

Destination
Country and Outback NSW

November 2019

Night Skies Experience Concept Plan



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Authorship

Prepared by SMA Tourism, Website: www.smatourism.com,
Email: info@smatourism.com

SMA is an international tourism consulting firm, specialising in innovative product development for cultural tourism, ecotourism, adventure tourism and culinary (food and wine) tourism.

The authors contributing to this Report were:



Simon McArthur
Product concept
development and
reportwriting



Jane McArthur
Consultation,
product audits
and product
research

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Disclaimer

Specific investment decisions addressing recommendations in this report require further planning, engineering, environmental and heritage advice, and costing by an estimator. Costings should not be used for construction.

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DEFINITIONS

Astrotourism: Tourism using the natural resource of unpolluted Night Skies, and appropriate scientific knowledge for astronomical, cultural and environmental activities¹

Astronomical tourism: Travelling to a particular location to enjoy the beauty of the night sky or an astronomy related historical site [Collison & Poe 2-13]

Brand: source of a distinctive promise for customers from a product, service or place. Everything the lead organisation does in collaboration with its partners and community should be orientated around delivering and constantly enhancing the promise. A brand is not just a logo.

Celestial tourism: Ecotourism, where the interest of visitors is focused on the observation and appreciation of naturally occurring celestial phenomena [Weaver 2008, 2011]

Event (tourism): designed to attract and satisfy the needs of visitors, reflecting the area's brand essence, driving increased visitor awareness of the brand, and increasing visitation and associated economic impact to the area during and after the event.

Experience: The emotions, feelings and sensations generated by the people met, places visited, activities participated in and memories created by travel, through watching, testing, smelling, touching, listening and being part of a culture or lifestyle that is distinctly different from everyday life and that reaches an individual's deep needs and desires. An experience is not a product (which is the simpler / stripped back / commercialisation of an experience).

Marketing: the management process through which goods and services move from concept to the customer. It includes the coordination of four elements called the 4 P's of marketing: identification, selection and development of a product ; determination of its price; selection of a distribution channel to reach the customer's place, and development and implementation of a promotional strategy.

Night Skies Tourism: has a focus on the visitor seeing, hearing, sensing, learning and enjoying the sky at night time. Night Skies Tourism might approach this in many different ways, including scientific, cultural, artistic and spiritual. A Night Skies experience might range from relaxing, exercising, socialising, learning, contemplating and creating new perspectives about the universe and our role within it. This might be done independently, or through facilitators such as guides, storytellers and educators. A Night Skies product could be delivered through any of the core tourism sectors, such as attractions, tours, events, accommodation and food and beverage.

Operator: an individual or organisation that conducts a tourism activity which results in some degree of commercial return.

Product: a good or service (tangible or intangible) than an organisation offers to its customers.

Space Tourism: The activity of travelling into space for pleasure or interest, rather than as a job [Cambridge Dictionary].

Target market: the portion of actual and potential visitors that an organisation most wants to attract to their destination or product. The target market is chosen because the needs of the market segments chosen most naturally fit what the destination or product can offer and offer the best return on any marketing investment to attract them.

Terrestrial space tourism: Earth-based simulations, tours and entertainment experiences related to space tourism [Crouch 2001, 2009].

Visitor (local): a person who comes from within village / township within the local government area

Visitor (day tripper): a person who comes to a destination from outside the immediate local area (such as a local government area) and leaves in the same day.

Visitor (overnight): a person who comes to a destination from outside the immediate local area (such as a local government area) and stays overnight within the same immediate local area.

¹Fayos-Solé et al., 2014Fayos-Solé, E, Marín, C & Jafari, J, 2014. Astrotourism: No requiem for meaningful travel. Revista de Turismo y Patrimonio Cultural 12(4), 663–671.[Crossref], [Google Scholar]:664.

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WOW factor: a highly differentiated experience that is so distinctive that it is a primary motivator to visit a region – which may in turn be thought of as an iconic product. The delivery of a wow factor experience should so surprise and excite the consumer, that it motivates them to do it again or at least strongly recommend it to their friends and relatives. Not every visitor needs to do the wow factor, but typically those that don't want to do it, still want to watch others do it.

Yield: In the context of a Tourism Plan, yield is the expenditure injections of tourists (sales revenues) or the profitability of catering to different visitor markets. Yield can be defined purely from an accounting perspective (sales revenues per visitor) or the financial rate of return to operators, or gross operating surplus of different industry sectors. Alternatively, the profitability to the tourism industry of different market segments can be assessed.

1. INTRODUCTION

1.1 The Project

Project objectives

Destination Network Country & Outback NSW (DNCO see **Figure 1.1**) is seeking to guide the reinvigoration of existing or development of new “Night Skies’ experiences within the region.

The first output in the process was the development of a Gap Analysis Report [SMA Tourism 2019]. The Gap Analysis Report provided Australia’s first comprehensive analysis of the Night Skies sector. The report summarised the results of a literature review, product audit, stakeholder consultation and benchmarking initiatives from outside the region.

The first output in the process is this The Concept Plan, which is designed to have three applications:

1. Direction for existing operators delivering Night Skies product to internally make ongoing improvements to their offer, and guidance on how to approach this.
2. As the basis for the preparation of Business Cases for higher cost projects, to support public sector funding applications.
3. Informing any new plans to redevelop or improve a site, ensuring that the visitor experience is at the centre of any new developments or can improve the experiences based on the infrastructure that already exists.

The plan may also provide strategic direction for individual stakeholders to use individually or collectively, in order to raise the profile of NSW and DNCO as a leading destination for Night Skies experiences which will ultimately drive increased overnight visitation to the region.

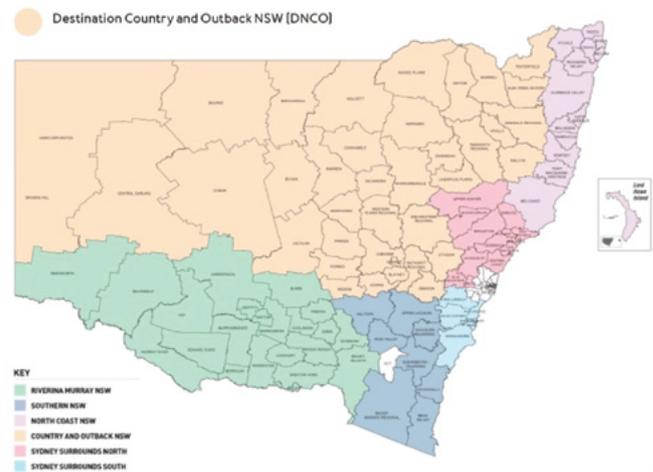


Figure 1.1 Map of New South Wales (NSW) showing Destination Networks and specifically the Destination Network Country & Outback NSW (DNCO)

1.2 Defining Night Skies as a tourism product

After a review of any published work on Night Skies tourism, and then Astrotourism, terrestrial space tourism, celestial tourism, astronomical tourism and space tourism, we could not find any formal or published definition of what constitutes Night Skies as a tourism product or experience.

Our review of some academic journals² revealed the following definitions of related tourism that we believe could be sub-segments of Night Skies Tourism:

- Astrotourism: Tourism using the natural resource of unpolluted Night Skies, and appropriate scientific knowledge for astronomical, cultural and environmental activities³
- Astronomical tourism: Travelling to a particular location to enjoy the beauty of the night sky or an astronomy related historical site [Collison & Poe 2-13]
- Terrestrial space tourism: Earth-based simulations, tours and entertainment experiences related to space tourism [Crouch 2001, 2009]
- Celestial tourism: Ecotourism, where the interest of visitors is focused on the observation and appreciation of naturally occurring celestial phenomena [Weaver 2008, 2011]
- Space Tourism: The activity of travelling into space for pleasure or interest, rather than as a job [Cambridge Dictionary]

For the purposes of this project, we have defined the Night Skies tourism sector as follows: as:

Night Skies Tourism has a focus on the visitor seeing, hearing, sensing, learning and enjoying the sky at night-time.

Night Skies Tourism might approach this in many different ways, including scientific, cultural, artistic and spiritual.

A Night Skies experience might range from relaxing, exercising, socialising, learning, contemplating and creating new perspectives about the universe and our role within it. This might be done independently, or through facilitators such as guides, storytellers and educators.

A Night Skies product could be delivered through any of the core tourism sectors, such as attractions, tours, events, accommodation and food and beverage.

²Weaver 2008, Ecotourism, Milton, Qld John Wiley & Sons, Australia; Weaver, 2011), Celestial ecotourism: New horizons in nature-based tourism, in Journal of Ecotourism, 10[1]; Cater 2010, Steps to Space, opportunities for Astrotourism, in Tourism Management, 31[6]; and Collison and Poe 2013, Astronomical Tourism: the astronomy and dark sky program at Bryce Canyon National Park, in Tourism Management Perspectives, [7]; Cambridge Dictionary: <https://dictionary.cambridge.org/dictionary/english/space-tourism>

³Fayos-Solé et al., 2014 Fayos-Solé, E, Marín, C & Jafari, J, 2014. Astrotourism: No requiem for meaningful travel. Revista de Turismo y Patrimonio Cultural 12[4], 663–671. [Crossref], [Google Scholar]:664.

