**Bristol Digital
Futures Institute**

MyWorld

Contents

BRISTOL'S CREATIVE INNOVATION HUB

Welcome to The Sheds

A globally unique facility where art meets technology to drive innovation for the creative sector.

Our unique, cutting-edge facility for research & development, training and experimental production.

Enabling the latest research in visual computing, audience understanding, signal processing and network distribution.

This building is a reimagined conversion of the Retort House (1821) and Coal Shed (1850), originally part of the Bristol Gas Light Company, which first brought gas and gas lighting to the city. We aim to continue this legacy of innovation in our creative space.

SHED FEATURES

— End to end flexible production workflow.

— Flexible access to dedicated on-site research networks and storage systems.

— Create, edit and stream media content via ST2110 network connecting the Studio, Smart Cinema, Edit Suites and AV Production Galleries.

THE LATEST IN CREATIVE TECHNOLOGY INNOVATION

Services

VIRTUAL PRODUCTION

Generate real time on set visualisations and deploy in camera visual effects to bring together the digital and physical worlds using our LED wall stage.

MOTION CAPTURE

High quality performance capture of up to 10 performers at once; body, hands and face. Get real time previsualisation of digital avatars in virtual sets, including freedom to explore shots using virtual cameras.

VOLUMETRIC CAPTURE

Capture authentic human performances in 3 dimensions and stream into shared virtual environments in real time.

AUDIO RECORDING

Explore spatial audio for virtual environments and record professional quality audio content in our purpose-built Experimental Studio sound stage.

Our mobile spatial audio recording capability enables high quality audio recording in any remote location outside the studio.

LIVE VIDEO BROADCAST

Produce professional standard audio-visual content in the Experimental Studio, which can operate in a live or as live mode and is equipped with 5 studio cameras either on pedestal, jib, or using an Agito camera pedestal.

AUDIENCE INSIGHTS

Generate unparalleled insights into audience immersion via an array of biometric sensing equipment in our unique Smart Cinema.

EDIT SUITES AND PRODUCTION GALLERIES

Finish your production to professional standards using our purpose built edit suites, audio gallery and vision gallery.

ON-SITE DATA CENTRE

On-site compute and storage facilities, with 5G and ultra-low latency optical network infrastructure, the on-site data centre enables high quality, low latency connectivity and processing of data across the Sheds facilities.

