

ABOUT CARBON ARTS

Carbon Arts generates and evaluates creative models for engaging society in imagining and shaping a more sustainable future.

Straddling the arts, economics, science, and technology, our projects foster innovation and dialogue between disciplines and the public as a means to address contemporary environmental challenges. We do this through targeted and timely public art commissions, events, workshops, exhibitions and research.

We work with forward-thinking governments, businesses, artists and designers to inject creative talent and thinking into decision-making and to reach broad audiences.

At the heart of our practice is the belief that creativity is essential in making the transition to a more sustainable society, and that the journey should be playful, fun and rewarding.

www.carbonarts.org

ACKNOWLEDGEMENTS

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Photography by Keith Deverell, Jodi Newcombe and Josh Hill Photography. Thanks to Josh Wodak for production support.

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BUILDING RUN



INTRODUCTION





ABOUT THIS REPORT

Every day, reams of data are gathered in organisations across Sydney to assess how they're tracking against their own and the City of Sydney's ambitious sustainability goals. These figures are reported regularly in the public domain, but how many of us take the time to read the reports or put ourselves in the picture?

Using historic and real time sustainability data on areas ranging from water and energy use, through to waste and transport, the Sensing Sydney project – a joint initiative between creative organisation, Carbon Arts, and the City of Sydney - invited artists to bring the figures alive in ways that celebrate our collective efforts to address environmental challenges.

First, a City Data Slam was held in June 2013 where twelve data artists joined with data providers to create innovative tools and concepts to visualise environmental data and develop project concepts for engaging the public. Second, a data-driven public artwork was commissioned for September – October 2013, as part of Art & About, Sydney's foremost collaborative arts festival produced by the City of Sydney. The winner of this commission was artist Keith Deverell, with his proposal Building Run.

This report documents the development, production and reception of Building Run, the public artwork commissioned as part of Sensing Sydney. A separate report documents and evaluates the City Data Slam. Both publications serve to articulate and assess the success of these projects in order to learn from the experience. From this, recommendations are offered to the industry regarding future initiatives of this type.

As a pilot project, Sensing Sydney broke new ground in terms of cross-sector collaboration, bringing arts and sustainability professionals together both within and across the participating organisations. Carbon Arts has conducted post-project interviews with project participants in order to offer a rounded perspective on what these collaborations offer and how they might continue fruitfully into the future.

Jodi Newcombe, Director, Carbon Arts

BUILDING RUN



PROCESS +
PARTNERSHIP



SENSING SYDNEY



In 2008, the City of Sydney introduced its blueprint for a vibrant city in 2030. Sydney 2030 grew out of talking to people, asking how things could improve and what was needed to take the city forward. Overwhelmingly, people who live and work in the city (and those that visit too), agreed Sydney 2030 should be a place where the environment matters and arts and culture are encouraged and supported.

Sydney 2030 is now firmly at the heart of everything the City of Sydney does, every day. Diverse projects are underway to meet ambitious sustainability targets including those to reduce greenhouse gas emissions by 70 per cent based on 2006 levels; and to give more people more access to the arts through major events and festivals, establishing space for artists to create and supporting public art on a grand scale.

Sensing Sydney represented a coming together of these two key Sydney 2030 goals, placing art and design at the centre of addressing sustainability. With countless streams of data available to highlight the city's environmental progress since 2008, the opportunities for innovation with regard to both getting the sustainability leadership message out there and providing spaces for public participation are boundless.

The model developed by Carbon Arts for the Sensing Sydney project breaks the process for bringing data, artists and public space together into three parts: collect, play and replay. The idea is to learn from the first iteration of this process to understand whether and how it should be repeated.

I THINK ART CAN TACKLE SUSTAINABILITY THE WAY THAT IT CAN TACKLE ALL SUBJECTS. IT'S A REALLY ENGAGING AND ENTERTAINING WAY TO BRING A WHOLE RANGE OF TOPICS TO PEOPLE WHO PERHAPS WOULDN'T OTHERWISE BE INTERESTED.

Gill Minervini
Creative Director
Art & About Sydney
City of Sydney

PROJECT MODEL

		Sensing Sydney 2013	
1. COLLECT	COLLATE MEANINGFUL DATA AND INTERESTED DATA PROVIDERS TO OFFER MATERIAL AND CONTEXT FOR ARTISTS TO WORK WITH IN ORDER TO MAKE IT OPEN AND ACCESSIBLE TO EVERYONE.	APRIL	<p><u>19 APRIL</u> Call out for public art proposals</p>
	2. PLAY	INVITE THE CREATIVE SECTOR – ARTISTS, DESIGNERS, HACKERS – TO PLAY WITH THE DATA, TO VISUALISE, INTERPRET, ENGAGE AND ENABLE THE PUBLIC’S PARTICIPATION.	MAY
JUNE			<p><u>15-17 JUNE</u> City Data Slam @ Object Gallery during ISEA2013</p>
3. REPLAY	IDENTIFY PUBLIC SPACE(S) FOR THE COMMISSIONED ARTWORK TO BE HOUSED, INVITING NEW AUDIENCES TO BECOME ENGAGED IN THE DIALOGUE AROUND MEETING THE CITY’S SUSTAINABILITY GOALS.	JULY	<p><u>JULY</u> Investa Office and Deutsche Bank agree to sponsor Building Run, allowing the project to be installed at Deutsche Bank Place with a more ambitious vision.</p>
		AUGUST	<p><u>AUGUST</u> Intense period of project development and promotion</p>
		SEPTEMBER	<p><u>20 SEP</u> Investa Office and City of Sydney host launch party for the artwork to coincide with Friday Night Live, Art & About Sydney’s opening night.</p>
		OCTOBER	<p><u>20 SEP – 19 OCT</u> The public artwork is on display in the Assembly at Deutsche Bank Place, 126 Phillip St, Sydney as part of Art & About Sydney.</p>
		NOVEMBER	<p>Project evaluation</p>

1. COLLECT April – May 2013

City of Sydney data sources on progress towards sustainability goals are compiled and made open to the public. Other businesses, organisations and communities are invited to make their own data open and available for interpretation. See Sensing Sydney Report 1: City Data Slam for details on the data collected.

2. PLAY May – June 2013

Call out for proposals
Artists, curators, cultural organisations and creative teams are invited to submit proposals for a temporary public artwork that engages with data on Sydney’s progress towards Sustainable Sydney 2030 to be showcased as part of Art & About, an annual public arts festival produced by the City of Sydney, which in 2013 took ‘art in unusual places’ as its theme.



City Data Slam
The data-minded creative sector is invited to work their magic with the data sets in a Data Slam held at Object Gallery, in conjunction with the world’s pre-eminent digital arts festival, ISEA2013 (International Symposium on Electronic Art) and with support from the Australian Network of Art and Technology. Teams of digital artists, hackers and designers worked in an intense hothouse environment over three days to produce engaging visualisations, tools and project concepts with the aim of driving awareness and more sustainable behaviours. The winning artwork is announced. See the City Data Slam Report for full documentation.

3. REPLAY June-October 2013

Keith Deverell is awarded the commission for Building Run, a video art installation that positions building energy performance as a race between buildings depicted as runners across five screens in a commercial building foyer.

City of Sydney is instrumental in bringing Investa Office and Deutsche Bank on board as sponsors of Building Run. Buildings Alive agrees to be the data partner. Carbon Arts and City of Sydney work closely with all the partners to produce and present the work to the public and engage the building’s resident office workers.

Building Run launches on 20 September in the Assembly of Deutsche Bank Place, 126 Phillip Street, as part of Art & About Sydney.



INTRODUCING BUILDING RUN

Building Run is a unique, real-time video installation that sees five elite sustainable buildings in the Sydney CBD compete as athletes in a daily race for greater energy efficiency. Using human avatars to represent each building, the installation tracks real time energy consumption with each building's progress at beating its own personal best displayed on screen.