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1.3 Product variations

Night Skies tourism spans multiple visitor economy sectors, such as:

- natural attractions and cultural landscapes;
- built attractions and heritage sites;
- guided and self-guided tours, interpretive activities and education programs;
- events and festivals;
- accommodation; and
- food and beverage.

There are many different sorts of product variations that could be delivered as a Night Skies product, and many can be adjusted to reflect the interests and skills of the operator providing it. Each of these products can also be delivered through a different perspective, such as:

- scientific (rational and systematic);
- cultural (beliefs, practices associated with a society eg. Indigenous group);
- artistic (individual and creative); and
- spiritual (personal, higher power or mystical).

Following a desktop review of products listed on websites across the DNCO region, we found that:

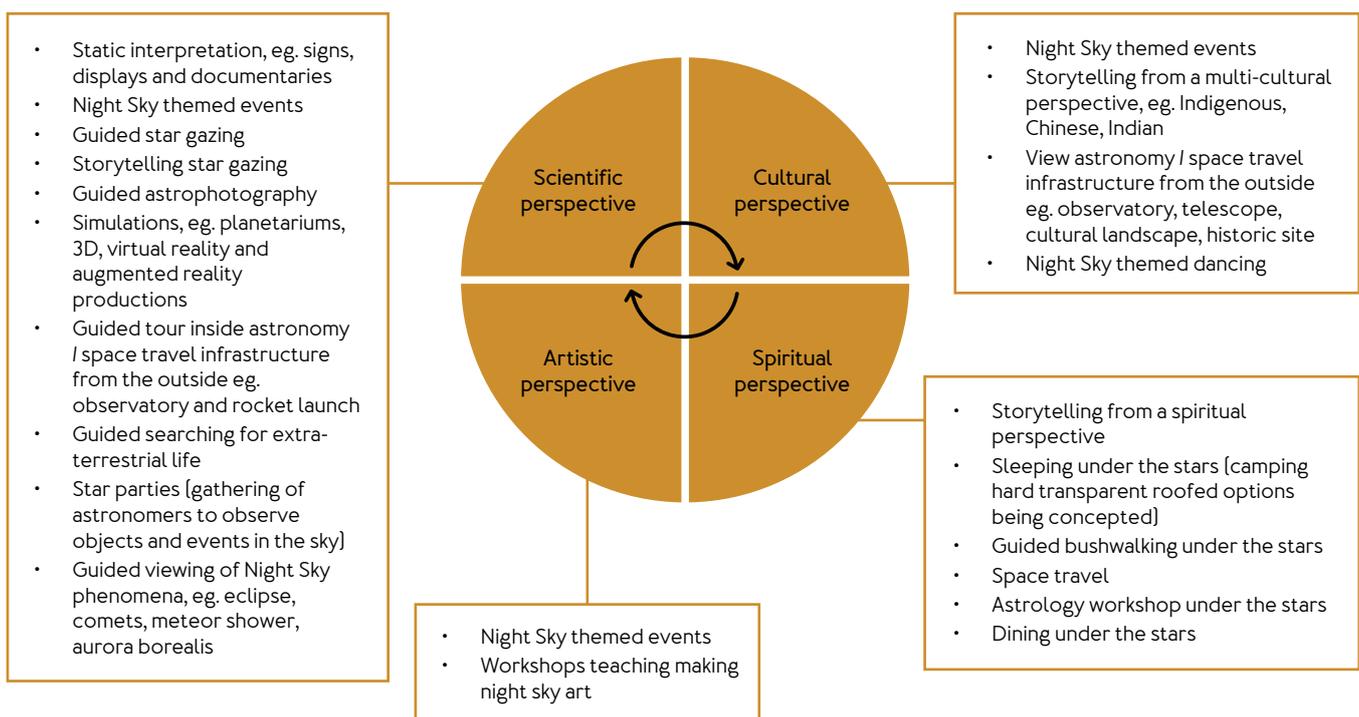
- the scientific perspective delivers the widest range of Night Skies tourism products; and
- the cultural and artistic perspective is least delivered.

Figure 1.2 presents a collection of experiences against these dimensions.

We also found that the most commonly available Night Skies tourism experiences in the region that we found were:

- static interpretation, eg. displays, signs and documentaries;
- guided star gazing (eg. guide pointing to stars and planets, and providing views through set up telescopes); and
- viewing astronomy / space travel infrastructure from the outside eg. observatory.

Figure 1.2 Some product variations of Night Skies Tourism, positioned in scientific, cultural, artistic and spiritual dimensions



1.4 Critical factors to healthy Night Skies tourism

Avoid light pollution

The main resource for Night Skies tourism is a high quality night sky, but this is very sensitive to atmospheric conditions and light pollution. The common condition is to have a clear dark sky to see astronomical objects. However, dark skies are becoming a scarce resource as light pollution increases.

The best locations are those with unpolluted and diaphanous Night Skies, such as national/regional parks, unique astronomical or archaeological-astronomical sites and events, as well as astronomical observatories. As it turns out, many potential sites of excellence for Night Skies tourism are at high elevation, away from sources of atmospheric contamination, and in rather dry areas. This often puts them geographically apart from traditional destinations, and provides significant opportunities for some of the more remote host communities.

Australia's first Dark Sky Park was declared at Warrumbungle National Park by the International Dark-Sky Association (IDA), joining an elite list of only 36 others in the world.

Nurture Night Skies heritage

Another key need for successful Night Skies tourism is its heritage – including cultural landscapes, buildings, infrastructure, objects and practices relating to the night sky.

Use credible knowledge

Another critical element for successful Night Skies tourism is scientific and cultural knowledge. This is the stuff that interpretation and storytelling is built around. This stuff needs to be authentic and credible. A key part of the intellectual property of Night Skies tourism product.

Blend knowledge with storytelling

For Night Skies tourism to thrive, it needs a solid professional approach to both destination and product management. However, much of the Night Skies tourism product has not originated from experienced tourism businesses – quite the reverse. For example:

- observatories are first and foremost scientific infrastructure established for scientific purposes, but sometimes find themselves becoming a tourism attraction, and have to balance the two sometimes competing roles; and
- star gazing product has typically been created by amateur and professional astronomers, and frequently, these scientific-led initiatives have been based on a solid knowledge foundation, with little grasp of tourism markets or how to run a tourism business.

Conversely, just occasionally, the opposite has also occurred, with generalist tourism businesses grafting Night Skies product with scanty scientific groundwork.

Blend knowledge with storytelling

For Night Skies tourism to sustainably grow, it needs a network to share ideas, learn from each other, mentor and cooperatively influence product development, marketing and issues threatening the natural resource (eg. light pollution).

1.5 Benefits of Night Skies tourism growth

The Night Skies product is uniquely positioned to generate many benefits, perhaps more powerfully than other tourism sectors. Night Skies products may be able to generate stronger regional visitor economies than other tourism sectors through its particularly strong ability to justify:

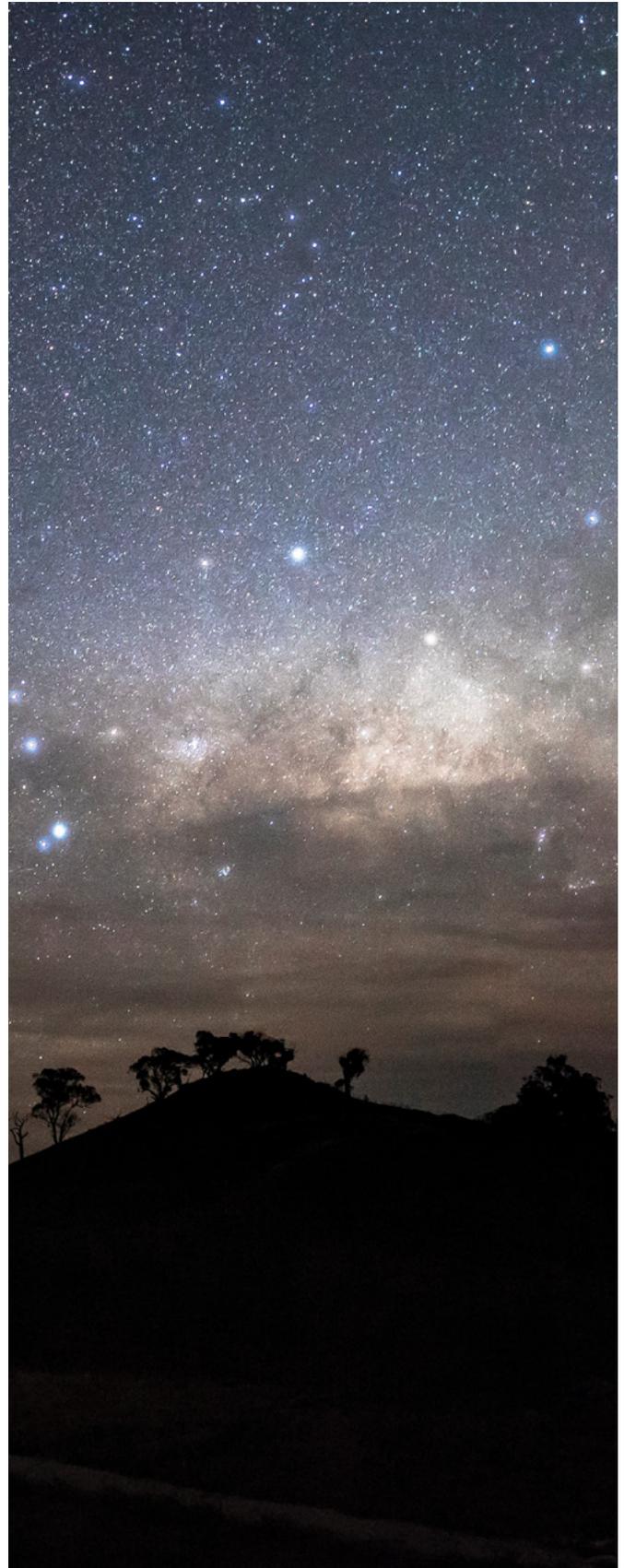
- leaving a capital city to travel to an inland regional area because the area has little to no light pollution, whereas the cities have so much that Night Skies may not even be visible;
- visiting places that otherwise don't have a reason to visit; and
- staying overnight in a regional area, because the products largely run at nighttime, triggering the need for accommodation close by after the experience is finished.