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FLEXIBLE & INTERCONNECTED IMMERSIVE SPACES

Specialist Facilities

The Sheds offers a unique collection of world class creative research, development and production facilities. Together they form an unparalleled test bed for large scale, live immersive experiences.
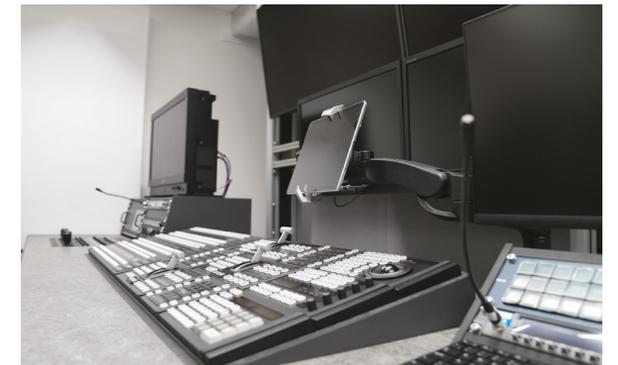
SMART CINEMA
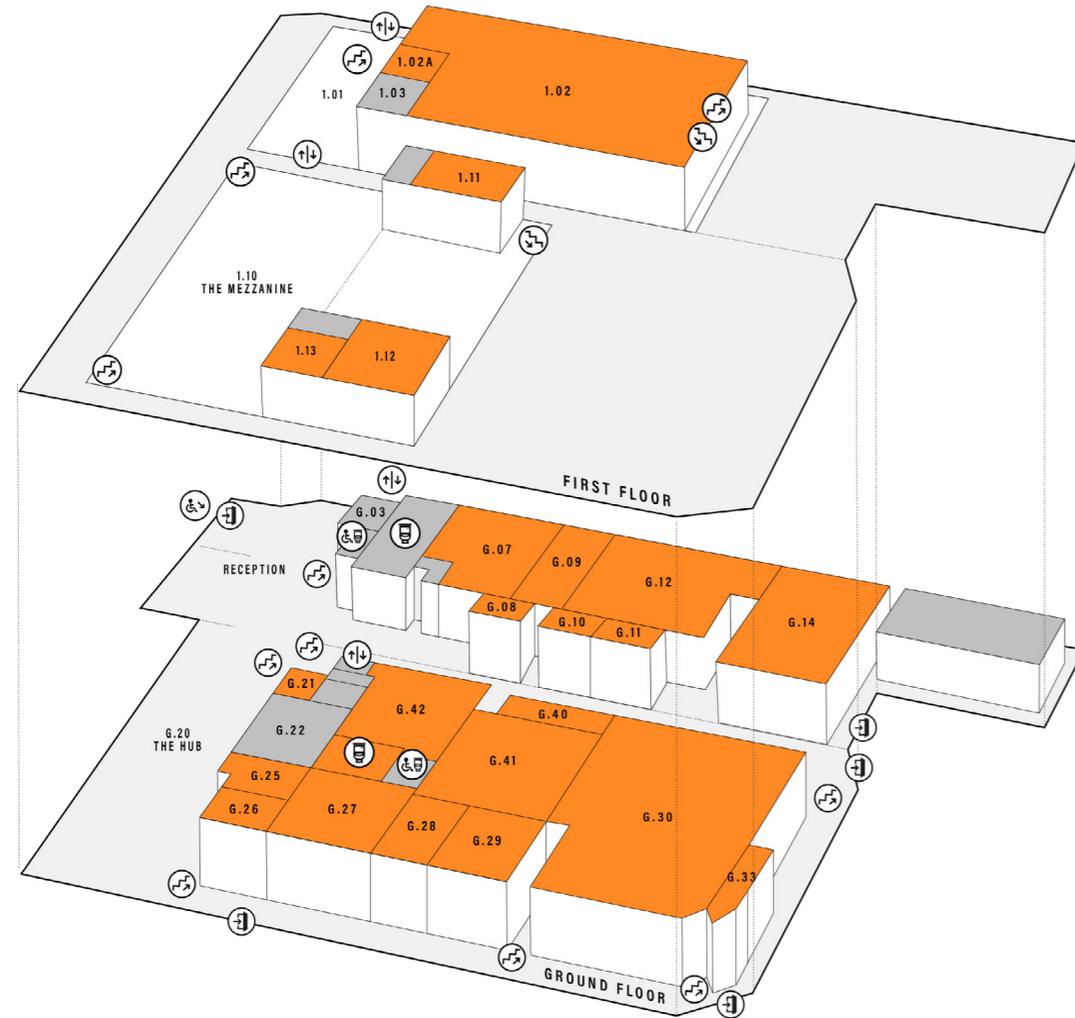
AUDIO GALLERY

EXPERIMENTAL STUDIO

EDIT SUITES

VISION GALLERY

Legend

- STAIRS
- LIFT
- ACCESSIBLE ENTRANCE
- ACCESSIBLE TOILET
- TOILET
- FIRE EXIT

- COMMUNAL SPACE
- SPECIALIST SPACE
- FACILITIES

GROUND FLOOR

G.03	SECURITY ROOM
G.07	WORKSHOP ROOM
G.08	MEETING ROOM
G.09	REALITY EMULATOR XR SUITE
G.10	MEETING ROOM
G.11	QUIET ROOM
G.12	REALITY EMULATOR TEST AND DEVELOPMENT
G.14	REALITY EMULATOR SHARED IMMERSIVE WORKSPACE
G.20	THE HUB
G.21	MEETING ROOM
G.25	MEETING ROOM
G.26	DIRECTORS OFFICE
G.28	AUDIO CONTROL ROOM
G.29	VISUAL CONTROL ROOM
G.30	PRODUCTION STUDIO
G.33	GREEN ROOM
G.40	CAR
G.41	SMART CINEMA
G.42	TRAINING ROOM 2