Building Run provides a novel way for audiences to engage with the energy performance of their workplaces. It also serves to contextualise the

role that green buildings play, together with the communities that inhabit them, in achieving the sustainability goals set by the City of Sydney.

As part of the umbrella project, Sensing Sydney, Building Run aimed to deliver against the City of Sydney's objectives for the project to bring awareness of the city's sustainability achievements to a broad audience through public art. The project brought together a unique creative team and set of collaborating industry partners.

TEAM

Artist: Keith Deverell

Runner: Alex Kovac

Additional programming: Jayson Hybreik

Installation design: Foolscape Studio

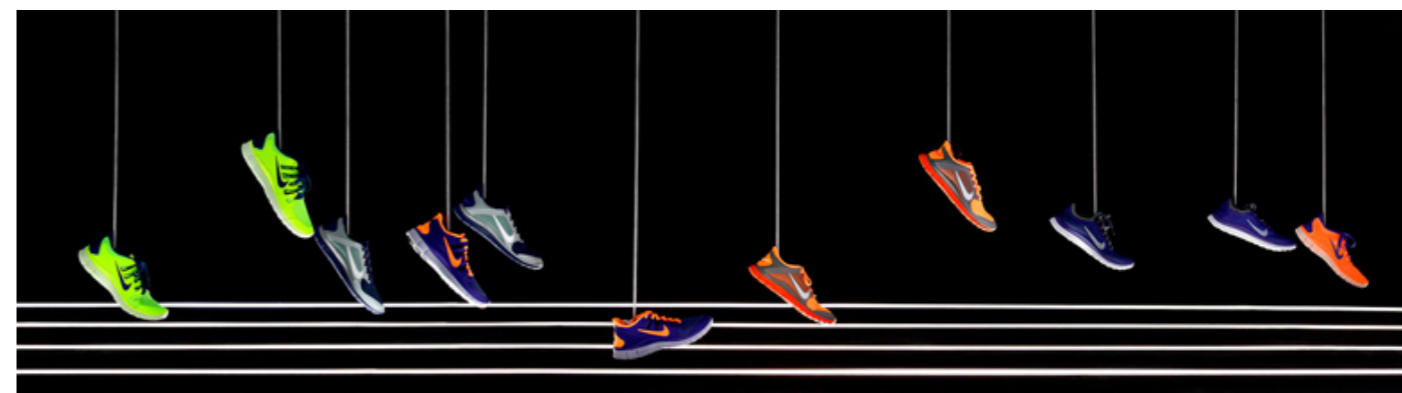
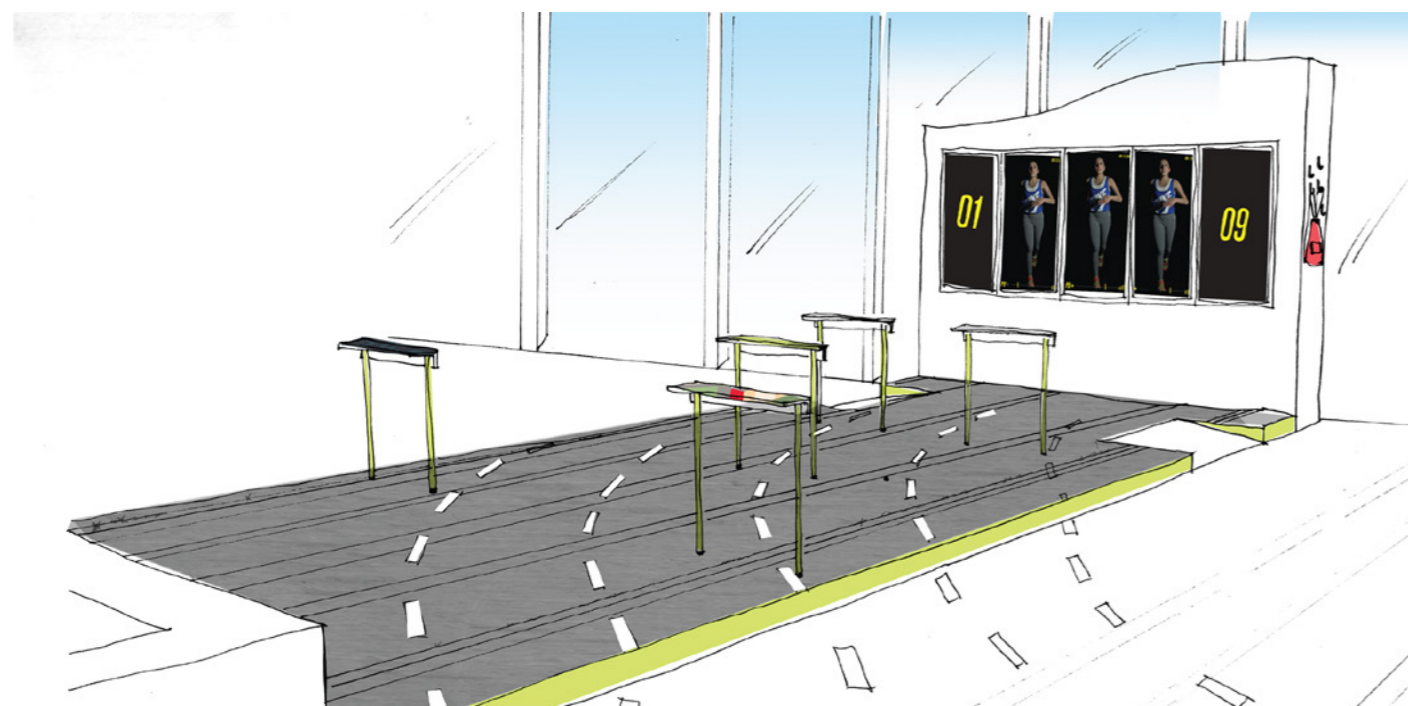
Stylist: Emina Džananović

Produced by: City of Sydney and Carbon Arts

Sponsored by: Investa Office and Deutsche Bank

With support from: Buildings Alive

Keith Deverell is a Melbourne based video artist who also has a professional background in installation design and data visualisation. Keith's video installations have been installed in both the Melbourne Laneways Commission, 2009 and the Melbourne International Arts Festival, 2010. Keith's work has been acquired by the Singapore Art Museum (SAM) and exhibited in the Centre Pompidou. As a designer and programmer Keith was employed as an Associate Researcher at the Australian Centre for Interaction Design (ACID). Outside of his video work, Keith designs installations for exhibitions, such as for the NGV in Melbourne and the Venice Biennial of Architecture.



INDUSTRY PARTNERS

Investa Office, part of Investa Property Group, is one of Australia's largest listed owners and managers of quality commercial real estate controlling assets worth more than \$8 billion across Australia. Investa Office has an integrated property platform incorporating property services, funds management, portfolio management, asset management, development and sustainability. Investa Office is recognised as a world leader in the development and implementation of real estate sustainability initiatives, with a long history of applying best practice environmental management of its funds and in the development and management of its assets. The company headquarters are located at 126 Phillip Street, Sydney.

Deutsche Bank is a leading global financial services provider, offering a wide range of investment banking, transaction banking, private client, and wealth and asset management services. With its sustainability performance Deutsche Bank is listed in the Global 500 Climate Performance Leadership Index (CPLI), which is based on an assessment by the international CDP organisation (formerly: Carbon Disclosure Project). Deutsche Bank's Australian headquarters are at Deutsche Bank Place, 126 Phillip St, Sydney, a building that is owned and managed by Investa Office.

Buildings Alive provides technical information and analysis to help optimise the performance of buildings. Participating businesses receive automated daily email messages conveying clear, timely and actionable energy performance information to building owners, operators and technicians. Complementing this automated message are sophisticated benchmarking tools and facilitated collaborative learning and knowledge sharing environments. Buildings Alive works with many of Australia's leading property owners, operators and technical specialists and currently provides services to almost 70 large CBD office buildings, shopping centres and hospitals.