This means that the Night Skies product could generate more visitors, more spend and more jobs to regions.

The Night Skies product can also generate a number of environmental, social and cultural benefits, that include:

- increased community understanding of the natural environment (earth, space and their interactions);
- increased understanding of the vastness of space and the Earth as the only place we can currently live;
- increased understanding of alternative values, perspectives and cultures;
- increased understanding of impacts and threats to the sustainable use of the environment; and
- opportunities for collaborations between tourism stakeholders, local communities, scientific institutions, cultural organisations and all levels of government.

These benefits have flow on effects towards heightened support for conservation and social cohesion.



2. NIGHT SKIES IN NSW COUNTRY AND OUTBACK

2.1 Industry coordination and planning

Industry coordination – Inland Astro-Trail Inc.

An incorporated association, Inland Astro-Trail Inc., was established in 2017 to develop, promote and manage a proposal for an Inland Astro Trail (IAT) and specifically:

- develop a branding and marketing strategy;
- establish an online presence (dedicated website, social media etc);
- conduct research;
- coordinate IAT events; and
- lobby, fundraise, and liaise with member groups.

The new committee was expected to produce a business plan and marketing strategy, conduct a membership drive, lobby, fundraise and establish an IAT Secretariat. Substantial changes to the IAT Inc. constitution are required to ensure that the new organisation can function effectively across the full length and breadth of the IAT region in accordance with the IAT's founding vision.

The Australasian Dark Sky Alliance

The Australasian Dark Sky Alliance is an independent non-profit organisation formed by advocates of the preservation of the night-time environment. It aims to educate the public and policymakers about night sky conservation, promote environmentally responsible outdoor lighting, create business opportunities that support night sky presentation and empower the public with the tools and resources to help bring back the night.

2.2 The regional market

There has been no specific research or monitoring to identify the Night Skies tourism market in the region. This project's consultation with Night Skies operators revealed that different Night Skies products attract different markets profile of the market.

Markets visiting public sector run observatories

The public sector run observatories and Condo Skyfest attract more visitors, and a more diverse range of visitors, than the privately run operations. These attractions attract a high proportion of:

- Senior travelers / Grey Nomad travelers – particularly older markets (55 – 70 years) travelling with their caravans through the cooler half of the year;
- Young families in school holiday periods; and
- Primary school groups during school terms, generally from NSW schools.

These markets are generally travelling a route, visiting a diverse range of attractions, and not seeking out Night Skies product as a purpose of travel. Most of the visitors from these markets have a slight to moderate price sensitivity to Night Skies product that are not free. These markets have low expectations of the product, and are generally happy that they have seen and photographed the attraction.

The largely domestic sources for Grey Nomads and young families were from across NSW, Victoria and Queensland, split about 60% from capital cities and 40% regional areas. There was limited mention of international markets among these product operators.

Senior travellers / grey nomads

- Visit throughout the winter and fringes of Autumn and Spring
- Travel with RV / caravan / campervan
- Want authentic, immersive, interpretation driven experiences
- Want to spend locally, though older markets a little more cost sensitive
- Some plan in advance, some via the VIC on arrival. Researched destination in advance.
- Limiting Night Skies product adoption is that they are not easily convinced to drive at night, are cautious about dinner drinking (with dinner) then driving to a Night Skies attraction, and don't like the cold.

Young families

- Full time working parents looking for an escape from the city 30 yr old FT escaping city, with young families
- Visit in Easter & Sept / Oct
- Need a lighter interpretive product, run earlier in the night due to children's bedtime, which is a problem in Easter when still light

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Markets to private sector run Night Skies products

The private sector run Night Skies products receive a mix of domestic and international markets (20 – 40%).

Domestic market

Domestically, Sydney is a key market, coming as a short break by own vehicle, and sometimes as a fly drive. The Sydney markets are largely from upper middle class regions (such as the Northern Beaches and Inner West) or the closer outer western suburbs (quicker drive). The Sydney market is very multi-cultural. Sydney residents with cultural backgrounds from India and China are highly interested in Night Skies product, and will set out specifically for taking on this product. The India markets will come in groups of up to 10 – 15 relatives and / or friends, and book long weekend and school holiday slots well in advance, making them quite lucrative. The India markets are particularly interested in planets, and are highly likely to be stimulated to visit when there are unusual planets in the sky. The international markets are generally satisfied with what they get, but would like to see the product integrate more multi-cultural perspectives in the interpretation. Some would prefer guides spoke more slowly, and would bring more visitors if guides could speak some Hindi or Mandarin.

The private sector do receive some Grey Nomads, but they tend to be marginally younger than those visiting the public sector run observatories (50s - 60s), travelling for shorter periods and more likely to be staying roofed accommodation than towing caravans. This version are less price sensitive.

International market

Internationally, the key markets are:

- India;
- China;
- USA;
- United Kingdom;
- Japan;
- Western Europe; and
- the Middle East.

These markets are generally aged in their 20s and 50s, well-educated and well travelled. They almost all live in capital cities with significant light pollution – some claim to have never seen more than a few of the brighter stars. China is a major source of astro-photographers.

These international markets were highly valued by Night Skies operators, because they are highly interested in the Night Skies product, are less price sensitive, are less impacted by the cold weather, and are more prepared to wait for weather to clear to still have their booked Night Skies experience.

Dubbo and Dubbo Zoo are regarded as a key portal and interconnected experience respectively.

Special interest markets

There are several special interest markets that directly seek out Night Skies product as a reason to visit a region, including:

- astro photography clubs;
- some general photography clubs, caravan associations 4WD touring clubs, and specialist car clubs;
- pilots – particularly those training to be pilots.

The tour operator AusSky Star Safari is active in bringing markets to Night Sky experiences.

2.3 The region's competitive advantages in Night Skies tourism

This project's consultation with Night Skies operators identified the following competitive advantages for Night Skies in the region:

- High likelihood of clear skies for most of the year, significantly better than Australia's capital cities, and vastly better than international capital cities
- Optimum latitude to view the Milky Way on its edge
- Passionate private sector operators who love the Night Skies so much they will deliver the experience to share their love of the topic
- Connectivity with major highways (eg. Newall), making driving relatively easy and straightforward, and connecting with complimentary nature-based and cultural tourism product
- For most operators, close proximity to natural attractions that provide walks, wildlife and bird watching that fits the market needs by day
- For some operators, close proximity to complimentary differentiated food and beverage and accommodation product, run professionally and enthusiastically (eg in Coonabarabran area is Pilliga Pottery, Coola Café Pantry and Mint Leaf Café)

2.4 The region's current Night Skies tourism products

The region offers a range of Astrotourism experiences, including the country's largest optical telescopes, the world's biggest "virtual solar system drive" and quirky astro-accommodation and tours.

Many locally based astronomers operate private observatories near inland towns, such as Tamworth, Coonabarabran, Dubbo, Parkes, Orange, Bathurst, Cowra, Mudgee, Canberra, and Wagga.

