage Site, Al Ain, one of the world's oldest continually inhabited settlements. In addition to the Louvre and Guggenheim, Warehouse421 is a new cultural destination in Abu Dhabi's port area of Mina Zayed, in which transformed warehouses become a platform for artistic expression and development of the UAE's creative community. The Biennial Foundation provide advocacy and thought leadership for the international visual arts community.

Investment

The Abu Dhabi Executive Council has also announced plans to attract start-ups and support research and development under the third pillar of the emirate's \$13.6 billion stimulus plan, Tomorrow 2021, which was first announced by Abu Dhabi's Crown Prince in June 2018, covers four main areas: business, society, knowledge and innovation and lifestyle.

Events

As Expo 2020 advances upon the UAE, young people are being enlisted to communicate a significant share of the country's aspirational vision and expo theme – 'Connecting Minds, Creating the Future'. The UAE will use the opportunity of this international spotlight to place innovation, technology and creativity centre stage, both in terms of economic opportunity and also as a means to empower the events young hosts with the appropriate skills to represent the Emirates on a global scale. ⁹⁵

This builds on a tradition of shoring up knowledge, skills, investment and collaboration through internationally-facing creative events, including the Culture Summit Abu Dhabi, Abu Dhabi International Book Fair, Dubai International Film Festival, Innovation Week, The Global Grad Show, and Innovation Summit. Abu Dhabi also has a growing market for large-scale music events, including RedFestDXB, Abu Dhabi Festival, and major international stars brought in by Flash Entertainment.

^{90/} <https://www.mzaabudhabi.ae/en/>

^{91/} <https://www.mzaabudhabi.ae/en/>

^{92/} <http://ecbnetwork.eu/creative-industries-in-the-middle-east/>

^{93/} https://www.designingbuildings.co.uk/wiki/Architectural_technology_in_the_Middle_East

^{94/} <https://visitabudhabi.ae/en/explore/culture.and.heritage/saadiyat.cultural.district.aspx>

^{95/} <http://www.creative-elements.org/blog-creativepartnerships/2017/7/27/how-can-participation-in-the-arts-empower-uae-youth>

C

ANATOMY OF A CREATIVE CLUSTER 7: INDIVIDUAL LEADERSHIP

HER EXCELLENCY NOURA AL KAABI

Abu Dhabi's creative cluster is being driven forward by several prominent female leaders, who have considerable impact and influence. They include designer Aljoud Lootah and Louise Roberts, founder of SheSays, an award-winning organisation focused on the advancement of women in the creative industries.

At the forefront of this new wave of leadership is Her Excellency Noura Al Kaabi Minister of Culture and Knowledge Development for the UAE. HE Noura holds a range of prominent UAE and international creative and cultural positions and was named as one of the 20 most powerful women in global television by The Hollywood Reporter in 2016.

HE Noura's dynamic leadership has been vital to the rapid growth of the emerging creative cluster in Abu Dhabi. Her clear sense of purpose for the Emirate's creative and cultural industries has helped to accelerate the development of Abu Dhabi as rapidly expanding global creative industries hub.

Over the last ten years HE Noura has adopted a range of approaches to leadership to drive forward her vision; from direct engagement of senior Royal Family to the importance of investment in the creative industries through to talking to individual parents about viable creative career opportunities for their young Abu Dhabi girls.



C ANATOMY OF A CREATIVE CLUSTER 8: PHYSICAL HUBS

twofour54

Physical hubs are an important part of the emerging cluster, acting as catalysts businesses start-up services, space, production facilities, training and networking support.

Named after the geographical co-ordinates of Abu Dhabi (24° North, 54° East), twofour54 is a media zone with over 450 creative industry business based including international brands such as Sky News Arabia, CNN and Cartoon Network.

'twofour54' is a media-based Free Zone in Abu Dhabi, located near to central Abu Dhabi, the international airport and Yas Island. Named after the geographical co-ordinates of Abu Dhabi (24° North, 54° East), it offers competitive economic benefits for companies such as simple licensing and business set-up services, 0% corporate tax and 100% company ownership in a stable environment.

