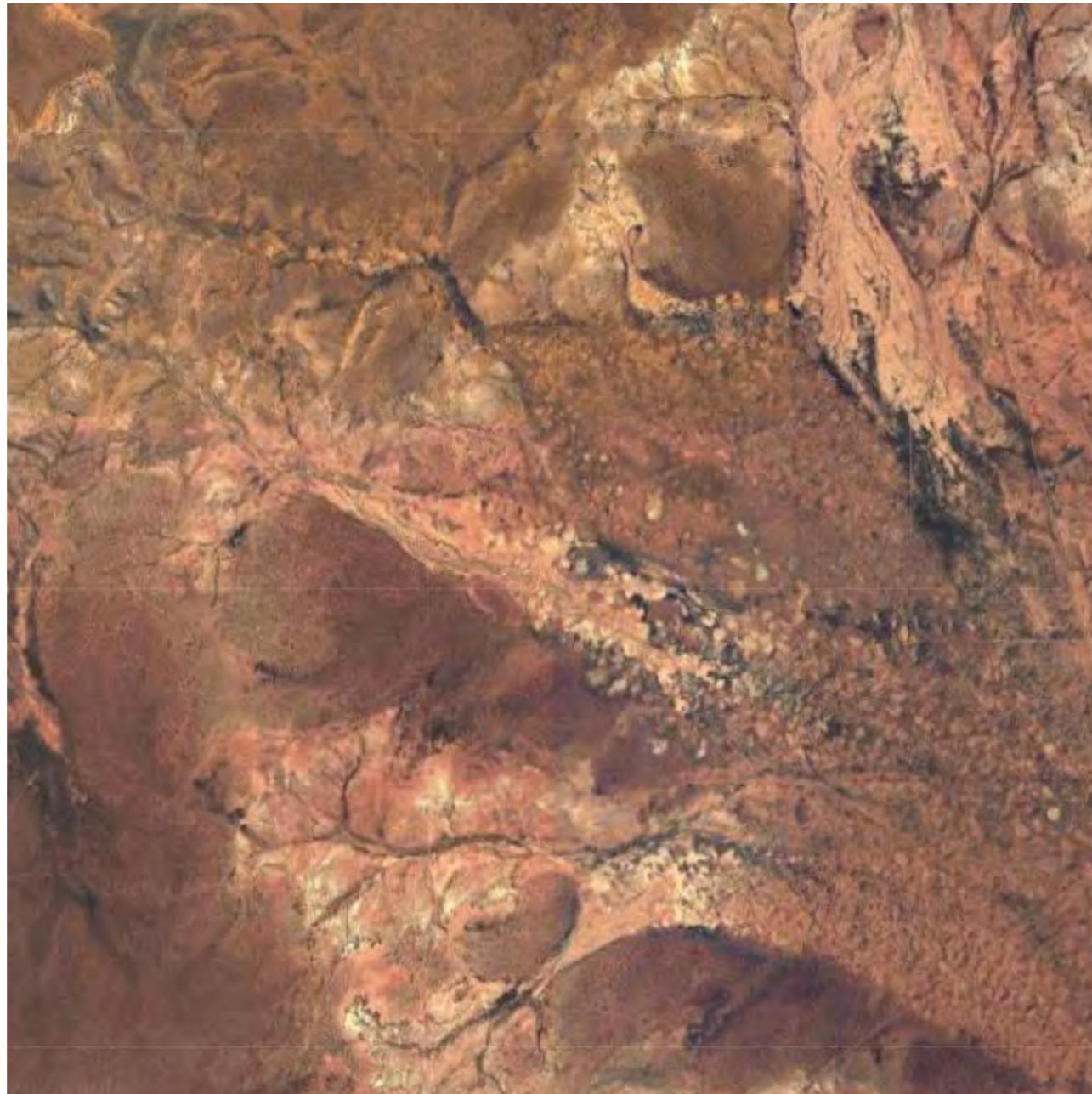




MURCHISON VAST SKY EXPERIENCE BUSINESS CASE





We acknowledge the Wajarri Yamatji people as the Traditional Owners of the land on which the Murchison Settlement site stands today. We pay respect to the Wajarri Yamatji people, the Pia Wadjari Community, and Elders both past and present whose knowledge and wisdom has and will ensure the continuation of cultural and traditional practices.

