

PART A – Project Submission

1. What is your project?

In Darwin, every corner has a story. But this history can be hard to see: in its short history the city has been almost completely destroyed four times – three times by cyclone and once by war – so Darwin has been rebuilt over and over again. Still, in between the shiny high-rise are lots of secret historic spots to discover, representing all kinds of extraordinary stories. You just need to know where to look, ideally with a local to show you. That's what this project was designed to do, with legendary Territory broadcaster and anti-violence campaigner Charlie King OAM as their guide.

Darwin: A Tale of Four Cities is an immersive, self-guided audio walking tour that takes you to ten historic locations around Darwin's CBD, narrated by Charlie King and developed by myself, Caddie Brain, an independent curator and audio maker based in the Northern Territory. Along the way you hear the voice of a man sheltering behind the Darwin post office as the Japanese attack, meet the ghost of the Territory's richest woman as she walks the halls of the Victoria Hotel, head to ranch night at the old Star Theatre, immerse yourself in the sounds of the tailors, hair salons and market gardens of Darwin's vanished Chinatown or pop into one of the city's oldest stores and try a local delicacy, the salty plum.

In an Australian-first, the one-hour tour is recorded binaurally, an innovative recording method that produces immersive 3D sound. Hundreds of Darwin locals helped to recreate and build powerful soundscapes to support each story, transporting the listener back in time. You just download the Darwin Audio Tour app to your mobile device or tablet, pop on your headphones, explore the sights and sounds of the city in your own time and space and you'll never look at Darwin in the same way.

The project was funded by the Northern Territory Department of Tourism and Culture's Live Darwin Arts program and I aimed to achieve five main objectives:

1. To make Darwin's history accessible - using rare Northern Territory collections and research materials, develop a rigorous, comprehensive, accurate and narrative-driven audio tour that enables participants to easily access, observe and learn a lot about Darwin's little-known history in just one hour.

Having been destroyed four times, there are four distinct yet almost invisible chapters in Darwin's history. There are just a few remaining relics here and there from each of these old cities, but you could easily walk right past them and not know what they are or what they represent. The audio tour shows you these, using sound to transport you back in time - hence the tour's name *Darwin: A Tale of Four Cities*

Historical research in the Northern Territory is particularly challenging. There is relatively little written about its history and its documentary heritage materials have either been destroyed or are dispersed in cultural institutions across Australia due to its long history of changing governance. Few local collections are digitised or broadly available. So this tour aimed to do the hard work of drawing powerful local stories out of these collections, in order to make them digestible and accessible to anyone.

Lastly the tour aimed to be succinct, but also comprehensive. While there are different interpretative experiences that provide coverage of specific chapters of Darwin's history (i.e. the Defence of Darwin Experience for wartime history or the Aviation Museum focused on aviation history), there weren't many experiences available that accessibly contextualise, link-up and expose the patterns and cyclical nature of Darwin's social history.

2. To make history experiential and personal - offering a new kind of interactive, site-specific, powerful, sensory experience that brings history to life and changes the way people interact with Darwin's CBD.

Audiences' expectations are changing rapidly. As a former journalist and manager working on dozens of exhibitions at both the Museum and Art Gallery of the Northern Territory and Northern Territory Library, I witnessed this shift first-hand. Especially when it comes to social history exhibitions, just hanging a set of static images and panelled information on a gallery wall just isn't cutting it with a wide range of audiences any longer, predominately I think, due to the expansion of collections available online and social media which allows audiences to curate their own experiences online.

The Darwin Audio Tour app responds to these changes, offering instead a narrative-driven sensory experience where the historical events actually took place. The app brings Darwin's history to the streets by appealing to all senses, and especially hearing, to transport the participant back in time, effectively layering a place with a new set of meanings, associations and impressions that stay with audiences long after the tour.

3. Something for everyone – ensure the app has broad audience appeal by developing a tour that is relevant and appeals to both long-term and new residents of Darwin, and domestic and international visitors/tourists. The app responds to the lack of opportunities for these audiences to get an affordable, engaging overview of its history and how this city came to be.

4. To engage with difficult histories - develop a tour that's inclusive of a balance of fresh post-colonial, gender-inclusive and multicultural perspectives and stories that do not shy away from the difficult histories and themes that truly make Darwin what it is.

Spanning early Larrakia history and their links with Macassan traders right through to the development of the modern Darwin after Cyclone Tracy in 1974, the tour also aimed to reinsert and represent the contributions of Darwin's Indigenous and multicultural communities. Whether it's concerning the stolen generations, class structures and forced domestic labour, alcohol abuse, boredom and isolation, the challenging weather, or the many bungalows of Darwin's wartime and political history, the tour also aimed to give an honest, balanced perspective on the city.