The twofour54 Free Zone currently encompasses more than 450 companies operating in the creative industries, from international brands such as the CNN, Sky News Arabia and Cartoon Network Studios through to a wide range of small to medium-sized companies.

The distinctive 'Freelancer' licence provides access to a vast pool of media professionals ready to add value to all businesses that setup in the Free Zone. The Free Zone now has a talent pool of around 4,000 professionals, including over 400 freelancers.

The twofour54 Free Zone offers a campus environment with facilitated business networking, state-of-the-art infrastructure, world-class studio production and post-production facilities supported by technical staff, a strong IP protection framework and a critical mass of sector knowledge and talent.

The 'twofour54 connect' online portal provides the latest information about news and events at twofour54, facilities and services, as well as any new partners and freelancers that have joined. It is also home to the 'twofour54 briefing room', a free online service for matching and connecting clients with media agencies and specialists from the hundreds of expert service providers available at twofour54, as well as providing twofour54 partners with exclusive access to Abu Dhabi government contracts.

The Media Zone Authority is responsible for overseeing all regulatory and licensing aspects of the Free Zone, including developing, and ensuring compliance with, the regulations, codes and policies and procedures, as well as registering and licensing companies, branches and sole proprietors (freelancers). It further develops initiatives and events to facilitate business integration, networking and collaborative development.

Image 1/ twofour54 under construction
(Photo © twofour54)

Image 2/ twofour54 Studio
(Photo © twofour54)



12 BANGALORE

Highest number of engineering colleges of any city in the world ⁹⁶

Bangalore's Global Software Testing industry is growing at a rate of 90% annually ⁹⁷

2,550 individuals listed as entrepreneurs and investors in Bangalore ⁹⁸

Bangalore has over 5000 practicing designers ⁹⁹

Bangalore's creative cluster has developed organically over the last 20 years, catalysed by the IT boom at the turn of the century, which now positions the city as the digital capital of India. Bangalore's cluster is at the centre of a technological revolution in India, a country with one of the world's fastest growing digital audiences with 800 million mobile connections and over 200 million internet users. ¹⁰⁰

Apart from being the country's IT capital, Bangalore also has a deep connection with science. National institutions like Hindustan Aeronautics Limited (HAL), Indian Institute of Science (IISc), and the National Centre for Biological Sciences (NCBS) and others have been founded in the city. Interwoven within the strong IT and science clusters, is a rich, egalitarian and thriving creative and cultural sector underpinned by Bangalore's hugely diverse demographic with a large immigrant population of young professionals, educational institutes and civil activists. Bangalore has spearheaded the gay and transgender movement in India, resulting in the recent overturning of 377 anti-LGBTQ laws across India.

The last 10 years have seen more cross-pollination between science, technology, and the arts, with HE and FE institutes helping to drive collaboration. The city hosts a range of physical hubs, including Technicolor Bangalore a primary hub for the creation of premium CG animation for movies, television, and the games industry, and is renowned for their global expertise in visual effects.