PARTICIPATING BUILDINGS

The following green buildings were the 'elite athletes' participating in Building Run. Here we show their key statistics and reveal their true colours. These profiles helped to style each of the runners into a unique outfit that reflected the character of the building and its tenants.

Note: NABERS Energy rating (National Australian Built Environment Rating System): NABERS is a national rating system that measures the environmental performance of Australian buildings, tenancies and homes. Put simply, NABERS measures the energy efficiency, water usage, waste management and indoor environment quality of a building or tenancy and its impact on the environment. The rating goes from 1 (significant room for improvement) to 6 (market-leading performance).



255 Elizabeth Street

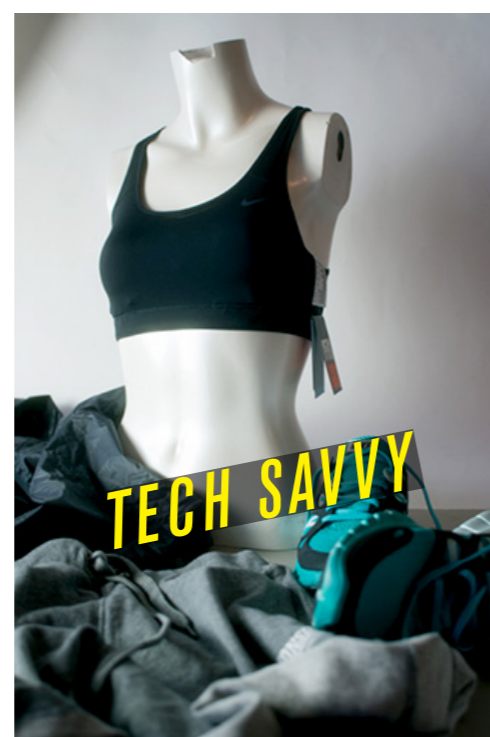
Grade: A
NABERS Energy rating: 5 stars
Total Net Lettable Area: 28,272.2 m²
Date of completion: 1989
Major tenants: Commonwealth Government (including Fair Work Ombudsman, Department of Education, Employment and Workplace Relations), Telstra
Character: Located across the road with superb views to Hyde Park with close proximity to Museum Station and transport networks.

DEUTSCHE BANK PLACE 126 Phillip Street



Grade: Premium
NABERS Energy rating: 4.5 stars
Total Net Lettable Area: 42,256m²
Date of completion: 2005
Major tenants: Investa Property Group - Deutsche Bank (main tenant) - Allens Arthur Robinson
Character: Deutsche Bank Place is certainly the home of suits, matching its sophisticated Norman Foster design.

BT TOWER 1 Market Street



Grade: A
NABERS Energy rating: 4.5 stars
Total Net Lettable Area: 29,699m²
Date of completion: 1991
Major tenants: Sony Pictures, British Telecom (BT), IPART, Nokia
Character: With outstanding views across Darling Harbour and Cockle Bay, 1 Market Street is well-connected to the hub of some Sydney's busiest premier retail, dining, accommodation and tourist facilities.

400 George Street



Grade: A
NABERS Energy rating: 4 stars
Total Net Lettable Area: 51,222m²
Date of completion: 1998
Major tenants: Telstra (primary tenant), SG Australia, Commonwealth Government (APRA)
Character: 400 George Street offers excellent service and tenant amenity including brand new end-of-trip facilities to promote occupant wellbeing and promoting use of the City of Sydney's bike paths.

CUSTOMS HOUSE 31 Alfred Street



Grade: N/A
NABERS Energy rating: N/A
Date of completion: Initially completed in 1845, refurbished most recently in 2003
Major tenants: City government and restaurants (including The City of Sydney library and Café Sydney)
Character: Super stylish, enjoying one of the most chic restaurants in town with views to the iconic Sydney Harbour, smart and cultured with the Library and its ground floor gallery.

BUILDING RUN

RESULTS



ON YOUR MARKS...

Install



BUILDING RUN TIES TOGETHER TWO OF DEUTSCHE BANK'S GREATEST PASSIONS, USING THE POWER OF CONTEMPORARY ART TO FOCUS ATTENTION ON SUSTAINABILITY THROUGH ENERGY EFFICIENCY.

Fiona Shoobert
 Head of Global Logistics Services
 Deutsche Bank Australia and New Zealand



GET SET

Launch



FOR MANY OCCUPANTS, ENERGY EFFICIENCY IN BUILDINGS IS OFTEN OUT OF SIGHT AND OUT OF MIND. WE REALLY WANTED TO CHALLENGE THIS CONCEPT. THIS PROJECT IS ABOUT SUSTAINABILITY, IT'S ABOUT ABOUT INNOVATION, IT'S ABOUT EDUCATION AND IT'S ABOUT COMMUNITY.

Beck Dawson
General Manager Corporate
Sustainability, Investa Office



GO!

Public Interaction

THIS ARTWORK MAKES IT EASIER TO APPRECIATE THE AMOUNT OF CARE THAT GOES INTO MAKING A BUILDING RUN WELL. IT'S ABOUT MAKING THE INVISIBLE VISIBLE IN A NEW WAY.

Campbell Hanan
CEO Investa Office



HOW BUILDING RUN WORKS

Building Run is a video art installation that uses data from five green buildings in Sydney's CBD, which have undertaken energy efficiency measures. The data is supplied by Buildings Alive, which receives data from the building management systems every 15 minutes.

The runner on each of the five screens 'impersonates' a different building. Each building is depicted by the same runner wearing different clothing to reflect the different personalities of the buildings. The runners' behaviour on the screens is tied directly to the data stream being received, such that the more energy a building is using the faster the runner is moving, and the more effort is required.

Icons displayed on the screen provide a portal into the backend functioning of the work.

PERSONAL BEST

Personal Best (PB) is determined by comparing today's energy consumption with the building's predicted performance for today based on modeling of historical data and prevailing conditions, such as the weather. Buildings Alive produces both the predicted performance (or personal best) as well as actual performance.

This comparison is shown on a continual basis, as in a sporting event so that we can see if the runner is on-track to receiving PB at any one time. The bar at the top shows today's performance and the bar at the bottom of each screen shows the PB. If the building is on track to achieve a PB, then the top bar will turn green otherwise it will be red. In this way, one can tell at a glance which buildings are 'winning'.

As the runner completes the race, she will stop and pick up her bottle of water and mobile phone. Upon glancing at the phone she'll learn whether or not she beat her PB. At this stage she will either crouch down and look disappointed (not achieved PB), or stay standing looking skyward and smile (achieved PB). It is entirely possible that all buildings achieve a PB on the same day.

LEVELS

The levels icon indicates the level of effort of the runner – similar to a level on a treadmill - which is equated to the amount of energy being consumed by the building. So, more energy consumption equates to greater effort and exhaustion. This is normalised so that the highest level of energy consumption for the day is the highest running effort, and the lowest level of running effort is the lowest level of energy consumption. There are a total of eight levels, and by design each runner will reach the highest level at some point in the day. Noting when this happens against the time of day on the clock tells the viewer something about how that building is being used, but the levels do not indicate who is winning (see Personal Best).

The framing of the image provides another visual cue that the runners are speeding up. At the slower speeds we are the farthest away from the runner – and see the full body shot. At the medium speeds the camera zooms in closer, until at the fastest speeds we see only the torso.

DATE & TIME

A clock at the top of the installation shows the time and date for the energy data driving the runner's performance, where an entire day's performance is compressed into 40 minutes. This runs on a loop, so that a visitor could easily stay and watch the day's performance, or someone regularly coming and going from the building will catch different parts of the loop.