Astronomical groups, including the Canberra Astronomical Society, Central West Astronomical Society (Parkes) and the Tamworth Regional Astronomy Club (TRAC), offer public stargazing opportunities, day-time astronomy and astrophotography. Domes are also being developed in Tamworth and Orange and, on completion, will become major IAT attractions. The Tamworth facility is already funded while Orange is awaiting funding. Table 3.1 in the Night Skies Gap Analysis Report (SMA Tourism 2019), presents a summary of the key metrics in the audit, and identifies that:

- most of the product is provided by the private sector who have far less infrastructure or impressive location, and so should further develop their interpretative experience to compensate;
- almost half of the product is provided by public sector organisations have major constraints to marketing, visitor management, product reinvigoration and growth generally, because tourism is not their focus and tourism revenue is not returned back into the Night Skies business;
- all the operators audited offer chargeable product as the main proposition, or at least as an extension offer;
- just over half of the operators offer multiple products (the remainder only one product);
- the Night Skies experiences in the DNCO region are dominated by scientific perspective – 11 operators provide this, while four offered a cultural perspective and one a spiritual perspective;
- the majority of the audited operators offered retail, but almost all of the product sold was generic, made in China and very little presented as artwork;

- about half of the operators audited offered food and beverage, but only one offered dinner (Skywatch Observatory Domestay) and only two did so as an integrated offer – the rest are contracted out as a separate service providers;
- there is very little accommodation set up to integrate accommodation with the Night Skies experience (only Skywatch Observatory Domestay)
- despite the various constraints facing operators, feedback on TripAdvisor and Google suggests that current visitors are generally happy with the Night Skies experience that have been audited

2.5 Marketing the region's Night Skies tourism product

Unlike some other niche tourism sectors (eg nature tourism / ecotourism, arts and culture) the Night Skies sector does not market product as a collective category. The most integrated approach is currently delivered by Destination NSW, through its visitnsw.com website.

The most comprehensive marketing of Astrotourism in Australia that we could find is: <https://campervanaustralia.uk>

The main promotional techniques used by individual operators were Facebook, own website; Visit NSW website; and Google reviewed.

Generally, the operator websites are cluttered and missing compelling images and text describing the essence of the experience. Most of the images were of poor quality. The operators listed as part of a broader organisation generally presented in a less visitor friendly form again.

There is limited regular packaging between Night Skies product, related special interest experiences, transport, accommodation and food and beverage.

One example is undertaken by Travel Ogg (trading as Dark Sky Traveller). They package domestic and international Night Skies product, over four, five and nine days. The products combine Night Skies product with nature tourism and cultural tourism experiences.

We found no packaging that incorporates transport, and given the proportion of the market that is time poor, packaging with regional flights appears a blue sky opportunity.

2.6 Strategic issues for the sector in region

We have identified three strategic issues in the Night Skies sector for the DNCO region that a concept plan could respond to:

1. Over reliance on increasingly over mature public sector observatory attractions
2. Sourcing sufficient human resources for sustainable stargazing experiences
3. Operators working in isolation

Over reliance on increasingly over mature public sector observatory attractions

Night Skies experiences largely began with making major research observatories into tourism attractions. These have ebbed and flowed in their investment and promotion as a visitor economy product.

The visitor / interpretation centres offered by the larger public sector operators are continuously in danger of having their product become over mature and stale, and at this point may wait many years for funding and management to reinvigorate them. Until this occurs these products may reduce the overall competitiveness of Night Skies tourism for the region. A number of operators have limited operating hours which don't easily accommodate visitor hours eg. almost all are closed at night except for Mount Stromlo Observatory.

Historically marketing has focused on these products, and the dominant image is of an observatory not a Night Skies experience.

The private sector are progressively moving towards the public sector offer through the introduction of small cost effective observatory domes and supporting mobile telescopes. These products have a very scientific perspective but do not have the actual scientists as part of their offer.

But there is an ongoing resistance in the public sector institutions to deepen and or diversify their product offer, either because it competes with their core business of research, it introduces potential visitor impacts on the research environment or it culturally just doesn't fit.

The question is where does the public sector observatory go from here?

Sourcing sufficient human resources for sustainable stargazing experiences

Most of the private sector Night Skies tourism businesses are either sole operator or partnership scaled businesses. Almost all have only the one lead guide with the knowledge and communication skills to deliver the product. Consequently, these businesses struggle to scale up during peak periods that trigger group size above 15 people. This is largely due to:

- the businesses operating in remote areas with a limited population to draw from
- the need for guides to retain large amounts of information and concepts
- the need for guides to have the skills to adjust the telescopes to identify specific stars and constellations
- the need for the guides to be able to deliver the information in an entertaining, passionate and digestible manner
- Compounding these issues is the relatively low level of market awareness and subsequent demand for this product, making it difficult to justify an investment in the potential guides, let alone be able to retain them with sufficient regular employment.

Operators working in isolation

Most operators are working in their own business with very little to no integration with other operators in their geographic region or Night Skies tourism sector. The closest initiative to trying to integrate operators is the Inland Astro Trail, but this is still very much in development and not in a form that which it can deliver major outcomes. We found no evidence of cohesive marketing initiatives, resource sharing or training.

2.7 Product gaps for the sector in region

We have identified five major gaps in the Night Skies sector for the DNCO region that a concept plan could respond to:

1. Substitution experiences for poor weather;
2. Alternatives to a scientific depiction of the Night Skies
3. Integrated Night Skies with food and beverage and / or accommodation experience
4. Connecting product into an integrated offer
5. Reaching wider markets through events

Substitution experiences for poor weather

Most of the existing Night Skies product, especially that provided by the private sector, relies on clear skies and favourable weather conditions, so cloudy skies and strong winds generally stop the delivery of this product. Generally, there is no substitution experience or at least nothing of equivalent value whereby the natural environment is directly the focus. Faced with this impost operators generally have to either ask customers to stay in the local area to try the following night, or refund their payments.

Substitution experiences of equivalent value to what was proposed would therefore maintain visitor satisfaction and ensure the operator received the booked fees they had anticipated, greatly assisting with their ongoing viability.

The challenge for this sector is to design, fund and operation substitution experiences that are of high value and not copy-cat.

Alternatives to a scientific depiction of Night Skies

Most of the existing Night Skies product being marketed in the region provides a scientific depiction, and much of this focus appears to be informative rather than interpretive or contemplative.

We could find very little product being marketed that provides a cultural, artistic or spiritual perspective. There is unfulfilled market demand for products providing cultural perspectives such as Indigenous, Chinese and Indian. There is anecdotal unfulfilled market demand for products providing artistic depictions of Night Skies, and for facilitating customers to create their own. Given the huge question of how the universe was formed, life beyond Earth and the related question of life after death that Night Skies

often trigger, there is probably some unfulfilled demand to explore spiritual perspectives, even if only an adjunct to scientific, cultural and artistic perspectives.

Presenting night skies experiences from an Aboriginal perspective is one for Aboriginal people to determine and deliver. We acknowledge the role of NATOC in working with various Aboriginal people wanting to deliver night skies experiences from an Aboriginal perspective.

Some alternative discussion topics might include:

- The Search for Another Earth
- Meteors, Meteorites, and Meteorwongs
- Mythology and Lore of the Night Sky
- How Accurate were Lowell's Martian Canals?
- Top 20 Summer Deep-Sky Objects That You've Never Seen
- Life Beyond Earth and what would we think and do if we discovered life beyond Earth?
- What might the discovery of life beyond earth do to our social, cultural and religious norms?
- There is also very little interpretation of astronomy in music, dance or the arts.

Integrating Night Skies with food and beverage and/or accommodation experience

Most of the existing Night Skies product is cognitive and there are limited opportunities for experiences involving relaxation, exercise and socialisation. These opportunities are fundamental to the tourism industry because they represent fundamental needs of people when holidaying or travelling.

At present the provision of food and beverage and accommodation is largely done as a completely separate service to Night Skies product. There is very little product in these two sectors that has integrated Night Skies themes or experiences. This integration would not only meet unfulfilled market demand but would also create new demand among markets that had not even contemplated it but would like to do it if presented.

We believe that addressing this gap could be done in highly creative ways, drawing on leaders in the local food and beverage and accommodation sector to perhaps partner with existing Night Skies tourism operators.

Connecting product into an integrated offer

All of the existing Night Skies product is currently marketed in isolation. There is no information gateway or distribution channel focussed on Night Skies from which potentially interested markets can easily source and then contrast and compare alternative products. Furthermore, only some of the existing operators have their own booking systems and there is no booking system capable of processing more than one Night Skies product. Beyond this having booked a Night Skies product or two, customers must separately book everything else supporting their visit separately. There are no packages or itineraries combining Night Skies products and supporting services, to make it easier for time poor customers to quickly book and pay.

Reaching wider markets through events

One way to expand market interest in particular, tourism sectors, is to create events and or festivals that provide a collection of 'bite sized' experiences in the one location. Providing these diverse tasters in a single convenient location has proven to be an effective way to attract markets to become customers. Operators that present these tasters have often reported a surge in demand for their day to day offer that could have cost far more resources if conventional promotion was used. Events can even serve as a useful way to market test emerging ideas prior to full implementation.