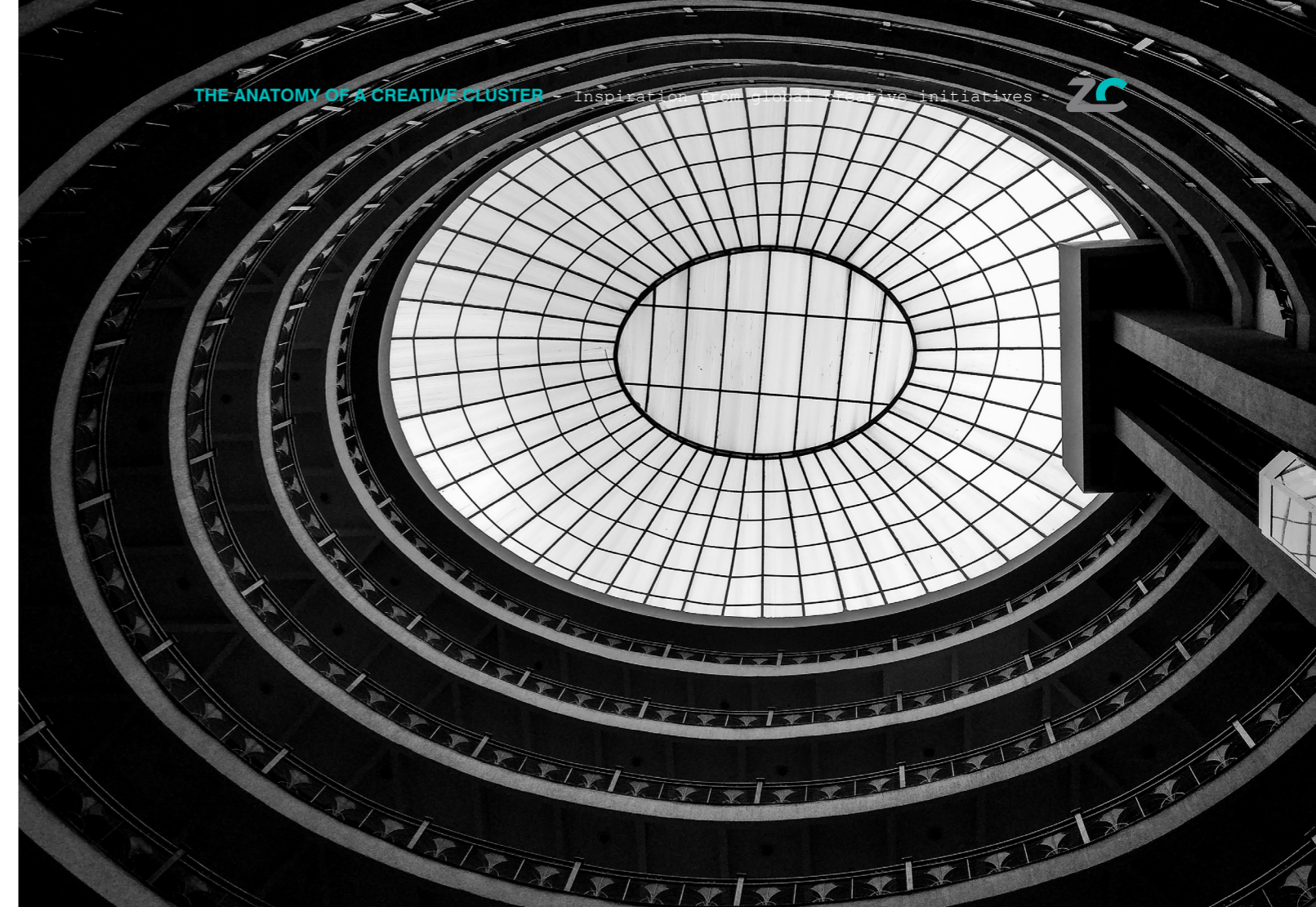
^{96/} <https://cis-india.org/raw/studying-digital-creative-industries-in-india-initial-questions>

^{97/} http://www.isocarp.net/Data/case_studies/593.pdf

^{98/} <https://bangalore.startups-list.com/people>

^{99/} Meena Varni, Srishti School of Technology, Art and Design June 2019

^{100/} <https://www.ril.com/OurBusinesses/Jio.aspx>



Bangalore: Tech-led Creative Development

Bangalore ITC and digital boom began in the early 1980s, with a surge in the early 2000s, bringing both economic and social benefits, including being established as the Indian Headquarters of the UN's Technology in Education Initiative. ¹⁰¹ Consequently, Bangalore is a key global location for Western companies looking to buy in 'outsourced' IT resources and is home to over 250 high-tech companies. ¹⁰²

The digital cluster is underpinned by a rich concentration of research institutes, such as Indian Institute of Science, the Indian Institute of Astrophysics, the Raman Research Institute, the Jawaharlal Nehru Centre for Advanced Scientific Research and the National Center for Biological Science.