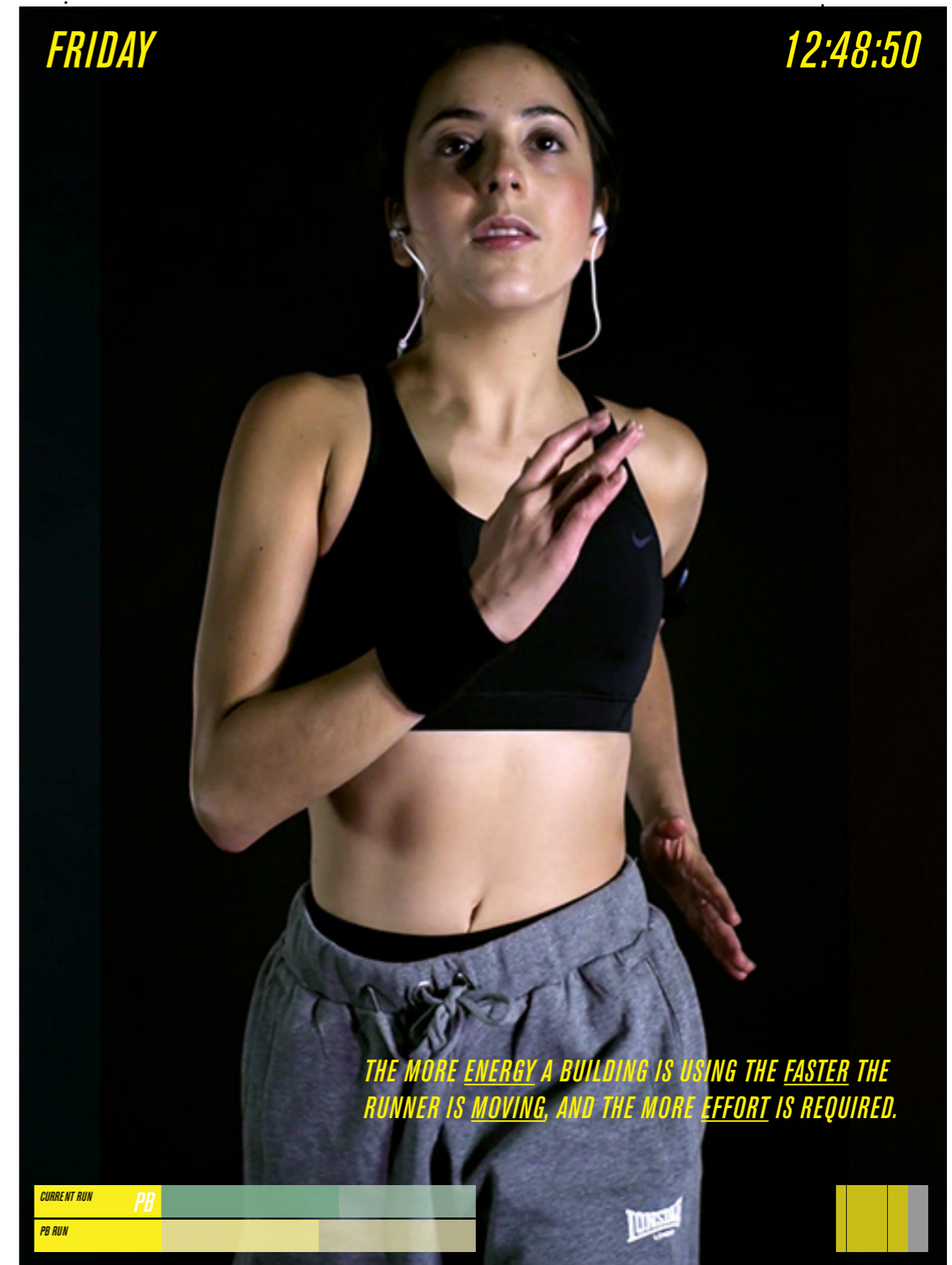
By noting the time and comparing this to the effort of the runner, the viewer should be able to get a sense of the energy profile of a building – i.e. low use in the morning and evening with peak use in the middle of the day. Four of the buildings, as office buildings, have similar profiles, but one of them – Customs House – has a somewhat different profile due to the nature of its use as an evening venue as well as a daytime venue.

On the Saturday the installation showcased the data from the whole week on a rolling basis, so the first 40 minutes were Monday, then Tuesday, then Wednesday, and so on.

DATE & TIME

FRIDAY

12:48:50



PERSONAL BEST

LEVELS

BUILDING RUN FLYER

A flyer was produced to accompany the artwork in order to provide further insight and depth to the public's experience of Building Run. Two statements on the inside spread gave greater context to the City of Sydney's vision for a low-carbon future and the artist's intent in working with data, buildings and an environmental theme.

These statements are reproduced here. The flyer was a key component of the project aimed at informing the public about the City's 2030 vision, the importance of the arts and the role that everyone in the city can play in reducing carbon emissions.



Front Cover

Back Cover

MOVING BEYOND MERE DATA VISUALISATION,
BUILDING RUN CREATES A UNIQUE NARRATIVE TO
ENHANCE OUR PERCEPTION OF THE ENERGY PULSE
OF A CITY.

Jodi Newcombe
Carbon Arts

A LOW CARBON FUTURE

City of Sydney

It's 2013 and Sydney is engaged in the race of the century: a race to create a low-carbon city by 2030. With an ambitious target to reduce CO₂ emissions by 70 per cent compared to 2006 levels, the City of Sydney has hit the ground running with investments in green infrastructure and energy efficiency programs.

Leading the race is a cast of highly energy efficient buildings in the CBD. Like elite athletes, these awe-inspiring structures make impressive gains in energy savings each day. With commercial buildings representing around 70 per cent of the city's carbon footprint, the efforts of this sector are immensely valuable.

As with athletes, each building's success is the result of a team effort. It's not just good technology or clever data management that keeps these buildings fit, but the energy aware behaviour of thousands of their occupants as they go about their business.

Building Run showcases the efforts of a unique team player, the artist. Supporting art and culture and creating a place where the environment matters are two shared visions of Sydney dwellers. Building Run is an exciting opportunity to bring these objectives together, placing art and design at the centre of addressing sustainability.

Every day, the five buildings showcased in Building Run, and others like them, will work hard to achieve a personal best. Join us to see which of the runners will triumph. Or simply witness the fitness.

CURATORIAL STATEMENT

Jodi Newcombe

Approaching the running track from the entrance to Deutsche Bank's Assembly area, Building Run immediately implicates the viewer in the work. Choosing your lane, navigating the hurdles until the runners appear from the distance – this is an experience beyond mere spectatorship.

By the very nature of this art commission, which challenged artists to work with live data streams on Sydney's environmental performance, the artwork becomes a platform for conversation. With Building Run, artist Keith Deverell engages us on the topic of energy consumption with nuance, wit and humour, by using the language of sport and our hunger for spectacle to turn attention to an otherwise hidden world.

This is the hidden realm of building infrastructure, of energy and data flows within a building's walls and floors. As our cities get 'smarter' and more connected through pervasive computing and sensor networks, the power of this invisible world to shape our future grows. Moving beyond mere data visualisation, Building Run creates a unique narrative to enhance our perception of the energy pulse of a city.

Drawing on the traditions of documentary filmmaking and the aesthetic language of video art, Deverell blurs the boundaries between reality and fiction, the literal and the poetic. Building Run reveals as much as it questions. As we rely more and more on the virtual, is there a risk we lose sight of the physical? How can we sense what we can't see or touch? Can we feel what the data is trying to tell us?

In humanising buildings –giving them familiar gestures, movements, and expressions – Deverell converts an otherwise alien, intangible world into one that we can experience through a physical, bodily connection.

ACTIVATION

Building Run was supported by a media and marketing team at the City of Sydney, the extensive reach of the Art & About program, and a number of additional activation strategies developed by City of Sydney, Investa Office and Deutsche Bank to engage building tenants and the general public. Carbon Arts, Buildings Alive and Deutsche Bank also provided support through events, media and advertising through their diverse networks. The following statistics were provided by City of Sydney, reflecting a considerable effort and resultant levels of success in profiling the project to the public and target audiences.