5. To be innovative - to reimagine what an historic interpretive experience could be by using the latest mobile and audio technology – binaural sound – and to use it not for its own sake but as a means of delivering the most powerful experience possible through to the new tools that are emerging.

2. How does it demonstrate excellence and best practice in heritage interpretation?

Research

Many people in Darwin know very little about the place they live in. The demographic profile of Darwin is one of extremes: long-term locals within a highly transient labour market, local and visiting Indigenous peoples, European Australians and large communities of Indonesian, Greek, Chinese, Indian and Filipino people. This tour was designed to appeal to all of them.

The tour is simultaneously designed for the half-million visitors to the Top End each year, including the 62,000 visitors to Darwin arriving via cruise ships, that have just a few hours in the CBD and not many meaningful activities to engage them. A 2015 Tourism Research Australia study rated self-guided experiences as their most desired activity. Only 16 per cent of visitors reported visiting the city's cultural organisations (nearly all of which are located outside the CBD), stating that there was 'not enough free time' or that they 'prefer to do own thing/sightseeing'. The tour directly responds to these preferences by bringing history directly to them, through the development of a moving experience that offers deeper understanding and access to local stories.

The route of the audio tour was strategically selected to broadly cover four main chapters in Darwin's history. Having been completely destroyed four times – in the 1897 cyclone, the 1937 cyclone, the bombing of Darwin in 1942 and Cyclone Tracy in 1974 – the stories aimed to cover each of these

distinct chapters in Darwin's history – hence the tour's name *Darwin: A Tale of Four Cities*. These included:

- Larrakia Darwin – what was this place before colonisation? And how have the original people lived since then?
- The early settlement of Darwin – why did this settlement survive when four previous attempts had failed?
- Chinese Darwin – firstly: what? Was that a thing? Then: why is there nothing left of Darwin's Chinatown when Chinese people outnumbered Europeans by four to one?
- Wartime Darwin – how did Darwin come to be bombed by the Japanese? What was it like as the bombs fell?

The development of the script drew on the resources, materials and collections of the Northern Territory Library, Northern Territory Archives Service, State Library of South Australia, Darwin's Chinese Museum and the National Library of Australia. The grant supported the contracting of two consulting historians, Jared Archibald (Museum and Art Gallery of the Northern Territory) and Matthew Stephen (Northern Territory Archive Service). In the resulting 8,500-word script, every sentence was scrutinised, challenged and ultimately fought for its life. The final route included:

- Welcome to Bank Corner – the tour starts at what was once the centre of town, an intersection with a bank on every corner. Each bank represents a different chapter in Darwin's history, a great introduction to the tour's themes.
- The Old Town Ruins – Darwin's very first town hall, built in the early years of the Darwin settlement. It was destroyed during Cyclone Tracy and is now a symbol of resilience.
- Meet Your Guide, Charlie King – Charlie's father John first came to Darwin while riding a Malvern Star bicycle around Australia on a promotional tour with a friend. As they headed inland John's riding companion became increasingly afraid of the 'natives', so he bought a pistol. On a bumpy road south of Darwin, the gun went off in his pocket, shooting him through the leg and he was shipped back to Melbourne. Stranded in Darwin, John got some work in construction but got sunstroke ending up in Darwin hospital, where he was cared for by an Aboriginal woman. They fell in love and had 11 children, one of which was Charlie King.
- Chinute Chinute – head back to pre-settlement Darwin with local custodian Violet Mills. She'll introduce you to the secret guardian of the Darwin headland.
- The Singing Wire – the overland telegraph line put Darwin on the map. Discover what it took to string a wire across 36,000 wooden poles through 3000 kilometres of Aboriginal land.
- The Last Letter – Stand on the exact spot where a family sheltered out the back of the Darwin Post Office when hundreds of Japanese bombers appeared in the skies above them.
- Victoria Hotel – meet Darwin's richest woman, who built the finest hotel Darwin had ever seen, a place which became a key site in world aviation history.
- Star Theatre – Visit the old Star Theatre, the centre of Darwin's social life for decades and a backdrop for the complexities of local race relations in the early 1900s.
- Chinatown – Visit an opium factory, the only remaining building from Darwin's vibrant Chinatown at a time when Chinese people outnumbered Europeans by four to one, and meet the man who built it.

The stories were then recorded by narrator Charlie King with traditional Larrakia custodians Robbie and Violet Mills, and the soundscapes were built around them. The tour was recorded binaurally using a special microphone that features human-shaped ears. It creates 3D spatial sound, so that sounds happen to the participant's left or right, above or below them – creating an augmented reality audio experience, an Australian first.