Bangalore boasts a highly-trained and English-speaking workforce, educated in institutions renowned for academic excellence, including the Indian Institute of Management – Bangalore (IIM-B) and the Institute of Bioinformatics and Applied Biotechnology – Bangalore (IBAB).

Government has invested in state-of-the-art infrastructure over the past 40 years, including the Electronic City, which houses international IT industry leaders such as Motorola, Infosys, Siemens and ITI, and Indian business which are now global leaders in their own right, like Tata Consultancy Services and Wipro ¹⁰³. The International Tech Park and Cyber Park - Technology Incubation Centre are also central hubs within the cluster.

Progressive government policies have focused on creating a strong ecology of industry, research and training facilities. In addition to government-led initiatives, there are several private networks and incubators to support entrepreneurs. The Indus Entrepreneurs (TiE) is one of the most impactful. It aims to foster entrepreneurship globally through mentoring, networking and education, funding and incubation. It has 11,000 members in 60 chapters across 17 countries. Bangalore TiE hub connects the entire ecosystem from early-stage entrepreneurs, serial entrepreneurs, professionals at leading corporations, venture capital, angel investors, and thought leaders. ¹⁰⁴

Expansion beyond IT

Bangalore's IT sector is increasingly interacting with the city's creative and cultural sectors, resulting in an emerging and dynamic creative cluster. The growth of Bangalore's creative industries has benefited from a development priority to bring the traditional arts and craft sectors together with commercial creative industries, such as design and entertainment, to take distinctly Indian products and services to the global market.

Driven by increasing internet usage and digitisation, enabled by Bangalore's rich IT ecosystem and rising incomes, the Indian Media and Entertainment (M&E) industry is becoming a 'sunrise' sector for the economy with tremendous scope for growth. Media is consumed by audiences across a broad spectrum of demographics and mediums such as television, films, out of home (OOH), radio, animation and visual effect (VFX), music, gaming, digital advertising and print. ¹⁰⁵

The emerging cluster is centred around co-working spaces, business parks, arts collectives, networks and start-up accelerators.

Workbench Projects in the city is an example of a physical hub at the intersection of technology, creativity and culture. Workbench is a 5000 sq ft 'maker-space', innovation hub and co-working space, providing opportunities for funding, meet-ups and prototyping. Similarly, Jaaga provides co-working space, programmes, labs for Bangalore's creative entrepreneurs, offering accelerated learning programmes, start-up bootcamps, product development labs and residencies for creatives to help solve urban issues.

The cluster is underpinned by strong interest in academic research and learning and is supported by several prominent HE institutions including Srishti Institute of Art, Design and Technology (SIADT). SIADT emphasis on Art along with Design and Technology provides a distinct flavour within the cluster, which cuts across disciplines.

The Bangalore cluster's IT ecosystem and expertise has given it an important place in supply chain of India's giant Bollywood film industry, predominantly based in Mumbai and worth \$2.47 billion ¹⁰⁶, and its product base has widened to exploit synergies with TV, music, games and advertising. ¹⁰⁷ Bangalore is also a primary hub for Technicolor's CG animation and VFX teams for movies, television and games. It is connected to the worldwide Technicolor Production Network, ensuring a consistent vision and quality of service for clients. ¹⁰⁸

As Bollywood modernises in terms of technology and distribution, there is a strong culture of nurturing the traditional arts that underpin Bollywood's talent and aesthetics. The arts scene in Bangalore is experimental and collaborative, a robust mix of traditional and contemporary arts organisations and creators.