KEY DATES & DELIVERABLES

- JUL 30 - Art & About webpage for Building Run **61,043 visits + 207,547 page views since launch**
- SEP 12 - Release of promotional video for Building Run **696 views**
- SEP 14 - Art & About catalogue released with page dedicated to Building Run
- SEP 20 - Launch party for Building Run in Deutsche Bank Place
 - Building Run brochure, accompanying the artwork **1,800 printed**
 - Launch party for the Art & About festival in Martin Place
 - Banners and LCD screen race statistic updates in all participating buildings
 - Emails and intranet postings with Building Run updates to Investa Office staff
- SEP 23 - Artist Talk for Deutsche Bank Staff
- SEP 29 - Profile report on ABC news – ran twice
- NOV 28 - Investa Office promotional video released
- DEC 7 - Presentation to the National Energy Efficiency Conference by Investa Office and Carbon Arts



FURTHER PR AND COMS STATISTICS

CITY OF SYDNEY PLATFORMS

- What's On e-news and event listing **27,500 readers & 235 page views**
- Dedicated media release & presence on Sydney Media website
- Post on sustainability e-news and website, Green Villages **13,083 readers & 8,626 views per month**
- CitySwitch Green Office e-news story **1,300 readers**
- City of Sydney instagram post **7,239 followers**
- Art and About facebook post **18,889 page likes**
- Creative City Sydney blog post
- City of Sydney tweet **26,471 twitter followers**

OTHER PLATFORMS

- Carbon Arts tweets
- One clip in general news publication
- Five clips in sustainability sites
- Five clips in arts & culture sites
- One clip in business site
- Carbon Arts webpage, e-news and tweets
- Buildings Alive blog story and tweets



Clockwise from top left: Building Run statistics displayed daily on screens in the foyers of participating buildings; Banner about Building Run displayed in the foyers of participating buildings; ABC news report on Building Run; Keith Deverell delivers artist talk for Deutsche Bank staff



BUILDING RUN

REFLECTION

A large yellow chevron graphic pointing to the right, located in the upper left quadrant of the right page.

WHAT WERE THE EXPECTATIONS FOR BUILDING RUN?

Building Run represents a significant achievement in the novel interpretation of energy performance data. Supported as an experiment by its sponsors, the artwork revealed much about the potential for open and interactive data-driven visualisations to drive measurable change in energy efficiency. The collaboration between artists, data managers, building managers, business and local government to bring Building Run to life is testament to the power of the arts as a driver for innovation.

Arts projects like Building Run offer participants a safe place to take risks, to trial systems and technology and develop new relationships with customers, suppliers and the public. By demonstrating that something like data transparency can be made rewarding and effective, Building Run points to new models of engagement and action on energy efficiency, made possible through open data and environmental leadership.



This chapter looks at what Building Run aimed to achieve, what resulted from the experimental showcase during Art & About, and then examines lessons learned and what next for art, energy data and public participation.

There was a general perception by all stakeholders supporting Building Run that they were investing in an experiment. Therefore, the expectations around the project weren't around specific, measurable outcomes. If there was any expectation, it was that art was going to provide something unique and different that was worth exploring. That said, it's clear that each organisation had different motivations and expectations about what the project might reveal or advance for their own organisation. The following is a very brief summary of the key aims or expectations of each of the stakeholders, as interpreted by Carbon Arts.

CITY OF SYDNEY

Getting the public on board with the City's sustainable 2030 vision, delivering engaging public art.

For the City of Sydney the public art project was principally about experimenting with the arts as a means to open up new avenues for communication around and participation in the City's sustainability programs. Because Building Run proposed working with energy data, this became a touchstone to showcase the City's initiatives in this area, and to bring to the fore one of its greener buildings, Customs House. The public art commission selection criteria asked the work to be innovative, artistically excellent, to make use of unusual public space, be accessible, engage a broad audience and employ environmental data that speaks to the City's 2030 vision.

INVESTA OFFICE

Showcasing a portfolio of high performing green buildings and reaching out to tenants to undertake further energy efficiency measures.

Investa Office's key interest in Building Run was in exploring alternative ways to communicate sustainability, through novel data visualisation strategies that go beyond graphs and numbers. The organisation saw the project as a unique opportunity to engage with the public and building occupants in the buildings which it owns and manages, in order to promote Investa Office's sustainability service offering and strengths.

With tenant energy use accounting for up to 50 per cent of whole building energy use, Investa Office is keen to experiment with different ways to facilitate tenants' efforts to reduce their own energy consumption. Ultimately, for Investa Office it's about driving behaviour change and getting people to think about buildings as systems; systems that can be improved and influenced by those who work within them.

DEUTSCHE BANK

Demonstrating the power of contemporary art and environmental leadership.

Building Run was housed in Deutsche Bank Place, named after the building's key tenant, a global financial services company. Deutsche Bank selected 126 Phillip Street as its Australian headquarters in part because of its leading sustainability rating, which reflects the priority that the organisation places on the environment, demonstrated, for example, by its standing as a carbon neutral business. As one of the world's largest corporate collectors of art, Deutsche Bank saw Building Run as an opportunity demonstrate its support for the arts and share this with all the tenants in the building.

BUILDINGS ALIVE

Showcasing sophisticated real-time data feedback systems and marketing the business offering

Buildings Alive provided the back-end capability to the artwork, assisting the artist with data analysis that drove the behaviour of the video clips onscreen. The company was interested in demonstrating the technical prowess of their system, its ability to function in near real-time to provide effective feedback to building managers and tenants, and the insights that the data and its analysis can provide to the understanding of buildings as near-living systems. The achievements of Building Run, both technically and in communications terms, were expected to offer marketing benefits to the company.

WHAT DID THE ARTWORK ACHEIVE?

I THINK IT WAS A GREAT CONCEPT, WELL EXECUTED, NO QUESTION ABOUT IT.

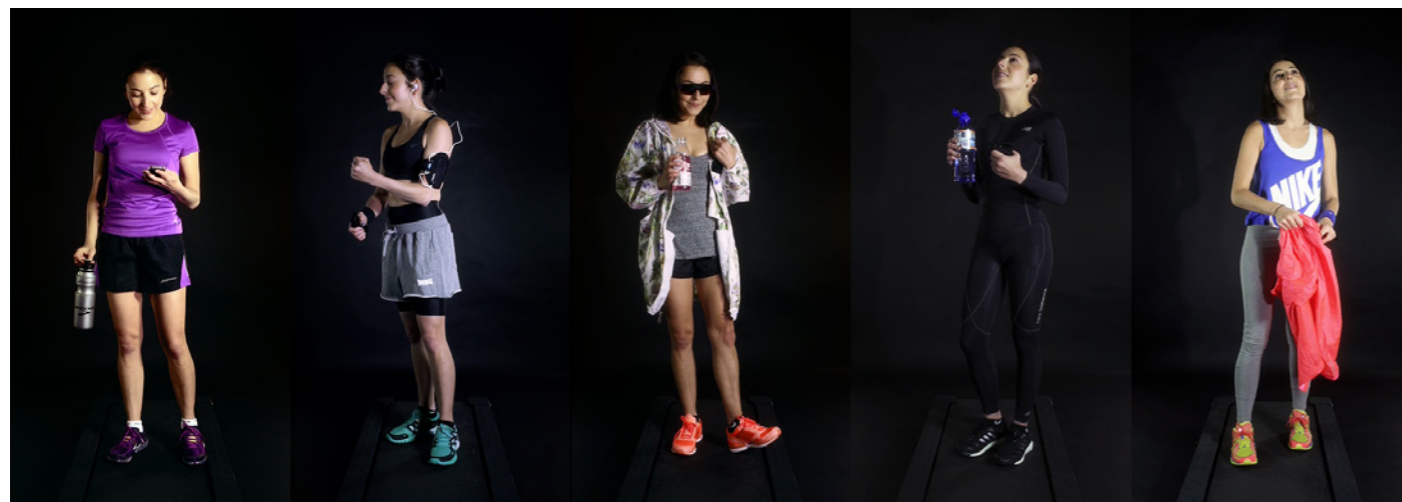
Craig Roussac,
Buildings Alive

In evaluating the outcomes of this project, Carbon Arts has developed a simple framework that maps aims and outcomes of the project across four sets of values referencing the four pillars of sustainability: cultural, social, environmental and economic. Following this analysis is an assessment of key challenges and next steps.