Finally, events can also serve as a way to attract Night Skies stakeholders to the one location, from which networking and industry development can occur.

3. PROPOSED CONCEPTS

We encourage readers of this section to also review Section 6 of the Night Skies Gap Analysis Report (SMA Tourism 2019), as this provided a wide range of case studies, as sources of inspiration to further develop the concepts.

The three concepts chosen by the DNCO Board to feature in this Concept Plan are:

1. Network of star bathing attractions and bubble tent / transparent dome accommodation
2. 3D mobile dome
3. Adaptive reuse of surplus observatory at Siding Spring

These three concepts outlined in the order of the degree of immersion and facilitation, from least to most, in the remainder of this section.

3.1 Network of star bathing attractions and bubble tent / transparent dome accommodation

This concept is designed to create a collection of ‘out of the square’ Night Skies experiences that stir up talk and recommendations to participate, because they are authentic to the places where they exist, provide a sense of freedom, and are not afraid to be just a little unconventional, if not quirky.

It is proposed to create a network of star bathing attractions and bubble tent / transparent dome accommodation, designed to view and engage with the Night Skies.

This concept addresses the strategic need for Night Skies tourism in the DNCO region to:

- diversify away from the over-reliance on observatories and conventional stargazing;
- provide alternatives to the scientific perspective on the Night Skies; and
- integrate Night Skies accommodation experiences into the region’s Night Skies product mix.

The collection of images of these experiences should be able to create highly memorable and shareable collateral, that in turn does much of the promotion through social media channels.

Star bathing attractions

To capture the enormity of the Night Skies, a series of attractions would be created whereby visitors lay down and look up at the Night Skies. This position should help them feel relaxed, a little smaller and more directly connected to the sight, smells and sounds of the Night Skies. Star bathing is related to forest bathing / Shinrin-Yoku (see for example <https://www.wildfest.com.au/product/forest-bathing/>).

The experience could be supported by a stargazing guide for part of the time, a selection of alternative pre-recorded music or meditation listened through individual headsets, or just the silence and natural surrounds of the local environment. A bilingual recording of the guided and/or meditation section of the evening could be delivered via the headsets.

The baths could utilise warm or cooled water, depending on the weather conditions, or an alternative material that customers can still submerge in but not get wet or dirty (such as light weight balls), or they could sit or lay in the structure with nothing else in there, still feeling cradled for example self-standing hammocks.

Some potential examples of star bathing attractions include:

- individual hot tubs, allowing customers to get into the warm water and feel entirely comfortable watching the stars, while other star gazers could be feeling the cold;
- romance double tubs, for couples to lay next to each other and hold hands;
- larger group tubs, for family or friends to sit / lay together;
- baths with added special minerals to add a health treatment at the same time, or perhaps with same minerals found in outer space to feel touched by the stuff of the galaxy;
- bath’s in domes or mini-glass houses, so there is no chance of a cold breeze, and minimal noise from other visitors;
- baths on the edge of cliffs or suspended up on towers, to feel as though they are floating above the ground;
- hammocks, single and double for a “dry” bathing experience.

CONCEPT PLAN FOR NIGHT SKIES EXPERIENCE

We envisage that this network of star bathing attractions each provide this experience in its own individual and imaginative way, perhaps capitalising on some character of the site, such as:

- rock tubs cut from the local geology to interpret the landscape;
- cow troughs to interpret a farm setting;
- wine barrels to interpret a wine producing region;
- steel tubs to interpret nearby industrial character; and / or
- personal giant bird nests, to sit in and feel like a bird in a tree.

Bubble tent / transparent dome accommodation

Bubble tents and transparent roofed dome accommodation are a relatively recent but fast growing accommodation option being introduced into regional areas across the world. The objective is to maximise the guests connection with the night sky, by being able to lay down at night on one's own bed, and look at the night sky. This is particularly exciting for people that live in apartments and cities, where there is little privacy to look out from a bedroom at night, or excessive light pollution preventing a clear view of the night sky.

There is a trade-off between the amount of transparency offered and the level of privacy and sometimes thermal properties able to be delivered. So some units only provide a transparent roof, some a transparent side that overlooks a view without other people, and some entirely transparent where subtle waist to chest high visual barriers or curtaining around the bed can be introduced. A fully transparent unit is also quite easy when there is only one unit provided by the host.

Generally, the unit is placed on a platform, to keep it clean and separated from wildlife and most ground-based crawling insects. The higher the platform, the more special the experience feels, but the more exposed it becomes to wind and weather.

Inside the unit can be an open plan bedroom / lounge with a personal telescope. Some operators have also experimented with magnifying glass to bring part of the sky closer.

Generally bubble tents have utilised either a strong but very thin frame and / or an air pump constantly pushing air into the structure, to keep the tent up and thus avoid intrusive framing. The tent works with the aid of a turbine that keeps replenishing the air inside the tent which helps to circulate the air. Bubble tents using the air pump require a separate vestibule to move in and out of the unit, to avoid sudden air loss. To manage temperature, a sunshield is often used during the day and some tents are fitted with high-tech electric blankets.

Generally domes are larger and so more easily able to accommodate an ensuite, whereas many bubble tents need to provide a separate personal ensuite or a shared bathroom. Generally domes require a larger development budget, but then offer a larger space with more facilities and comfort, resulting in a higher nightly tariff and less seasonality influence on rate and occupancy.

Sources of inspiration (see Gap Analysis Report)

We did not find any full matches of star bathing to what is proposed, but we did find the following related examples:

- L'Auberge de Sedona (Arizona USA), a retreat and spa, offered star bathing as an event in 2017, offering to find peace under the stars, heighten the senses and slowing down
- Tourism Tasmania profiles a collection of outdoor bath opportunities to soak up the starry skies that includes Great Oyster Bay, Pumphouse Point, Porky Beach Retreat, Magnolia Garden Pavilion in Launceston and Cradle Mountain Lodge (<https://www.discovertasmania.com.au/about/articles/2019/8-open-air-baths-to-soak-up-starry-skies>)
- The South Australian Tourism Commission profiles a collection of baths with a view that includes three outdoor bath opportunities to soak up the starry skies at Tiny Home Escape Kingsford Homestead and Cliff house (<https://southaustralia.com/travel-blog/bathtub-views-to-make-you-warm-thiswinter>)
- Artesian Mud Baths (Eulo Queensland) offers four heritage baths to soak in warm artesian water impregnated with clay in an outdoor environment in day, sunset or evening

CONCEPT PLAN FOR NIGHT SKIES EXPERIENCE



Figure 3.1 Composite of inspirational images for a network of star bathing

Examples of bubble tents and domes include:

- Bubble Tent Australia (Capertee Valley NSW) offers three bubble tent accommodation units, named after star signs, hidden from each other but each offering panoramic views, wood fired Swedish hot tubs, telescopes and fire pits
- MiLodge Elqui Domos (Chile) is a hotel featuring seven geodesic domes and four observatory-type cabins (all air-conditioned and centrally-heated), supported by an astronomical observatory and guided night horse rides under the stars
- Kakslauttanan (Finland) offers kelo-glass igloos that accommodate two, four or six people each; the four person igloos adding an ensuite bathroom and the six person adding a private sauna, fireplace and kitchenette
- Bubble Hotel (Ulawatu, Bali) are set in a secluded location and offers transparent walled dome shaped tents for unrestricted views of the Indian Ocean, with bathroom facilities located at the back of the tent

Figure 3.2 presents a mosaic of inspirational images for this concept.