FIRST FLOOR

1.01	BDFI WORKSPACE
1.02A	THE CUPBOARD
1.02	NEUTRAL LAB
1.03	KITCHENETTE
1.10	THE MEZZANINE
1.11	PROJECTOR ROOM
1.12	EDIT SUITE 1
1.13	EDIT SUITE 2

Experimental Studio

- Multicamera live studio.
- 9m x 3 .5m LED Virtual Production stage.
- 28 camera Vicon motion capture system.
- 10 camera Condense Reality volumetric capture system.
- Studio control via a separate production gallery and audio control room.
- Flexible lighting control via VP lighting controller, Vision Gallery or portable floor operated devices.
- 8 x Studio X5 Bi-Colour 200W LED Fresnel.
- 50 x Gemini 1x1 Hard RGBWW LED Panel.
- Sound stage for professional audio recording.

- Range of high quality camera equipment available for use including:
  - Red V Raptor.
  - Arri Alexa mini LF.
  - Sony Venice 2.
  - Phantom 4K GS.
  - Canon ML105 for low light use.

DIMENSIONS

- 220m² active area.
- 6 metres from floor to bottom of ceiling beams.
- 340² total floor area.

17.7m · 14.3m · 15.95m · 19.8m
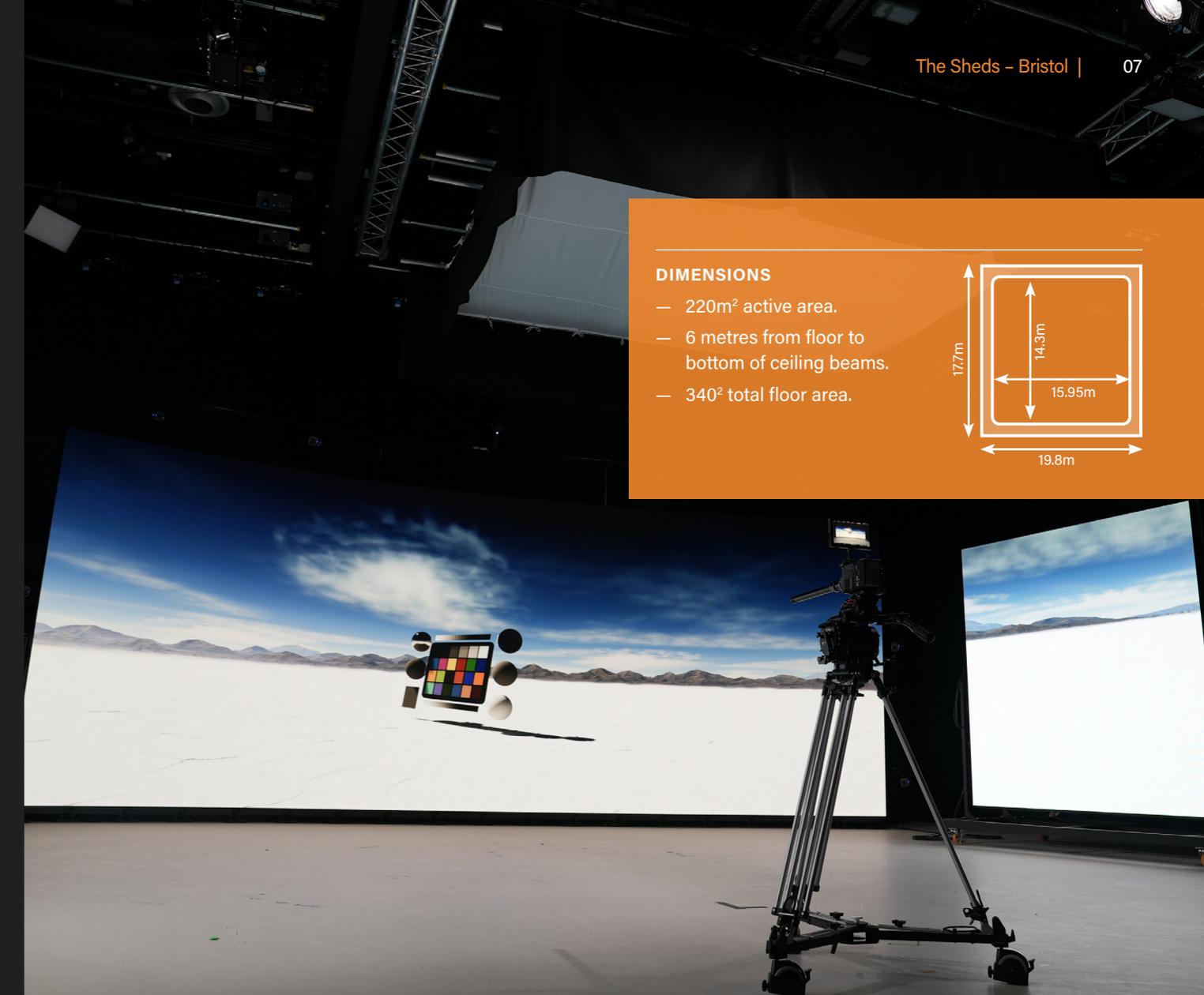
Smart Cinema