Data on stakeholder expectations and actual or perceived outcomes has been collected through in-depth interviews with a number of the project stakeholders, including Investa Office staff (6), City of Sydney staff (2), Buildings Alive staff (1) and the artist team (1), as well as a short survey with members of the general public (15) and observations collected by the building's concierge and invigilators of the artwork.

The table opposite provides an overview of the key impacts of the project, as distilled from the various data collected. A plus sign indicates a positive impact, whilst a +/- indicates a mix of impacts and/or uncertainty and difficulty with ascertaining the direction of impact. The far column indicates which stakeholders are the principle recipients of the impacts. The remainder of this section teases out these impacts in more detail.

It should be noted that Building Run was not expected to achieve many of these impacts. As an artwork, and a commission of Sensing Sydney, the key expectations placed upon it were to bring sustainability data alive in new ways that engage the public. Designed or managed differently, impacts on behaviour change, energy performance and economics could be enhanced, and this is discussed in the final section in terms of 'where to next?'



OVERVIEW OF KEY IMPACTS AND BENEFICIARIES

CULTURAL

Artistic merit	+	Recognised as high calibre contemporary art	DB, CoS
Innovation/risk	+	Innovation in artistic practice and technical achievement (energy data driven video art installation)	Inv, BA, CoS
Audience engagement	+	Brought contemporary art to unusual places (a commercial foyer)	CoS, DB
	+	Brought public art to new audiences (city office workers)	CoS, DB
	+/-	Only managed to engage audiences to a certain point	-

SOCIAL

Place and identity	+	Provided a unique feature of the building (sense of place)	Inv, DB
	+	Within the business, sense of excitement and pride for employees interested in the arts and in culture	Inv, DB
Social activation/ debate	+	Connecting tenants within the building (launch party, activation through the Vertical Communities program)	Inv, CoS
Social capital	+	Increased conversation in the lifts (about the artwork)	Inv
	+	Activating conversation and networks between stakeholders in the buildings sector (Better Buildings Partnership)	CoS
Education	+	Brought greater awareness to the functioning of buildings	Inv, CoS
	+	Encouraged people to think about energy efficiency	Inv, CoS
	+	Brought awareness to the reality of open and real-time data	BA

ENVIRONMENTAL (energy efficiency)

Awareness	+	As above with Social activation and debate, progressed some conversation and awareness within the building	Inv, CoS
	+	Provided a unique vehicle to speak to the public and media about sustainability concerns in the City	CoS
Behaviour change	+/-	Very difficult to measure for the general public	-
Measurable gains	+	Energy efficiency gains in most buildings over the period of the artwork installation	Inv, CoS

ECONOMIC

Marketing	+	Provided a unique marketing vehicle for presenting the business or organisational aims and competencies	Inv, BA
Corporate culture	+	Connected different parts of the business (through the necessity of delivering of a unique and challenging project)	Inv
Attracting investment/ improving core business	+	Improving/securing relationships with key clients	Inv, BA
	+/-	Attracting new clients (difficult to measure at this stage)	Inv, BA
	+	Attracting increased business to the foyer for lunch or coffee	cafes

BA = Buildings Alive, CoS = City of Sydney, DB = Deutsche Bank, Inv = Investa Office

CULTURAL IMPACTS

Artistic merit, innovation and risk taking

Building Run broke new ground artistically in Australia, and arguably at a global level, with its innovative use of energy data to drive a near-real time system based on energy performance.

Merging the domains of video art and data visualisation through his poetic use of language, hyper-real video footage and manipulation of speed, Deverell achieved a number of firsts. The ambitious nature of the project, particularly given the time and system constraints, meant that Deverell took a number of risks to break new ground.

Satisfying the demands of the City of Sydney Arts & Culture branch for its public art program, as well as those of Deutsche Bank, a major global collector of contemporary art, gave Building Run two very different and significant ticks of approval from a critical art perspective.

Audience reception

Housing the work in a corporate foyer also meant that public art reached new audiences in the City of Sydney and challenged a corporate audience to consider contemporary art in an unusual setting. Conversely, an art-going crowd was also challenged to consider a corporate context for an artwork.

A small, intercept survey conducted in the foyer revealed a mixed view of the artwork by building residents and the public. For some, attraction

to the artwork was a matter of taste. For many, the presence of the artwork did not challenge them to change their patterns of behaviour in the foyer and move beyond, for example buying a coffee, to spending time with the artwork in order to find out what it was about.

On the other hand, observations collected by the concierge, revealed a strong curiosity about the work by tenants in its first couple of weeks of its showing. Over ten people a day asked the concierge about the work, what it meant, how it worked and who was winning. The overwhelming response was ‘interesting’. There was a desire expressed by many to understand the mechanics behind the work and receive updates on performance in the race.

SOCIAL IMPACTS

Sense of place and identity

Building Run created a focal point for the foyer of Deutsche Bank Place and the lunchtime visitors frequenting the juice bar and café, setting it apart from other office buildings in the local area. As the Vice Chairman of Deutsche Bank stated at the launch event, the artwork served to remind the business about the high sustainability performance of the building, and the reasons why they had located there in the first place. Investa Office reported that presentations about the artwork in the office activated a subset of employees who identified

with art and/or sustainability.

These staff brought enthusiasm to the project, expressing pride that these shared values were being put on display by the company. In this way, projects like Building Run can be important contributors to employee satisfaction and employee retention.

Social activation and social capital

The act of bringing the artwork to the building involved coordination between different sides of Investa Office’s business, as well as between tenants in the building. These often new connections served to cement relationships that are instrumental to driving a sustainability agenda, which by its nature requires collaboration. The launch party in particular was the first time many of the tenants of Deutsche Bank Place had met, an important first step towards Investa Office and City of Sydney’s vision for creating vertical communities in office towers that will affect positive change.

The building managers, who were effectively those pulling the levers behind the artwork, affecting the performance of the runners, reported feeling in the spotlight. That the competition was not an overt one between the buildings, meant for the most part that this increased attention on the role of building managers was felt as a positive one. Bringing a mostly hidden, and potentially under appreciated, role to the fore gave greater emphasis to the hard work that goes into making tenants comfortable and buildings efficient in their use of energy.

Education

It’s difficult to measure education outcomes from the project, as educational materials and programs were not widely deployed. However, as stated earlier, the project engendered a lot of curiosity and the system on display had much to offer the curious mind. The Buildings Alive real-time data reporting and benchmarking system is novel in the industry and would have been new to many. Building Run’s key message was to highlight the existence of so many green buildings in Sydney’s CBD – this fact alone would have been new to many of those frequenting Deutsche Bank’s atrium.



ENVIRONMENTAL IMPACTS

Awareness

There were three distinct audiences for this work – the general public, tenants of the buildings in the race and the building managers for those buildings. In terms of affecting measurable change in energy efficiency, the building managers were the only ones capable of influencing the outcome of the race as the data being used was base building data only. Given this fact, the ability of Building Run to drive any behaviour change in the tenants of the buildings was very limited, and certainly not measurable. So for the majority of the audience, Building Run was only able to raise awareness. That said, awareness is an important first step towards behaviour change.

IT’S FANTASTIC THAT THE ARTWORK CAN BRING AWARENESS TO WHAT WE DO AS BUILDING MANAGERS AND GET PEOPLE ASKING QUESTIONS.