Bengaluru International Arts Festival, for example, creates an annual platform for music, dance, theatre and visual artists to interact, collaborate and perform together, and provides frontline services through an artist's welfare fund and health helpline for artists in need. ¹⁰⁹ A recent report for the British Council notes "a rise in both public art projects as well as the use of the arts in public discourse, with noticeable links and collaborations with the government for these projects. SIADT's Art in Transit project in the Namma Metro stations, Sandbox Collective's Gender Bender and Maraa's work in the domain of public art and media are just three examples of this trend." ¹¹⁰

The Bengaluru Film Festival, Bangalore Design Week and Bangalore International Literature Festival are also important platforms for their respective sectors' development and are helping expand opportunities. In the music sector, audience tastes are shifting beyond the traditions of Bollywood and are looking for new sounds. This has led to new venues opening and a passionate, allowing a dedicated and vibrant music scene to emerge. ¹¹¹

While the creative industries could be key to driving tourism, there's also a concern that unplanned and sudden increase in tourists could result in a sub-optimal experience and put pressure on the infrastructure and ecosystem of a fragile region. For this reason, tourism boards and ministries are looking to collaborate with creative industries to drive tourism in a proactive and planned manner. ¹¹² This contrasts to other internationally-facing clusters worldwide, and signals Bangalore's commitment to cluster development for the primary purpose of improving local livelihoods.

^{101/} http://www.unesco.org/new/en/brasilia/about-this-office/single-view/news/bangalore_chosen_as_india_headquarters_for_un_technology_in/

^{102/} <http://www.creazy.be/pdf/leeshoek/Research%20report%20The%20creative%20economy%20-%20Challenges%20and%20opportunities%20for%20the%20DC%20regions.pdf>

^{103/} <https://www.citylab.com/life/2012/08/bollywood-and-bangalore-clusters-creativity/2848/>

^{104/} <https://bangalore.tie.org/about/>

^{105/} <https://www.ibef.org/industry/entertainment-presentation>

^{106/} <https://www.citylab.com/life/2012/08/bollywood-and-bangalore-clusters-creativity/2848/>

^{107/} <https://www.citylab.com/life/2012/08/bollywood-and-bangalore-clusters-creativity/2848/>

^{108/} <https://www.technicolor.com/create/bangalore>

^{109/} <http://www.biaf.co.in/AboutUs.html>

^{110/} Trends in the Cultural Sector in India, IIndia Art Strategy Consultation 2018-22 report prepared for the British Council. Art X Company

^{111/} <https://economictimes.indiatimes.com/magazines/panache/indias-silicon-valleys-thumbs-up-for-independent-music/articleshow/64239263.cms>

^{112/} https://www.mpa-i.org/wp-content/uploads/2018/05/India-ECR-2017_Final-Report.pdf

C ANATOMY OF A CREATIVE CLUSTER 9: VIRTUAL NETWORKS

DARA

Launched in May 2019, DARA is India's first AI chatbot, developed to create virtual and physical networks across the creative and cultural industries in Bangalore and beyond. DARA was developed by Bangalore-based Jaaga, a creative enterprise established to help build collaborative communities to solve global challenges, in partnership with Microsoft Research India. The project is funded through the British Council in recognition of the need to create both virtual and physical networks to grow the creative cluster in Bangalore and the wider South India area.