COVER IMAGE: A 20-SECOND EXPOSURE SHOWING THE MILKY WAY OVERHEAD A TEST ARRAY OF SKA-LOW ANTENNAS. CREDIT: MICHAEL GOH AND ICRAR/CURTIN.

ABOVE IMAGE: MURCHISON AERIAL (MNG)

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EXECUTIVE SUMMARY

The Murchison Vast Sky Experience has been conceived as a 'wide-net, light-touch' approach that combines **flexibility, place-appropriateness, scalability** and **modularity** with the strategic placement of multiple buildings, spaces and components that require minimal reliance on ongoing staffing.

This Business Case describes the proposed development of the Murchison Vast Sky Experience ('Vast Sky Project')—an Interpretive Experience with related accommodation and amenities to cater for tourism, education, recreation, civic, cultural and community activities for visitors and locals at Murchison Settlement. Included in this document is information about the proposed facilities' outcomes, options, financial information and economic benefits.



IMAGE: VIEW OF THE VAST SKY PROJECT FROM THE SETTLEMENT'S MAIN POLO-CROSSE FIELD

EXECUTIVE SUMMARY (CONT.)

The proposed facilities will be constructed in Murchison Settlement, which is the nearest accessible tourism-appropriate location to the Australian component of the Square Kilometer Array (SKA). The SKA is a global project to build one of the world's largest and most sensitive radio telescopes. It will revolutionise our understanding of the Universe and operate for at least 50 years. The SKA-Low telescope is being built in the Shire of Murchison, in the heart of Wajarri Country. Combined with the other precursor instruments at CSIRO's Murchison Radio-astronomy Observatory (MRO), the SKA project is helping spotlight the Murchison and Mid West region of Western Australia to the world.

The purpose of the proposed facilities of the Vast Sky Project' is to create a series of external and internal spaces and places to support and enable a range of visitor interpretation experiences to provide compelling information about the unique qualities and ways of life of the Murchison region, including but not limited to information about the significance of Wajarri Country, the SKA, the MRO, the area's Radio-Quiet Zone status.

The Vast Sky Project builds on the Murchison Masterplan (2021) and leverages the tourism opportunity presented by the Settlement's proximity to the SKA-Low. Delivered in 3 stages, the Vast Sky Project has been conceived as a 'wide-net, light-touch' approach that combines **flexibility, place-appropriateness, scalability** and **modularity** with the strategic placement of multiple experiences that require minimal reliance on ongoing staffing. Once complete, the Vast Sky Project will comprise:

- A multi-functional Interpretive Centre that doubles as a large, shaded gathering and event space;
- A "Skybox" facility that is equipped with interactive multimedia capabilities and doubles as a viewing deck;
- A dorm-style shared accommodation facility to cater for

larger groups including tour groups and school groups;

- 15 glamping-style 'immersive accommodation' cabins to cater for a higher-spend visitor type not currently catered for in the Settlement;
- Extensions to the Oasis Caravan Park to provide additional camp sites and ablutions;
- Multiple "sky-view" camp fire seating nodes;
- Multiple interpretive nodes of signage, replica SKA-Low antennas and/or site responsive sculptural artworks;
- Trails and pathways to connect and extend the experiences provided for.

The Vast Sky Project is expected to provide a number of tangible economic and social benefits for the Settlement, the Shire of Murchison, the Mid-West Region and the state more broadly. In particular, the Vast Sky Project will:

- Attract domestic and international visitors;
- Encourage overnight stays in the Settlement, generating new accommodation demands and economic opportunities for the Shire and community;
- Provide State and National-level interpretive educational facilities that builds on the Shire's unique existing relationship with CSIRO and the MRO;
- Provide employment and volunteer opportunities, as well as smaller-scale private business opportunities;
- Attract and retain staff for Murchison Settlement and nearby stations;
- Increase capacity and skillset building in the region;
- Increase opportunities for residents to have dual jobs;
- Improve facilities and amenities in the community for wide-ranging events, tours and programs that could be leveraged by existing and future locals as micro businesses;
- Improve community amenity, positively contributing to livability for current and future residents; and
- Increase appreciation for the Settlement, the community and the region.