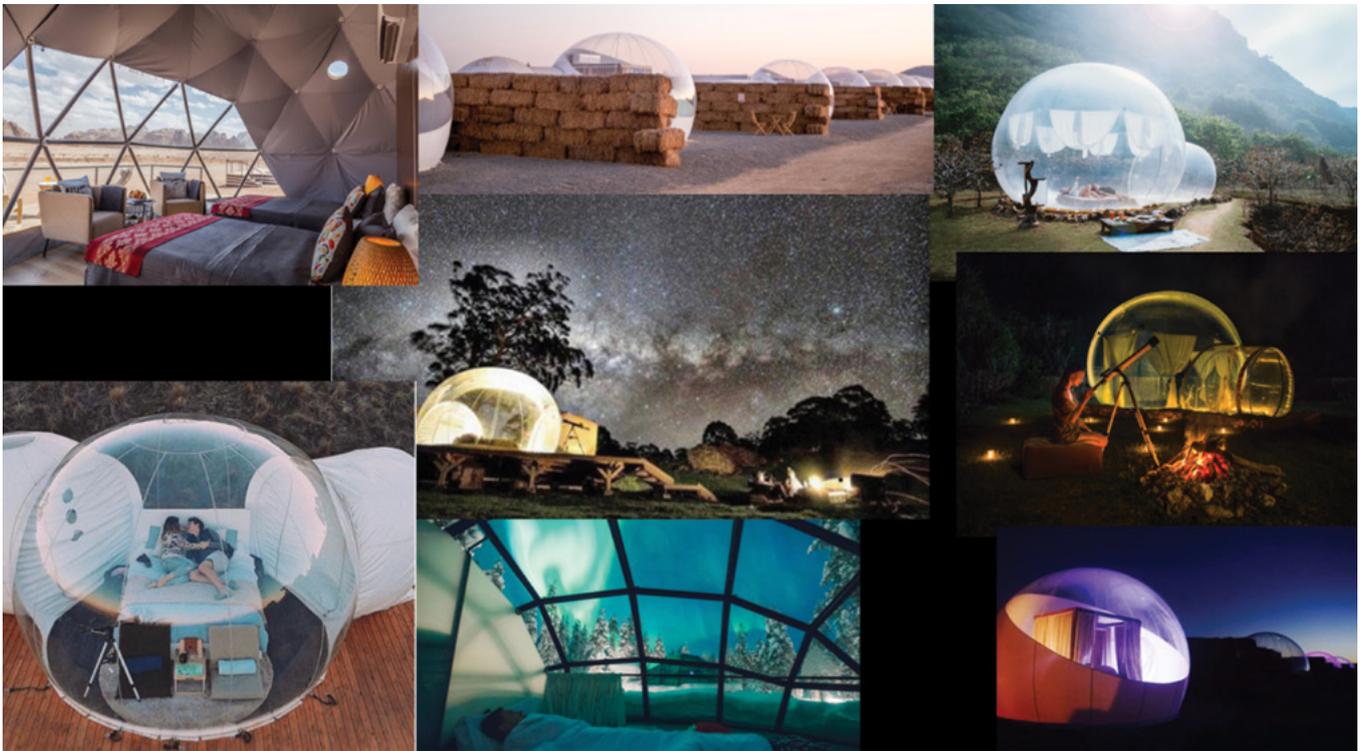


Figure 3.2 Composite of inspirational images for a network of bubble tent / transparent dome accommodation

3.2 3D mobile dome

It is proposed to develop a Business Case that fully scopes, costs and forecasts the use of a 3D mobile dome, multiple projectors and supporting facilities. The 3D mobile dome could have a long term base location in Dubbo, where it could operate for the majority of the year. At Dubbo, the facility could be a stand-alone mobile unit, or it could be co-joined with an arts performance / cultural centre facility. The mobile dome would allow it to be transported to different local government townships, to be utilised as a short term attraction / addition to an attraction, or as a feature component in an event.

This concept addresses the strategic need for Night Skies to:

- provide a second night centrepiece experience to the Western Plains Zoofari as a short break fly / drive package from Sydney or Melbourne;
- deliver an experience in poor weather and during the day for group markets;

- provide an alternative to a scientific depiction of Night Skies; and
- support events featuring Night Skies.

The concept is designed to interlink a group of local governments to share the facility, its costs and its benefits across the region.

Fixed Dome / Cultural Performance facility

It is not proposed to develop a conventional planetarium [a domed building in which a single projector projects images of stars, planets, and constellations for public entertainment or education].

Instead, it is proposed to develop a 3D interactive dome facility that utilises multiple 3D projectors and a sound surround audio system, so as to provide a 3D experience that is much more immersive and interactive and social than a planetarium. It is possible to meld several media forms including 3D interactivity, film, animation, and theatre to tell stories in a more visual, entertaining and impactful manner. The visual projections are portrayed over large spaces and along the surround sound, gives people a full immersion in 360 degrees.

CONCEPT PLAN FOR NIGHT SKIES EXPERIENCE

The dome would be capable of being dismantled and transported to alternative locations (see next sub-section for more detail).

The content could generate a multi-cultural perspective on the Night Skies that adds to the scientific perspectives from the Chinese, Indian and perhaps regional Aboriginal communities.

The production could be easily dubbed into a range of languages, so that audiences who do not have English as their first language could wear a headset and follow the same production.

In Dubbo, there is an opportunity to create a secondary building that delivers one or more complimentary cultural experiences, thereby expanding the offer. These could operate separately or as part of an integrated production with the dome facility. This opportunity is covered in the shaded box below.

The Dubbo Regional Council is currently in the final stages of a large grant they submitted early 2019 for Dubbo to be 'international ready'. A component of this grant is a Wiradjuri Cultural Centre – tentatively costed at around \$4m to develop.

There is a real opportunity for the high level Council proposal to be adjusted to blend its original idea into a cultural performance space adjoining the 3D interactive dome facility. The result could be a multi-functional facility that could deliver a Wiradjuri experience of the night sky. This product could be a ticketed, world class experience that combines telling myths and stories related to the Night Sky from an Aboriginal perspective, incorporating local voices, local talent and outside expertise in production and performance - building capability within the region. The dome facility could support the live storytellers and dancers with its 3D projections, film, digital and sound effects. Visitors could move between the two facilities, via a tunnel, to experience separate Acts.

Mobile Dome

The mobile 3D dome could be shared with other local governments, for use as a short term attraction or event feature.

The mobile 3D dome would serve as a screen, an interactive environment and venue which could host a range of events. Visitors would sit or stand inside the dome and be fully immersed in an interactive digital theatre environment in surround 2D or 3D vision and sound. This would usually be supported by a guide providing interpretation or a pre-recorded narration.

Other host regions might choose to create their own content and use the 3D dome and its projectors to deliver it. This would differentiate the experience from that delivered in Dubbo.

Applications could come from regional areas such as Mudgee, Tamworth, Orange, Coonabarabran and Broken Hill. Two quite interested potential applications are:

- in Bathurst, who are keen to apply the concept as part of their Bathurst Winter Festival; and
- supporting the Condo Sky Fest (previously held in Condobolin in early to mid-November).

The development of the facility could include components to pack it up and safely transport it across the region. Organisations interested in utilising the mobile facility would liaise with Dubbo Regional Council to pre-book and this ensure plenty of notice and minimal interruption between uses.

Sources of inspiration (see Gap Analysis Report)

- Big Skies created by Box of Birds (Sydney, NSW) inspired by the star stories Australia's First Peoples and Chinese Australians, takes the audience on a journey through space and time, from the first humans who navigated in their boats to Australia in pre-history, to the many migrants who have come to Australia since, melding several media forms (including 3D interactivity, film, animation, and theatre) all in 360 degrees
- Night Sky Secrets (near Cairns, Queensland), providing Aboriginal Astronomy Stories, mobile dome / travelling digital theatre that offers a Stellarium Show and digital theatre in surround vision and sound

CONCEPT PLAN FOR NIGHT SKIES EXPERIENCE



Figure 3.3 Composite of inspirational images for a 3D Interactive dome

- Dark Sky Project [Lake Tekapo, New Zealand], combining Maori astronomy and science to deliver four products that include the Dark Sky Experience, an interactive multi-sensory indoor experience
- Tekapo Star Gazing [Mackenzie International Dark Sky Reserve, New Zealand], combining an indoor experience using state-of-the-art virtual reality and high-definition projector, then an outdoor guided tour focusing on the mythology and legend attributed to celestial objects by different cultures around the world
- Au Diable Vert [Glen Sutton, QC, Canada] offers the world's first open air Augmented Reality Dome, where every guest receives a newly developed augmented reality headset which allows them to see the actual night sky, with a digital overlay of the constellations and the names and stars and planets
- Tjapukai Aboriginal Cultural Park Centre [Cairns Queensland] started as a play, then five years later incorporated interactive demonstrations and performances, a cultural village, restaurants and retail; and today combines holographic images and live actors for day and nighttime performances

Figure 3.3 presents a mosaic of inspirational images for this concept.

3.3 Adaptive reuse of surplus observatories at Siding Spring

There is an opportunity to restructure the visitor offer as an integrated and more commercial offer that helps the ANU and Night Skies tourism. It is proposed to develop a Business Case that fully scopes, costs and forecasts the proposal, so that funding and a suitable operator can be pursued.

We are not aware of any opportunity in the world where visitors can stay overnight in an observatory, within an operating astronomy research complex, and access experiences directly linked to the researchers and their research, let alone one inside a Dark Sky Reserve.

This concept addresses the strategic need for Night Skies to:

- provide a highly differentiated Night Skies accommodation experience, strong enough to trigger short break escapes from the Melbourne and Sydney markets, and attract international markets to stay in the region;
- second night centrepiece experience to the Western Plains Zoofari as a short break package from Sydney or Melbourne;
- deliver an experience in poor weather and during the day for group markets;
- provide an alternative to a scientific depiction of Night Skies; and
- support events featuring Night Skies.

The project would also address several unfulfilled objectives of the Australian National University (responsible for managing the site and operations):

- increasing the reach depth of the ANU Outreach Program to audiences that otherwise may not visit and be engaged;
- increasing the depth of the ANU Outreach Program to cover greater coverage of actual research being conducted, as well as the researchers themselves;
- simplifying the operation of all visitor services to a single operator, which in turn:
- increases the range of services to visitors;
- reopens day visitor services on a Sunday;
- integrates the management of visitors on the site; and
- reduces the day to day operational burden on the ANU.