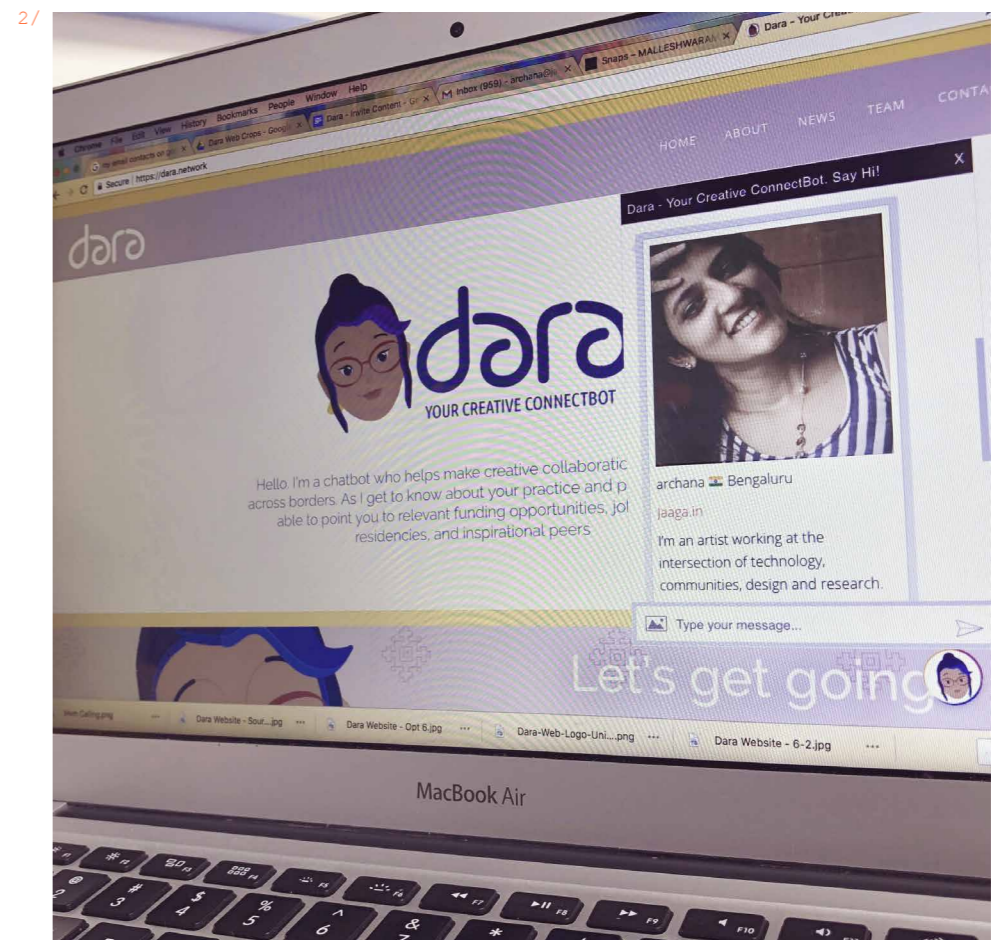
Dara (or "thread" in the Indic language, Kannada) is a conversational AI chatbot that asks a series of questions to individual creatives and then suggests relevant creative collaborators. The idea is to help emerging creative professionals collaborate with international peers on projects.

The AI-managed network cluster helps remove growth barriers, such as contacts, access and knowledge. Dara's 'Angels' and 'Associates' broadcast available resources, grants, collaborations, residencies and job opportunities to relevant creators. Dara enables members and supporters to connect with each other, via a one-on-one conversational interface, which is GDPR compliant.

DARA also creates physical networks in the form of Dara Dinner gatherings. The format is based on shared conversations across the table - not private ones between a few, active listening and non-judgemental dialogue. Over a period of two hours, invitees have an opportunity to connect and discuss the challenges and benefits of collaborative creative practices, and how to support such activities across the creative sectors.

Image 1/ Dara Dinner, Jaaga, Bangalore
(Photo © Karthikeyan Gopinathan)

Image 2/ Dara Chatbot
(Photo © Jaaga)





C ANATOMY OF A CREATIVE CLUSTER 10: ARTISTS and INDUSTRY TOGETHER

BANGALORE ARTS COLLECTIVES

Independent arts spaces, residencies and collectives are at the heart of Bangalore's growing creative cluster, creating a vibrant underground, internationally-focused arts scene, nestled within India's digital tech capital. It bears similarities to Shoreditch in East London in the 1990s, where cheap living spaces, attracted a countercultural arts community, which would lay the foundations of leading uk cluster Tech City.

Whilst the thriving tech, innovation and start-up scene in Bangalore is undoubtedly driving growth across the cluster, the importance of providing informal spaces for artists to live and work should not be underestimated, helping foster creativity and inspiring new ideas across the cluster.

Bangalore arts collectives like Sandbox ¹¹³, the Arvani Art Project ¹¹⁴ and Blank Noise ¹¹⁵ emerged through individual artists wanting to create social change on issues such as LGBT rights, street harassment and rape. Numa ¹¹⁶ is primarily a tech start-up hub within a four-storey building in central Bangalore. Aeronautic and tech start-ups sit alongside a third-floor arts studio, encouraging collaboration between the arts practitioners and start-ups.