On the 5th of November 2022, an Indigenous Land Use Agreement (ILUA) with the Wajarri people and the Commonwealth government was signed in relation to the building of the SKA-Low on Wajarri land. **Consultation and engagement with the Pia Wadjari Community in relation to the multiple opportunities presented by the Vast Sky Project has taken place during the drafting of this Business Case, and is expected to continue to ensure ongoing agreement and trust.** Appendix 1 'Pia Wadjari Opportunities' is included to communicate an overview of these potential impacts and opportunities. This same document was sent to Pia Wadjari Community members in November 2022. Feedback is pending and will be incorporated into future stages.

The total estimated cost of the Vast Sky Project is \$21,840,000 (ex GST). The project has been designed to be scalable. Stage 1, which is intended to be operational by 2025, has been estimated to cost \$10,396,000 (ex GST) to build. Stage 2 is intended to be operational by 2028 and has been estimated to cost \$6,208,000 (ex GST) to build. Stage 3 has been estimated to cost \$5,236,000 (ex GST) to build. Project completion is anticipated to be by 2032.

An indicative 10 year financial analysis carried out by MCA in October 2022 demonstrates that the Vast Sky Project achieves an operating profit from its second year of operation (or its fourth year when asset maintenance costs are taken into account). The same financial analysis indicates that the activity at Murchison enabled by the Vast Sky Project boosts total output by an estimated \$1.546 million in year one, increasing to \$6.822 million in year ten.

Detailed design, approvals and tendering of works are planned to be undertaken following the endorsement of this business case.

EXECUTIVE SUMMARY (CONT.)

The below table summarises the Vast Sky Project stages and estimated costs.

STAGE	DESCRIPTION	COST (EX GST)
Preliminary Masterplan	<p>The Masterplan is guided by the aim of establishing assets, facilities and site works that complement the existing Settlement, with particular focus given to the pedestrian-friendly civic-spine that spans the Oasis Roadhouse and the Museum and Council Chambers. These initiatives will assist in attracting and retaining Shire staff as well as encouraging longer visitation by visitors.</p> <p>Key components:</p> <ul style="list-style-type: none"> • SKA / Space-themed playground; • Swimming Pool and splashpad; • Community Centre upgrades; • Caravan Park Extensions; • Museum Extension; and • Public open spaces and pathways. 	<p>Costed at \$3,101,770 in early 2021.</p> <p>Note: Not part of this Business Case. See Appendices..</p>
Stage 1	<p>Stage 1 aims to complement the priority assets and facilities within the Masterplan, with particular focus given to the creation of two key interpretive facilities and the provision of some new accommodation within the Settlement to both service the expected increase in visitation and, in the case of the glamping-style 'immersive accommodation' cabins, extend the interpretive experience and attract new visitors.</p> <p>Key components:</p> <ul style="list-style-type: none"> • A multi-functional Interpretive Centre that doubles as a large, shaded gathering and event space in the centre of the Settlement; • A "Skybox" facility that is equipped with interactive multimedia capabilities and doubles as a viewing deck; • A "Skybox Out of Place" facility that can be toured around places other than Murchison Settlement to communicate about the Murchison 'Vast Sky' Experience; • 5x glamping-style 'immersive accommodation' cabins; • An extension to the Oasis Caravan Park to provide additional camp sites and ablutions; • 2x "sky-view" camp fire seating nodes; • Multiple interpretive nodes of signage, replica SKA-Low antennas; • An "...-in-residence" program that situates artists, scientists, chefs, researchers and more within the Settlement and results in artworks, events, guided tours and the sharing of specialist knowledge; and • Trails and pathways to connect and extend the experiences provided for. 	\$10,396,000
Stage 2	<p>Stage 2 predominantly focuses on the provision of additional accommodation options to cater for the expected uplift in overnight visitors.</p> <p>Key components:</p> <ul style="list-style-type: none"> • The large roof, slab, ablutions and kitchen of a dorm-style shared accommodation facility; • 5x glamping-style 'immersive accommodation' cabins with central "sky-view" camp fire seating node; • Another extension to the Oasis Caravan Park to provide additional camp sites and ablutions; and • Site responsive sculptural artwork/s - an output of the inaugural '...-in-residence' program. 	\$6,208,000
Stage 3	<p>Stage 3 looks to complete the accommodation and experience mix.</p> <p>Key components:</p> <ul style="list-style-type: none"> • The room 'pods' of the dorm-style shared accommodation facility; • 5x glamping-style 'immersive accommodation' cabins with central "sky-view" camp fire seating node; and • Final extension to the Oasis Caravan Park to provide additional camp sites and ablutions; 	\$5,236,000
Total cost		\$21,840,000