— 4k Christie cinema projector.

— Dolby Atmos system utilising Munro acoustics & Dynaudio speaker system.

— 35 seats including accessible seating.

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— Biometric audience monitoring:
    — EEG brainwave monitoring.
    — Eye-tracking.
    — Thermal imaging.
    — Heart rate and skin response monitoring.

Vision Gallery

— IP Enabled.

— Can be used with external feeds.

— 4k UHD.

— 4M/E Vision Mixer.

— Grandma3 Lighting Control.

— 8 x Studio X5 Bi-Colour 200W LED Fresnel.

— 50 x Gemini 1x1 Hard RGBWW LED Panel.

— Comprehensive Graphics Capability.

Audio Gallery

— IP Enabled.

— Calrec Brio 36 Mixer with 96 input channels.

— Dolby 5 .1 Audio Monitoring.

— Can be used with external feeds.

— Dante, MADI, AES67 and Analogue audio.
   networks supported.

Edit Suites

— Multi-resolution capable.

— DaVinci Resolve primary finishing software.

— Unreal and Unity enabled.

— Audio edit.

— Colour grading.

— 100Gb capability I/O 650Tb SAN.

The Reality Emulator

Our Reality Emulator is a pioneering digital twin research facility. It comprises an 'immersive cave' front end, allowing users to experience 2D and 3D visualisations of their digital models in a 360-degree view.

The back end of the Reality Emulator is home to the data centre which houses the compute, data, network, immersive and integration platforms.

The facility is sector-agnostic, allowing sociotechnical collaboration across disciplines and sectors. Digital research models can cover a multitude of scenarios including a city, a factory, an engine, a molecule, or a system such as a telecommunication network or a pandemic scenario.