On site accommodation inside an observatory

The lead opportunity is to adapt and fitout surplus former observatory buildings on the site to provide observatory themed accommodation.

The 40 inch Telescope (building 1) is heritage listed and decommissioned from use. This building forms the foundation of the proposal.

There are two additional buildings that could also be made available. The 16 inch Telescope (building 2) is currently used as an office, and the 24 inch Telescope (building 3) has an aluminising chamber on the lower ground floor. It is possible for these uses to be relocated, to make these buildings also available for adaptation.

All three buildings are old and require significant repairs to make them usable, as a base cost prior to the adaptation works.

The Business Case would examine construction elements such as:

- the optimal use of each of each building;
- the standard of accommodation and supporting bathroom facilities achievable, while minimising changes to the outside of the buildings;
- whether to adapt one of the buildings for dining and / or lounge, or whether to use existing facilities associated with the existing accommodation operation; and
- what improvements could be made to the visitor centre and how additional use of this facility could be integrated into the overnight experience.

The fitout of the surplus observatories would create themed spaces aligned to Night Skies, (see Figure 3.4 for some examples). This could include:

- a mezzanine level bedroom to bring beds closer to the roof and a window above to view the night skies while lying in bed;
- Individual telescopes and perhaps redundant scientific research equipment; and
- 3D wallpaper of space scenes for the walls, floors or ceilings;

The fitout would be of a high standard (tentatively 3.5 to 4 star).

CONCEPT PLAN FOR NIGHT SKIES EXPERIENCE

Experience linked to the proposed observatory accommodation

The proposed observatory accommodation experience would be packaged as a set of inter-linked pre-programmed Night Skies and related experiences that could include:

- guided night viewing through the research telescopes⁴ and / or purpose built telescopes
- use of an imaging camera, so not only can people look through it, but then take photos of what they see, and then an astronomer can process it and they get a great, unique souvenir (that they will then hang on their wall and tell their friends about);
- guided back of house tour to areas unavailable to day visitors;
- join in the control room with an astronomer as they are observing - so they can talk about their research, and / or facilitated meeting with current astronomers and hearing about their research⁵;
- participation in current astronomy research, by collecting, analysing and interpreting data, such as the rapid follow up of transient phenomena and supernova; and
- scheduled guided tour of the main telescope (typically 10am or 2pm).

Still within the Dark Sky Reserve / Warrumbungle National Park, could be a set of additional experiences that could include:

- guided or independent nature and cultural walks;
- guided night walks using night goggles to see wildlife and the Night Skies; and
- guided cycle down the road from Siding Spring to Coonabarabran.

⁴This is a high value addition. Currently Mt Wilson (a 100 inch telescope in Los Angeles) charges \$2,700 USD for a 1/2 a night and \$5,000 for a full night for a group of about 20

⁵Depending on availability and pre-booked time, this could be in person, via video call, or as a pre-recorded introduction

⁶The current lease expires in June 2020, so a renewed lease would need to be drafted to accommodate the introduction of a new lease that incorporated the expanded roles and proposed new accommodation experience

⁷There would be additional visitor management protocols for the fire season (currently October to March inclusive), and there would be no visitors or guests during Extreme or Catastrophic Fire Alerts

Guided operation for overnight experience

This concept would be developed in ways that do not compromise the core scientific purpose of the site and ensures the safety of visitors at all times. As mentioned above, introducing a single operator for both day and night experiences could significantly integrate and enhance visitor management. This operator would receive a lease⁶ to utilise and be operationally responsible for specific visitor orientated parts of the site, and be responsible for visitor guest activity and behaviour⁷. Visitor service operations would include:

- visitor centre;
- guided tours;
- café, catering and meals for guests;
- overnight accommodation; and
- special events.

The overnight accommodation would be a supervised operation, so that guest arrival, departure and their overnight time was managed.

Other matters for a business case to address

In addition to testing the above potential options, the Business Case should also examine several other matters.

Long term use of the site

In a few years from now, there may only be one telescope (the AAT) that still has astronomers working at night, and most of these will be doing it remotely. An optimist might respond that this could be the moment to time a transition to introducing the proposed use. On the other, hand, the near absence of actual research and researchers might reduce the authenticity of the site, making it more of a heritage than scientific experience.

Bushfire risk management

The business case would need to consider the growing length of the bushfire season and the implications, risk and feasibility for operations during this period. The university is reportedly uncomfortable with allowing members of the public staying overnight during fire season. In Extreme to catastrophic fire risk periods, all persons must be evacuated off the mountain, so the Business Case would need to have measures in place to deal with this and perhaps provide a commensurate experience.

CONCEPT PLAN FOR NIGHT SKIES EXPERIENCE



Figure 3.4 Composite of inspirational images for the adaptive reuse of surplus observatories at Siding Spring

Safe management of customers at night

Travel at night at the Observatory is hazardous, especially since the road to the top of the mountain is narrow, and cars are required to use parking lights and/or flashers only. So the proposal would need to accommodate such measures. External lighting is heavily restricted, so operational buildings with windows would need to have shades that prevent light from escaping.

Sources of inspiration [see Gap Analysis Report]

- Dark Sky Project [Lake Tekapo, New Zealand] is in the middle of the Aoraki Mackenzie International Dark Sky Reserve – the largest dark sky reserve in the world and the first to receive gold status. The New Zealand government invested NZ\$3 million through its Tourism Growth Partnership fund in 2016 to kick-start the \$11 million development project.

- The Dark Sky Project operates as a hub / departure point for Night Skies experiences at other local sites, and offers four different experiences: The Lake Front Experience; The Crater Experience; Summit Experience; and Dark Sky Experience.
- The Dark Sky Experience interprets some of the important research undertaken by the University of Canterbury at the Mt John Observatory as well as tātai aroraki (Māori astronomy).
- The Summit Experience is the most popular experience at the University of Canterbury Mt John Observatory, a world-renowned astronomical research centre. Visitors can use sophisticated viewing technology and along with expert guides and astro-photographers learn about stories and science from the Southern Skies

Figure 3.4 presents a mosaic of inspirational images for this concept.

4. SUPPORTING THE INDUSTRY

While product concepts were the focus of this project, every operator and stakeholder of Night Skies would benefit from some wider support. The Gap Analysis report (SMA Tourism 2019) identified a number of initiatives. Following consultation with the report, the following shortlisted initiatives have been prioritised for consideration.

4.1 Website, packaging and booking system

Purpose built website to promote Night Skies experiences

The supporting initiative most likely to support existing operators is a purpose built website to promote Night Skies experiences in the region. An integrated website for all astronomy products across the trail. The website would be supported by professionally shot still images and video content, as well as a professional tourism marketing writer that is able to capture the essence of each experience, so they are differentiated.

Not all of the region's product is quite ready to be featured on this website – some is undeveloped in some aspects (see product audit in Gap Analysis Report). To avoid presenting inconsistent quality, it is recommended to set some standards to be met for inclusion in the website. These standards would capture a level of quality, professionalism and reliability in delivery.

An example for inspiration is the EU Sky Route (www.euskyroute.eu).

Package products and travel for ease of booking

There is potential to create packages with regional flights, to attract time poor Sydney markets. For example, it could be possible to fly Sydney – Tamworth, drive to Coonabarabran, then Dubbo, then fly back to Sydney. The package could include an itinerary with suggestions of where to stay and eat with operators who are part of the IAT.

4.2 Capacity building

Training in storytelling

Almost all of the guides that we experienced through the product audit, could benefit from some training in converting stargazing into storytelling. This training could help guides:

- create a stronger structure to their experience (with an introduction, set of interconnected stories, and a conclusion that provides a take home message);
- create more emotional dimensions to the experience, including buildups and climaxes;
- introduce more interactivity and a greater use of the senses (beyond eyesight);
- if using a scientific focus, looking for topics that connect with day to day life and topics of relevance and interest (eg. life beyond earth, life beyond death); and
- introducing non-scientific dimensions to the experience.

Developing Aboriginal Night Skies product

Local Aboriginal people interested in further developing Night Skies cultural tourism experiences would benefit from some more tailored capacity building that supports product development. Beyond the storytelling mentioned above, would be how to utilise cultural stories that might have constraints of secret business, or need their intellectual property retained. There is also an opportunity to explore how to integrate other cultural dimensions into the experience that take the visitor beyond storytelling, including music, dance and art, as well as incorporating non-Aboriginal perspectives.

Incorporating Night Skies into wider product

A wider but less intense application of capacity building could be applied to the wider tourism sector, focussed on how to incorporate Night Skies into their product. For example, there is a significant opportunity for:

- restaurants and accommodation forming partnerships with existing Night Skies operators, to sell experience, dining and overnight stays as an integrated / themed package;
- more retail product to be created that captures the region's Night Skies application (rather than standard scientific perspectives made in China);

- some décor theming of restaurants and accommodation closely linked to Night Skies experiences to recognize that Night Skies is a key part of the region; and
- some additional art installations in townships and landscapes close to Night Skies experiences, to further anchor the brand.