Bernard Brown, Facilities Manager, Investa Office



The media attention afforded to Building Run through the ABC news story which aired twice at 7.30pm reached a broad public audience with a playful message about the hard work of green buildings in the city. The novelty that an arts project brings to this well-trodden topic in the media demonstrates the value of an arts approach from a messaging perspective. Whether and how Building Run may have encouraged this TV audience to think differently about energy efficiency and the City's progress towards sustainability is impossible to measure, but its media success is a proxy indicator that the device is effective at gaining attention.

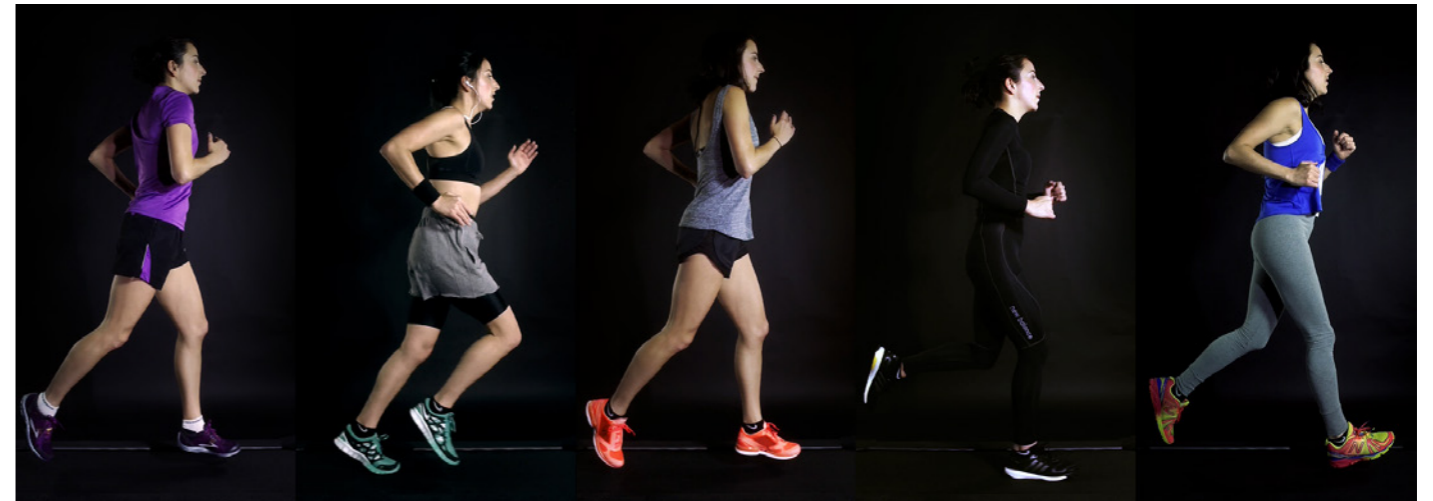
Behaviour change and measurable change

All of the buildings competing in Building Run, with one exception, achieved significant levels of improvement in energy efficiency over the period of the work's showing. Calculated as a percentage improvement over the predicted performance of each building, based on historical records and prevailing conditions such as weather, the results paint a picture of continual improvement. Gains in energy efficiency ranged from less than one per cent

improvement over the period (calculated as an average improvement per day) to over a 25 per cent improvement. See Graph 1.

For building managers already working with Buildings Alive, and already receiving feedback on energy use on a daily basis through that service, Building Run did not bring new information to light to guide their decisions. Many of the achievements noted above were sustained both before and after the artwork's public showing. However, the project brought a new building, Customs House, into the Buildings Alive service and while no significant energy savings were achieved, the participation of the building was an opportunity to trial a new system.

As a vehicle for incentivising other buildings to get on board with energy efficiency, data sharing and management, stakeholders involved in Building Run have noted some success. The City of Sydney, in particular, found that the artwork offered many opportunities to have meaningful conversations with partners in the sector, which allowed them to make progress in addressing



energy efficiency challenges collaboratively. All of these efforts assist in moving us closer to energy efficiency gains.

ECONOMIC IMPACTS

Economic benefits have been touched upon in the other impact categories, where Building Run has lead to improved relationships between businesses or between a business and its staff, or has lead to new relationships being developed. While monetising these effects is difficult, being aware of the value of the relationships at stake can help put things in perspective. For a business like Investa Office, where leasing contracts form a large part of core business, an opportunity to increase customer relationships with reputable tenants provides an attractive proposal. Deutsche Bank's partnership with Building Run, and praise for its outcomes, demonstrates an ongoing commitment to excellence in customer service, as well as demonstrating market support for initiatives which deliver positive environmental and financial performance.

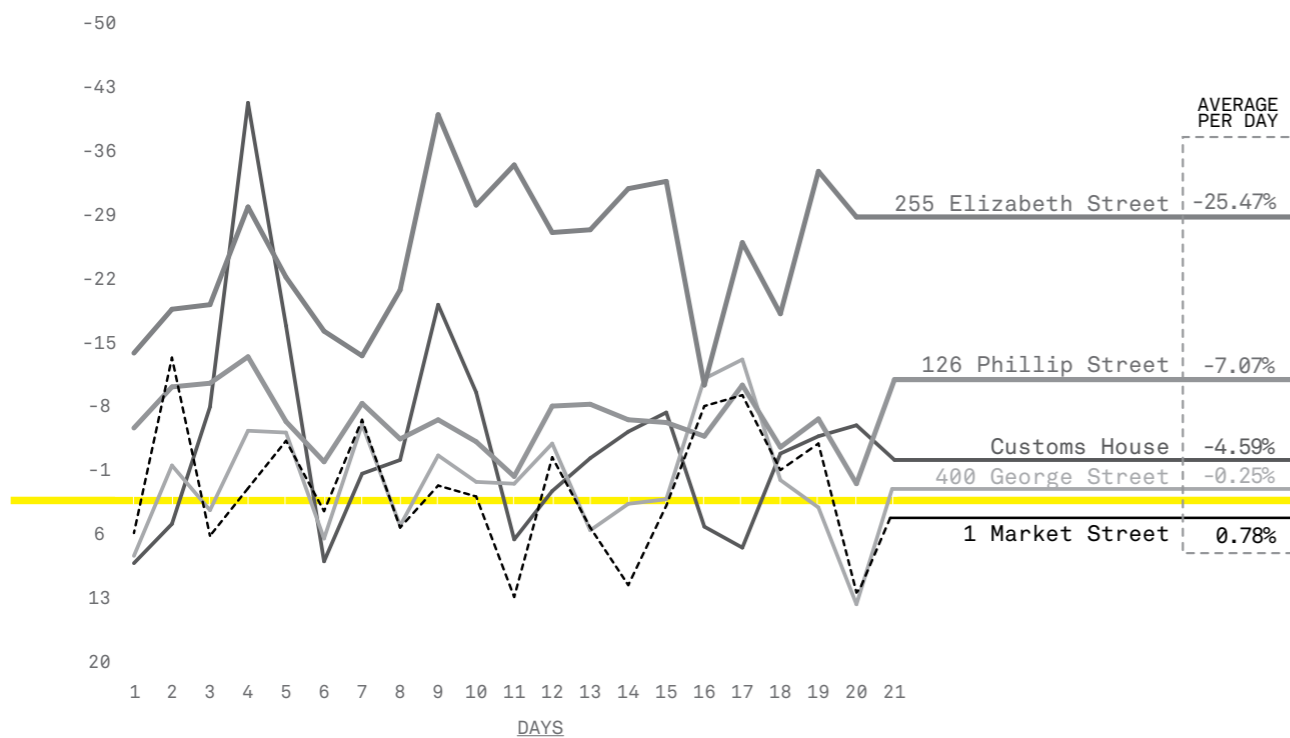
Buildings Alive's ability to secure new clients based on the demonstration of its systems through Building Run remains to be seen. However, the artwork, even after its decommissioning,

offers an ongoing opportunity to market the achievements of the partners in bringing it about. Investa Office and Deutsche Bank's joint promotional video on Building Run, developed post-exhibition, is testament to the power of the arts to bring a new angle to existing businesses and relationships.