In linking to the data centre, the immersive cave will allow users to develop, test and interact with visualisations of their AI-driven digital twin models, harnessing real time and historic data at scale, generating potential future scenarios.
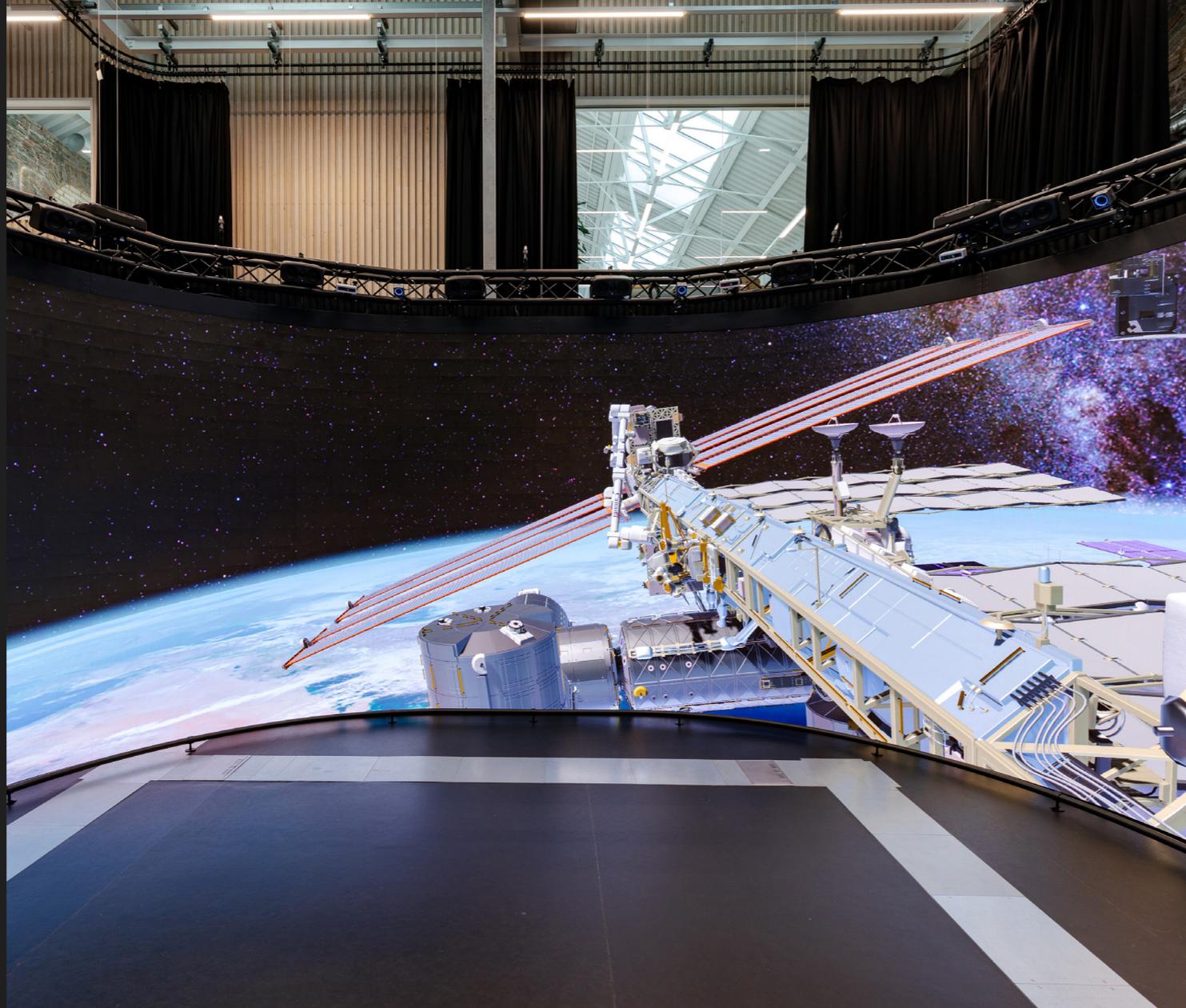
XR Suites

Our XR Suite has state of the art Virtual and Mixed Reality Headsets. The facility can support four independent users having separate experiences, or two or more sharing and interacting with the same experience.

The XR suite is also home to a state-of-the-art volumetric capture system powered by 10 Kinects and proprietary Condense processing software. This setup captures real people as textures and meshes and places them into virtual environments in real-time.