4.3 Land based transport links

The region has got used to the idea that visitors come with their own car and plenty of time. The region needs to make it easier for short break and international markets to quickly and easily visit the region to access some Night Skies experiences in a two-night stay. Some of the ways that this could be achieved includes:

- the introduction of a transport operator to transfer visitors from a regional airport to their accommodation and Night Skies experiences;
- the development of a Night Skies tour operator, who has a core piece of Night Skies business (such as a leading Night Skies experience), and is interested in expanding their reach to interlink this with other complimentary Night Skies experiences, nature, culture and food and wine experiences, as a tour product; and
- promotion of existing transfer / transport links to Night Skies experiences on the proposed Night Skies website and supporting wider tourism websites.

4.4 Facilitating more dark sky reserves in the region

To fully claim the Dark Skies as a central part of the region's brand requires some additional dark skies reserves and Night Skies experiences within them, beyond the Warrumbungle National Park. The Australasian Dark Sky Alliance could play a lead role in this.

The Gap Analysis Report (SMA Tourism 2019) provided some guidance on how to leverage the introduction of additional dark sky reserves into Night Skies product.

5. POTENTIAL FUNDING SOURCES

5.1 Allocation of funding sources to initiatives

Table 5.1 Potential funding opportunities to the proposed concepts and supporting industry initiatives.

Concepts	Potential public sector funding sources										Private sector	
	1	2	3	4	5	6	7	8	9	Local gov't		
Network of star bathing attractions and bubble tent / dome accommodation												
3D mobile dome												
Adaptive reuse of surplus observatory at Siding Spring												
Supporting industry initiatives												
Website, packaging and booking system for Night Skies												
Capacity building: Storytelling												
Capacity building: Aboriginal Night Skies product development												
Capacity building: How to incorporate Night Skies into their product												
Land based transport links												
Facilitating additional Dark Sky Reserves in region												

Key

- 1. Building Better Regions Fund (BBRF)
- 2. NSW Regional Tourism Product Development Program
- 3. NSW Regional Growth Fund
- 4. Community Development Grants Program
- 4. Community Development Grants Program

- 5. Drought Communities Programme Extension
- 6. NSW Community Building Partnership Fund
- 7. Qantas Regional Grants
- 8. Indigenous Tourism Fund
- 9. Commonwealth Department of Innovation, Industry and Science (Astronomy Department)

5.2 Outline of potential funding opportunities

1. Building Better Regions Fund (BBRF)

The Building Better Regions Fund (BBRF) will create jobs, drive economic growth and support strong regional communities across Australia by funding infrastructure and community investment projects.

The fund invests in eligible projects in regional and remote Australia, outside the major capital cities of Sydney, Melbourne, Brisbane, Perth, Adelaide, and Canberra.

Nearly \$500 million is available through this program, including \$200 million provided from the Regional Growth Fund allocated in the 2017 to 2018 Budget.

Grant funding is available through two funding streams:

- The Infrastructure Projects Stream: Supports projects that involve construction of new infrastructure, or the upgrade or extension of existing infrastructure
- The Community Investments Stream: Funds community development activities including, but not limited to, new or expanded local events, strategic regional plans, leadership and capability building activities

The infrastructure projects stream funds projects to the value of \$20,000 to \$10M. For most projects grant funding will be up to 50% or up to 75 per cent of eligible project costs. The location will determine the percentage of grant funding applicants can receive. The project is not allowed to have started before the application, but be ready to commence soon after executing a grant agreement. Local governments are eligible.

To be competitive, applicants must score highly against all of the criteria:

- Merit criterion 1 Economic benefit of your project for the region (15 points)
- Merit criterion 2 Social benefit of your project for the region (15 points)
- Merit criterion 3 Project delivery (5 points)
- Merit criterion 4 Impact of grant funding (5 points)

Successful Projects supporting Astrotourism:

The Program has funded the delivery of six community stargazing events, and a plan to develop a stargazing tourism trail to grow Astrotourism events and businesses, in the Wheatbelt and Mid-regions of Western Australia. Total project cost \$48,000, grant approved \$36,000.

<http://regional.gov.au/regional/programs>

2. NSW Regional Tourism Product Development Program

The Regional Tourism Product Development Program offers between \$15,000 and \$150,000 for eligible projects that satisfactorily meet the assessment criteria. The funding must be, at least, matched dollar-for-dollar.

Proposals can be submitted by local government, tourism and sector organisations, including Destination Networks, and industry (GST registered), located or representing industry within the six new Destination Networks (including Destination Southern NSW).

Proponents need to discuss their project with their Destination Network (Hunter Tourism) prior to preparing the Proposal in the online system. Contact details for the Destination Networks are provided in the Program Guidelines.

3. NSW Regional Growth Fund

The Regional Growth Fund will invest in projects that facilitate regional development through six funds. These funds aim to enable essential infrastructure, support arts and culture, enhance and build sporting infrastructure, improve regional voice and data connectivity, invest in mining-impacted communities, spur job creation and deliver local infrastructure.

The Regional Growth Fund will provide grants of \$10 million or more for major transformational projects which support long-term economic growth and create jobs in regions undergoing structural adjustment.

Projects must be located in Australia and in an eligible area or, if your project is located in an excluded area, you must clearly demonstrate how economic benefits flow directly into an eligible area. A mapping tool is available to assist applicants determine the project or benefit location.

Selection of projects will be undertaken in two stages. Stage One requires submission of an Initial Application for competitive assessment. Stage Two is for the submission of a Full Business Case. Only successful applications to the Initial Application will be invited to submit a Full Business Case.

<http://regional.gov.au/regional/programs/community-development-grants.aspx>

4. Community Development Grants Program

The Australian Government has established the Community Development Grants Programme to support needed infrastructure that promotes stable, secure and viable local and regional economies.

The Community Development Grants Programme is not a competitive grants programme.

General applications by organisations for projects not identified by the Australian Government will not be accepted by the Department. A list of Community Development Grant projects can be found on the Department's website at

www.infrastructure.gov.au

5. Drought Communities Programme Extension

On 27 September 2019, the Australian Government announced it would provide \$13 million under the Drought Communities Programme Extension to an additional 13 councils experiencing hardship due to drought. The 13 eligible councils will each be provided \$1 million to complete local infrastructure and other drought-relief projects.

Funding is available to eligible councils for local infrastructure projects and other drought-relief activities. Project funding is intended to provide short-term support, including by boosting local employment and procurement, and addressing social and community needs.

The Drought Communities Programme Extension is being administered through the Business Grants Hub at the Department of Industry, Innovation and Science.

<https://www.regional.gov.au/regional/programs/drought-communities.aspx>

6. Drought Communities Programme Extension

The NSW Department of Premier and Cabinet operates the Community Building Partnership provides funds for the building and improvement of vital social, recreational and environmental infrastructure that will enhance the wellbeing of local communities. Available to organisations that are incorporated not-for-profit and local Councils.

The successful 2019 projects in each electorate will be announced in March 2020. The 2020 round dates will be published on the website.

<https://www.nsw.gov.au/improving-nsw/projects-and-initiatives/community-buildingpartnership/>

7. Qantas Regional Grants

The Qantas Regional Grants Program is a \$5 million program, released as \$1 million per year over five years (2019 – 2024). Entry is open to Australian based individuals, not-for-profit community groups and organisations of any size.

The Regional Grants Program provides financial, flight and marketing support.

The assessment criteria are:

1. The extent to which the applicant directly services a regional community need and demonstrates a measurable socioeconomic impact.
2. The extent to which the applicant can maximise local community benefits in regional Australia with the Qantas Regional Grants Program funding.
3. The extent to which the project or activity will celebrate and highlight the work of the applicant and help boost the profile and strength of the applicant for the future.
4. The ability of the applicant to demonstrate innovation in their project strategy, goals and mission, and how these align to improving their service offering and increasing regional impact.

2020 applications opened on 12 June 2019.

<https://www.qantas.com/au/en/about-us/our-company/in-the-community/qantasregional-grants.html>

CONCEPT PLAN FOR NIGHT SKIES EXPERIENCE

8. Indigenous Tourism Fund

The commonwealth government is (as of late October 2019) currently developing an Indigenous Tourism Fund to develop indigenous tourism businesses. The fund will provide \$40 million over 4 years and is expected to commence in early 2020.

<http://www.niaa.gov.au/indigenous-affairs/economic-development/indigenous-tourismfund-consultation>

9. Commonwealth Department of Innovation, Industry and Science (Astronomy Department)

This department, as primary asset owner of Siding Springs, is listed as a key organisation that might fund or facilitate the funding of significant works associated with the proposed Siding Springs project.



FOR MORE INFORMATION

E. info@dnconsw.com.au

P. 02 5820 0290

www.dnconsw.com.au



Destination
Country and Outback NSW