Perhaps the most tangible economic outcome of Building Run was the reported increase in sales by the businesses in the atrium to Deutsche Bank Place. With a dynamic and imposing artwork to experience during lunch and coffee breaks, there is evidence that Building Run provided an additional incentive to local office workers to spend money within Deutsche Bank Place. Offering opportunities to retain tenants to increase business drives building traffic to support tenants and create community within the building.

IN TERMS OF A VEHICLE FOR HAVING CONVERSATIONS AND BRINGING DIFFERENT PEOPLE TOGETHER TO EXPLORE IDEAS FROM DIFFERENT PERSPECTIVES, IT WAS REALLY UNIQUE AND EXCITING.

Esther Bailey, City of Sydney



Graph 1: Percentage (%) Energy Savings over and above Personal Best & average saving per day.

WHAT COULD BE DONE DIFFERENTLY?

Approaching Building Run as an experiment means that there is an appetite to learn from the experience and take it to the next level. This section examines the key challenges that the project grappled with and makes recommendations for future iterations of this innovative melding of art and sustainability to address energy efficiency.

Building Run demonstrated the power of the arts to attract people to a particular subject, to encourage curiosity and gain new perspectives – in this case regarding how a building functions. Projects like Building Run have great potential to leverage this curiosity for real impact, but to do this requires a host of challenges be addressed and further fine-tuning of the system. If the objective is to achieve the original vision of the work to engage tenants and office workers in making further energy savings (addressing that 50 per cent of energy consumption coming from tenants), then the following are some recommended steps forward.

TENANCY DATA

Building Run was only able to access base building data, for energy consumption in the common areas, as this data belongs to the building owners and managers directly involved. In order to access tenancy data, each tenant would need to get on board with the project. Accessing tenancy data through the current regulatory system is problematic, but with the experience of Building Run, tenants might be more motivated to sign up, with the reward of being engaged in a high-profile race.

REAL-TIME FEEDBACK

The power of the Buildings Alive system is that data on energy performance is provided in a timely manner. Each morning at 8am data from the day before is delivered to building managers. For Building Run, in order for the system to be operating from 7am when people first enter the building, a decision was made for the data to be from the week before. In a future iteration, working with closer to real-time data will be important to drive engagement with the tenants keen to see the effects of their actions.

That data also comes through every 15 minutes for analysis may also be worth exploring for an even closer feedback loop.

ACTIONS AND EDUCATION

A project like Building Run offers a unique opportunity to drive a step change in behaviour change or systems adoption at the tenancy level. Examining what this might be for each tenancy, such as installing a new sensor lighting system, trialing different levels of temperature comfort, or gaining commitment to individual energy aware behaviours, will be an important first step. The visual and psychological reward of a system like Building Run will be much more effective if it is linked to a set of identified activities as part of a dedicated tenancy-specific campaign.

INTERFACE DESIGN

Feedback on the design of Building Run revealed that for many the icons pictured on the screens, such as changing personal best performance and levels, were not intuitively grasped. The artist's attempts to add variety and theatre to the behaviour of the actors on screen were sometimes confounding. For example, the tendency for runners to take a drink break gave the impression that the building had stopped using energy and put doubt in the mind of the viewers. Further development of the interface design is recommended for any future iteration.

DEVELOPMENT OPPORTUNITIES

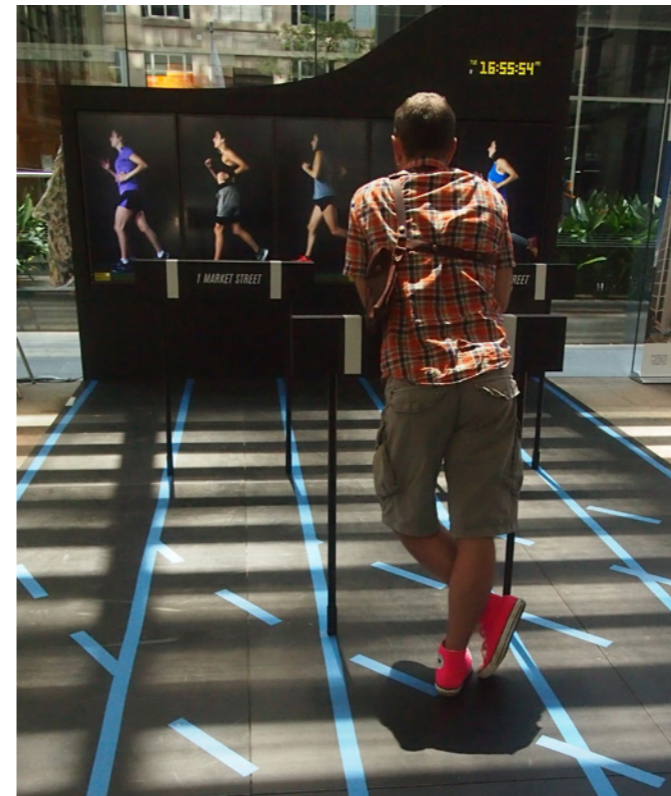
Building Run was developed in a very short period of time considering the complexity of the technology and number of partnerships involved. The Sensing Sydney Data Slam offered some opportunity for the artist to develop the concept with the key partners in a hothouse environment, as did subsequent meetings. It has become clear that these opportunities for intense development are extremely valuable and should be expanded. Extending a workshop to offer building managers, tenants and other potential participants a role in creative development would be worthwhile in informing any future iteration of this project.

ACTIVATING TENANTS

It was clear from conversations generated by Building Run that building tenants have a strong appetite for competition, reflecting the numeric and logic-focused professions that they pursue. Being aware of this drive will be important to driving behaviour change in future designs of the work. It was also suggested that exaggerating the feedback from the installation might be effective, especially in situations where small changes don't necessarily register, but are still important to motivate.

TIMEFRAME AND FORMAT

In this instance the timeframe for the artwork's display was one month, as dictated by the Art & About festival that hosted it. In the future, consideration could be given to whether a shorter or longer timeframe would be most suited to the objectives the work is trying to reach. In terms of format, it may be that an internet component, such as a desktop widget, might accompany the work and play out over a longer time frame.



MONITORING AND EVALUATION

The experience of working with Building Run also highlighted the usefulness of data collected to demonstrate the impacts of the work, particularly on the target audiences. More effort should be spent in future designing questionnaires and data collection systems in advance of the project's implementation and showing to the public. This will only increase our understanding of the techniques being used and allow a greater contribution to growing knowledge in this area.

ENGAGING A BROADER AUDIENCE

The key objective of the Sensing Sydney project and its public art commission for Art & About was to indirectly contribute to reaching Sydney's 2030 sustainability goals, through creative engagement of businesses and citizens with the collection, upload and interpretation of data.

Building Run was able to effectively engage businesses in contributing data and highlight the role that green buildings and building managers play in meeting sustainability goals of the City. The flyer, TV airing and promotional video were excellent vehicles for conveying this message. The extent that this exposure and story was able to indirectly influence people's behaviour is difficult to ascertain.

Due to the data limitations around access to tenancy data, the work was not able to engage a broader audience of building residents or the public directly in uploading data and influencing the behaviour in the artwork. With this extra layer of engagement in future, it is believed that art works of this nature can be more effective in driving measurable environmental improvements derived from actions of individuals as well as businesses.

Together these recommendations reflect the various lessons learned through Carbon Arts' discussions with the project stakeholders. There is a clear appetite to continue to innovate in the application of artistic responses to the challenges posed by increasing energy efficiency in commercial buildings. This report marks a first step along the way in that journey.