It opens up a whole new category of user experiences for the first time, including truly live music events that take place inside video games.

Coworking & Production Spaces

The mezzanine area provides wifi enabled co-working space for teams who are actively engaged in R&D projects, training and productions using the Sheds facilities.

Shower facilities, secure bike storage and kitchen facilities are available on site.

Dedicated production offices and a green room are available as required.

The Mezzanine
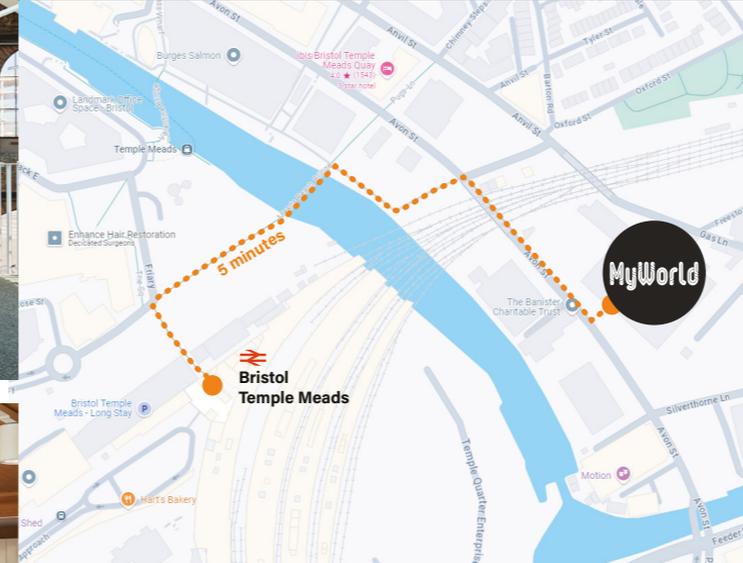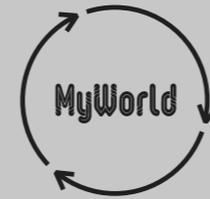
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ONE BUILDING; TWO GREAT PROGRAMMES

About MyWorld

MyWorld is a creative technology programme in the UK's West of England region, funded by £30 million from UK Research and Innovation's (UKRI) Strength in Places Fund (SIPF).

MyWorld is built on the production, technology and research strengths of the West of England region to create a globally unique proposition for creative technology research and innovation.

The MyWorld Offer: Discover – Learn – Build

The MyWorld programme provides opportunities for businesses of all sizes to:

— **Discover:** Access pre-market trends in technology via an extensive research programme in our partner Universities.

— **Learn:** Access MyWorld skills development training or create a talent pool ahead of the market through academic and industry short courses.

— **Build:** Accelerate product and process prototype development through access to innovation funding and production facilities.

All of this in one, world leading, collaborative, interconnected region in the West of England.
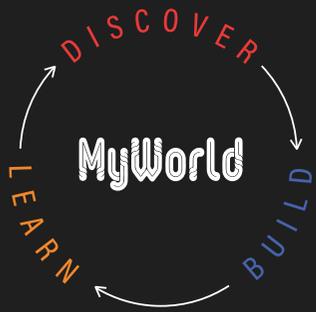
About BDFI

The Bristol Digital Futures Institute is a £100m initiative to develop cutting-edge digital innovation, and transform the way we create digital technologies, for more sustainable, inclusive, and prosperous futures . Working with over 100 researchers and 26 partners, the institute is developing the physical facilities and ecosystems to catalyse digital innovation differently.

BDFI became a University Research Institute in 2019 and received £100m in funding and support from Research England and our civic, business and charity partners . This includes a £29m investment from Research England's UK Research Partnership Investment Fund (UKRPIF) that was integral to developing the Sheds facility.

For more see: **www.bristol.ac.uk/bristol-digital-futures-institute**

Notes

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www.myworld-creates.com