1Shanthiroad ¹¹⁷ Studio/Gallery is a centre for alternative art practice, consisting of a non-commercial art gallery and multiple residency studios for both local and international artists. 1Shanthiroad emerged to extend the interaction of art, existing only in commercial art galleries in Bangalore, into a larger network of artists and communities. It has transformed into a public art space that houses alternative art and focuses on the process rather than the product.



Image 1/ 1ShantiRoad, Bangalore
(Photo © Sandeep TK, Bangalore)

Image 2/ 1ShantiRoad, Bangalore
(Photo © Sandeep TK, Bangalore)

^{113/} <http://sandboxcollective.org/>

^{114/} <https://arvaniartproject.com/>

^{115/} <http://www.blanknoise.org/>

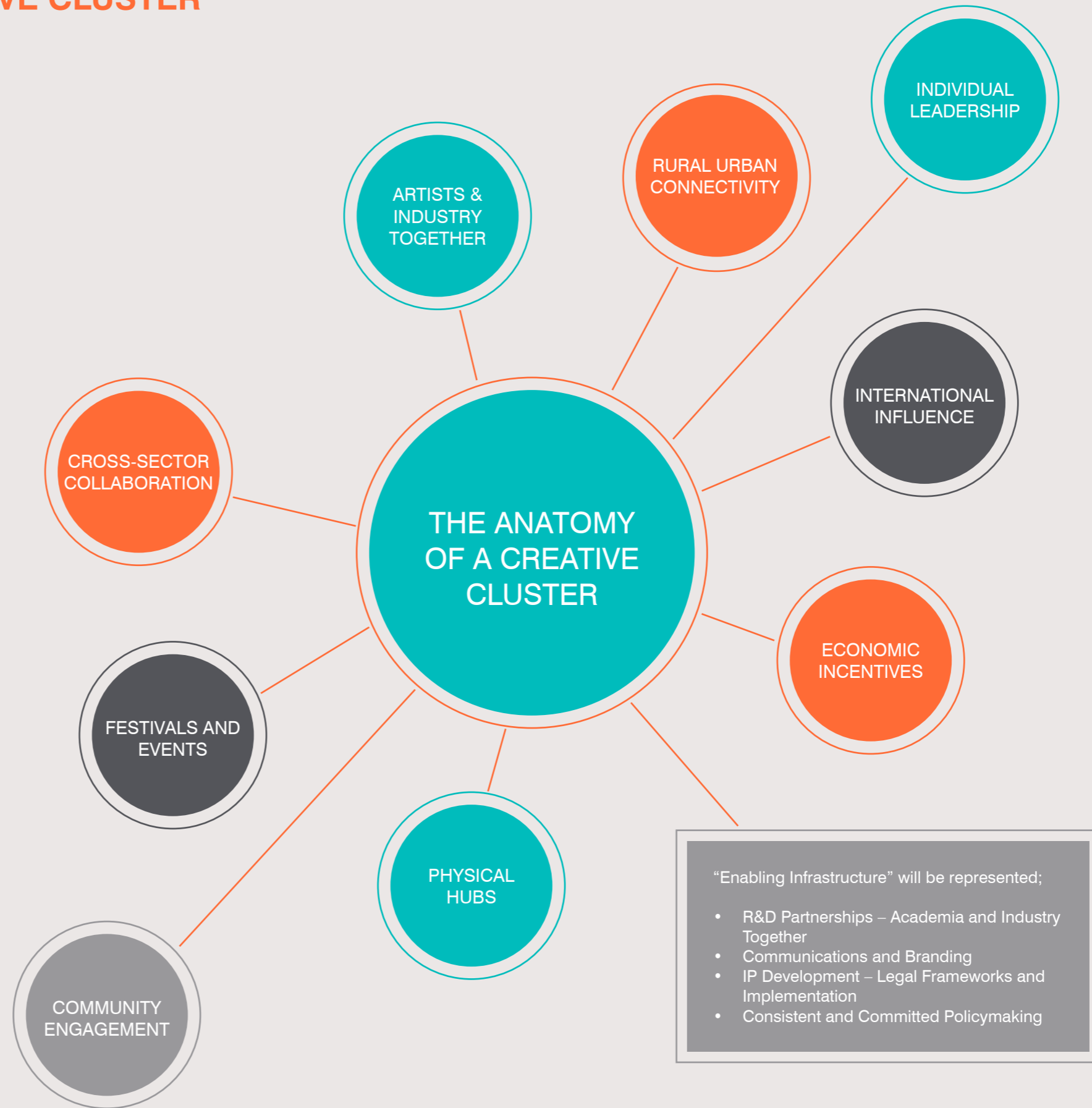
^{116/} <https://www.bengaluru.numa.co/>