Design constraints for the project were considerable. The route and audio stories had to be timed to meet the exact length and distance between stops. Darwin is a hot (and wet) place much of the year, so the route also considered overall length (no more than three kilometres) and use of ramps, shade, air-conditioning and under-cover walk ways to ensure participants are comfortable along the way. The tour brings participants into contact with local people such as storekeepers, publicans and security guards in incidental ways, opening up their experience of the city and its people.

One of the most important aspects of this tour is its strong Indigenous content. The app's guide, narrator Charlie King is a Gurindji man and the tour also features the unique perspectives and stories of the Mills family, the local Larrakia custodians of Darwin. Critically, the tour offers anyone who takes it a proper cultural welcome to country, something which is considered by the local Larrakia people to be an essential part of paying respect to them as traditional custodians and of their own role in ensuring the safety of visitors on their land. This is something that very few visitors to Darwin would otherwise have any access to. This app makes it possible for the first time to address that problem.

Engagement

Territory history is highly contested, so extensive consultation was essential to the success of this tour. The tour was checked and enriched by experts from Darwin's historic community, such as Alan Powell (Charles Darwin University), Samantha Wells, Margret Curry and Suzanne Young (Northern Territory Library), Michael Wells and Robyn Smith (Northern Territory Heritage Branch), Austin Chin and Neville Jones (Chinese Museum), the Morsecodians Fraternity, and authors/historians Stuart Traynor and Kathy de la Rue. The stories were also supported by the families of early Darwin figures, in particular the Harris, Chin and Kwong families. Most essentially, the project also had the support and participation of Robbie Mills and Violet Mills, traditional custodians of Darwin

The script is brought to life by the development of an innovative historic soundscape recorded throughout Darwin over four weeks. This involved recreating and recording historically accurate sound at Deckchair Cinema, Parliament House, the Chinese Museum, Hotel Darwin, Victoria Hotel, Star Arcade, East Point Historic Reserve, Todd Tavern, Nightcliff Foreshore, Administrator's Offices, Charles Darwin University grounds, Darwin Wharf Precinct and on the streets of Darwin. The extent of these field recordings was necessary to capture the unique atmospheric qualities that only these locations could offer, to weave in the augmented reality experience that will be presented via the app.

I was also (un)lucky enough to capture genuine cyclone sound first hand when Cyclone Marcus hit Darwin during the recording phase. The authenticity of going through a cyclone during production came at a cost though, and set the schedule back by several weeks as Darwin slowly restored power, reopened roads and shops and life returned to normal. The Darwin community supported all of these recording efforts - the Chung Wah Lion Dancers performed, the Hardy Family flew their 1930s Tiger Moth biplane over my head, two young actors performed their roles as chocolate sellers, and locals rode bikes and horses back and forth past my microphone. In total, hundreds of people were involved, enriching the accuracy, accountability and impact of the project.

Implementation

Darwin: A Tale of Four Cities is the first binaural audio walking tour in Australia. A tour of Alice Springs is now in development. It is supported by an ongoing marketing plan that incorporates collateral, digital and tourism networks.

Access

The tour's route was deliberately selected to be all-access. The language of the tour is as inclusive as possible and assumes no prior knowledge or abilities. It does of course require the ability to listen and to access mobile technology. There are also plans to translate the tour into other languages, starting with Mandarin.

Training

No training is required to use the app nor are staff required to administer it. It was critical that the tour was as intuitive as possible for the broadest audience possible. Every mobile platform was tested, considered and interrogated before the My Tours platform was selected and modified for use. All qualitative feedback and reviews indicate that it's easy to use and there hasn't been a single usability complaint.

3. Identify the resources needed for your projects (e.g. staff, materials, money). Demonstrate how you used these resources effectively.

An app was a cost-effective, efficient and consistent way to deliver audio to the participant. It enables them to use their own device and equipment they're already familiar with, and also minimises the project's future resourcing requirements, as there is no ongoing equipment hire and maintenance or staff costs. Both the software and the content of the app can be updated quite easily, which helps futureproof the experience. For example, if a landmark on the tour is removed, I can alter the audio to reflect that, upload the update and the walk is accurate again.

The concept of the walking tour in the first place was designed to reconnect participants with historically rich places themselves, rather than drawing them away from those places into say, a gallery or exhibition space where you're trying to recreate an experience. The site-specific nature of the work, which the app facilitates, maximises the power and relevance of the experience, and also the potential audience size. The tour also leverages the hard work and investment that has gone into previous interpretation of historic sites in the city over many years, as the tour takes people to existing interpretation and recontextualises it, building it into the narrative in a way that makes people more likely to engage with it. The tour costs \$2.99. While not prohibitive for most people, this fee further future-proofs the project by ensuring that ongoing costs of the app's maintenance and a small marketing budget are fully covered.

Darwin: A Tale of Four Cities was funded by the Northern Territory Department of Tourism and Culture's Live Darwin Arts program through two grants (one for development, the other for production) totalling \$26,298.