^{117/} <http://www.1shanthiroad.com/about/>

13 THE ANATOMY OF A CREATIVE CLUSTER

The creative clusters featured in this report are hugely diverse, with different socio-economic bases, history, size and level of maturity. Those, like Ontario and Berlin, are mature and highly evolved, with structures and economic incentives further boosting their growth. Others, like Bangalore and Mexico, have evolved over time in less structured environments. And clusters like Abu Dhabi are emerging rapidly underpinned by financial investment and strong leadership.

They do, however all display a common sense of leadership, direction and purpose. In addition to these elements, there is “enabling” infrastructure which are critical to the health of a cluster’s anatomy. These ten Anatomy elements and the enabling infrastructure comprise a development framework for new and existing clusters, and an ongoing “health-check” for cluster growth.



14 APPENDIX 1 – CONSULTATION

ALPHABETICAL ORDER

Gavin Anderson – Director, British Council: UAE
Gregory Baeker – Culture Planning and Development Director, Department Culture and Tourism, Abu Dhabi
Laura Bos – Foreign and Commonwealth Office
Hilary Carty – Director, Clore Leadership
Evy Caudwell-French - Strategic Partnerships Manager, Creative Industries Federation
Eleonora Cervellera – Head of Strategy and Cultural Programmes, Fikra Designs (UAE)
Erin Creasy – Manager: Industry Initiatives, Ontario Creates
Dr Angelika Eder – Director Art and Cultural Mediation Europe, Genshagen Foundation
Manuel Friedrich – Cluster Manager (ICT, Media and Creative Industries), Berlin Partner
Michael Garin – CEO, Image Nation (Abu Dhabi)
Briony Hanson – Director of Film, British Council
Maria Holley-Garcia – Head of Arts, British Council: Mexico
Her Excellency Noura Al Kaabi – Minister Culture and Knowledge Development, UAE
Jonathan Kennedy – Director of Arts, British Council: India
Jonathan May – Creative Consultant
Till Mayer – Cluster Manager (ICT, Media and Creative Industries), WFBB
Ulrike Muller – Ulrike Muller and Partners (Berlin)
Gregory Nash – Creative Consultant
John Newbiggin – Creative Industries Council
Steve Norris – Director Film and TV, twofour54 (Abu Dhabi)
Hari Parbu - Policy and Event, Creative Industries Federation
Dr Tej Pochiraju – Principal (Jaaga Labs), Jaaga (Bangalore)
Archana Prasad – Founder, Jaaga (Bangalore)
Christiane Raab – Film Commissioner, Medienboard Berlin Brandenburg
Roshni Rao – Head of Arts (South India), British Council: India
Melissa Seguram - Technical Secretary for the State Council for Culture and the Arts, Mexico
Erin Smith – Manager: Research and Strategic Planning, Ontario Creates
Graham Smith – Founder, DrinkBox Studios (Ontario)
Abhijeet Tambe – Music industry practitioner (Bangalore)
Karen Thorne-Stone – President and CEO, Ontario Creates
Andrea Wickleder - Hub Manager, MediaTech Hub Potsdam (Brandenburg)
Meena Vari – Dean (School Media, Arts and Sciences), Srishti Institute of Art and Design, Bangalore