Full project costs are outlined below:

Description	Cost (grant)	In-kind
Grant auspicing fees	1,100.00	
App audio production and implementation	2,000.00	
Studio and sound engineer	2,250.00	
Music licensing fees	1,702.00	
Writing and production fees - Caddie Brain	8,669.00	14,400.00
Historical consultation	1,100.00	
Narration and talent fees	2,500.00	
Sound equipment		3,879.00
App development	1,835.00	149.00
Travel		4,109.00
Graphic design	3,000.00	
Grant Music licensing agreement fees – Arts Law	80.00	
Streaming license - APRA	250.00	
App Launch	262.00	
Printing and marketing	1,550.00	285.00
TOTAL	\$26,298.00	\$22,822.00

4. How has your project met clear and measurable outcomes for your client/organisation and stakeholders?

The new Darwin Audio Tour app was just launched on 9 July 2018 by the Northern Territory Minister for Tourism and Culture, Lauren Moss, who took a preview tour with 50 other key stakeholders. Despite being produced by an independent curator, Minister Moss released a ministerial press release about the project and it was widely covered in ABC News, ABC Local Radio, the NT News, tourism journals and local street press. The app has since been downloaded 250 times in its first three weeks. It had received a blanket five star rating in both the Google Play and App Stores, receiving rave review such as:

- *Absolutely fabulous. Born and bred in Darwin, it brought back many memories.*
- *Wonderful binaural experience with rich historical insight. Highly recommend to anyone in Darwin.*
- *It is very easy to use, hugely entertaining, and informative. This is a really beautiful application of smartphone and audio technology. The binaural sound recording blends seamlessly with the voice of the narrator to create a multilayered, real-time tour experience. I learned more interesting things about Darwin in an hour's walk than I have in a year living here! Highly recommended*
- *This is a great app to give you an insight into the hidden history of Darwin. Not only do you get the facts but lots of reminiscences are also included which brings the story to life.*
- *After 40+ years in Darwin this app provided great information that in some cases I did not know. The narration was well done and loved the personal story told.*
- *Easy to download and manoeuvre from page to page as you walk or to listen to at your leisure. Beautifully delivered by a true local who has a genuine historic connection to Darwin. Having wandered past many of the sites during previous visits, I had no idea about the rich history that the dwellings and locations hold. It's the full package that, because of the integrated sounds, guides you on an intriguing journey that leaves you richer in experience and knowledge.*
- *I was amazed at how much I didn't know about Darwin. Very educational, great stories and audio/sounds/storytelling. Really professional, well developed app that is great value for money.*
- *A wonderfully put together narrative tour that shares the history of Darwin's war-torn past as well as its recovery to the beautiful city it is today. The narrator does an amazing job and the personal touch he puts on his stories was a definite plus! Enjoyable from start to finish!*

As the curator/producer, the overwhelming response to the app exceeded all expectations and met all objectives outlined in question 1 - it engaged and is being used by a wide range of stakeholders, both a diverse range of locals and visitors. It tells ten powerful stories that include multicultural perspectives and difficult histories regarding race relations and colonialism delivered in a personal, open way. The Mills family, Darwin's traditional custodians said it was one of the few projects they'd ever worked on that was truly and deeply respectful and engaged with their history. An innovative mix of both smartphone and audio technology was used - the app is available on all mobile platforms, is GPS triggered and features powerful binaural audio, that blurs reality and augmented reality for the first time in a history context. The app is now a flagship project for the local GLAMR sector and the NT Government and local council with growing interest for future translations into other languages and further tour development.

And this is only the beginning. The Darwin Audio App is a permanent piece of digital infrastructure, that will delight and inform Darwin locals and their guests for years to come. The return on investment increases each day. As an app there's little maintenance, no waste produced and it encourages people to take a longer-term view of the place they're living in or visiting by exploring and gaining awareness of the fragility of their environment.

So, what did not work? The GPS triggering is still in its infancy as a technology. Where the story trigger points are too close together the audio can play at the wrong time. Participants also fed back that they prefer to trigger the audio themselves and control the experience. (The app allows for that too.) While the future application for products like this around Australia are extensive, it will always be limited by a long development time. That said, the app has been constructed in such a way that future tours can be added, by myself, or by other developers keen to contribute new angles on history and culture in the Northern Territory or nationally.

The project in numbers

- 8500 - words in the script
- 12 - number of locations featured on the tour
- 60 - minutes of final audio
- 13 - number of hours recording the narration in the studio
- 20 - number of hours of binaural sound recorded for soundscapes
- 55 - partnerships, collaborations and consultations
- 62 - major research references
- 12 - kilometres walked trialling the route
- 18 - script revisions
- 200+ - locals who participated in the recordings of the soundscape at locations around Darwin