1.0 INTRODUCTION



1.0 INTRODUCTION

1.1 BUSINESS CASE PURPOSE

UDLA (in collaboration with TRCB, TRC, HWA and MCA) was engaged to develop and implement a collaborative design process and prepare a business case to guide decision making. The business case process assisted the Shire of Murchison and other stakeholders in deciding on the preferred scenario to deliver an Interpretive Experience and related accommodation facilities and amenities within the Murchison Settlement. Extensive stakeholder input, gathered via a three workshop process, along with additional direct input from The Shire of Murchison and the Mid-West Development Commission, supported the development of this business case.

The business case seeks to:

- Describe the background to the Vast Sky Project;
- Describe the Vast Sky Project components and staging rationale;
- Demonstrate the key benefits expected from the development of the Vast Sky Project;
- Describe the alignment of the Vast Sky Project with relevant government policy and stakeholder aspirations;
- Describe the funding and operating budget considerations; and
- Outline how the Vast Sky Project can be delivered.

1.2 BUSINESS CASE STRUCTURE

This business case includes the following sections:

- **Project Purpose:** Description of the Vast Sky Project's vision, background, context and opportunity.
- **Investment Proposal:** Description of the Vast Sky Project's objectives, the expected benefits to be delivered, identification of the partners and stakeholders involved and a summary of how the Vast Sky Project could support the objectives of national, state and local government strategies and policies.
- **Project Scope:** Description of the Vast Sky Project, its stages and components.
- **Scenario Identification and Analysis:** Description and analysis of the options considered in the development of the proposal.
- **Impacts:** Identification and description of the expected visitation, construction, operational and social impacts of the Vast Sky Project.
- **Implementation Plan:** Overview of implementation actions to deliver the Vast Sky Project.
- **Recommendation.**

The Murchison Settlement Masterplan (2021) and additional materials which informed this business case are appended to this document.

IMAGE PREVIOUS PAGE: THE APERTURE ARRAY VERIFICATION SYSTEM 2.0 (AAVS2.0), A DEMONSTRATOR FOR SKA-LOW AT THE MURCHISON RADIO-ASTRONOMY OBSERVATORY IN WESTERN AUSTRALIA. (CREDIT: MICHAEL GOH/ICRAR-CURTIN)

1.0 INTRODUCTION

1.3 BUSINESS CASE PROCESS

The process for developing the spatial scenario options, preferred scenario concept design and Business Case has been structured around three workshops.

These workshops were centred on collaboratively sharing progress to facilitate engagement with the multiple stakeholders involved. The focus of each workshop is outlined in the diagram to the right.

Workshop 1

- Early May 2022
- Held in Murchison Settlement and online
- The focus was on background information analysis, sense checking, confirmation of intent and benchmark analysis of WA, National and International astrotourism facilities.

Workshop 2

- Mid June 2022
- Held online
- The focus was on presenting three possible scenarios and unpacking the opportunities and constraints of each, relative to the Vast Sky Project's brief and aims. Feedback given during and following this workshop led to the confirmation of a preferred option.

Workshop 3

- Mid August 2022
- Held online
- The focus was on communicating the various aspects and impacts of the preferred scenario, and its development into a concept design, with CapEx and Economic Impact Analysis.

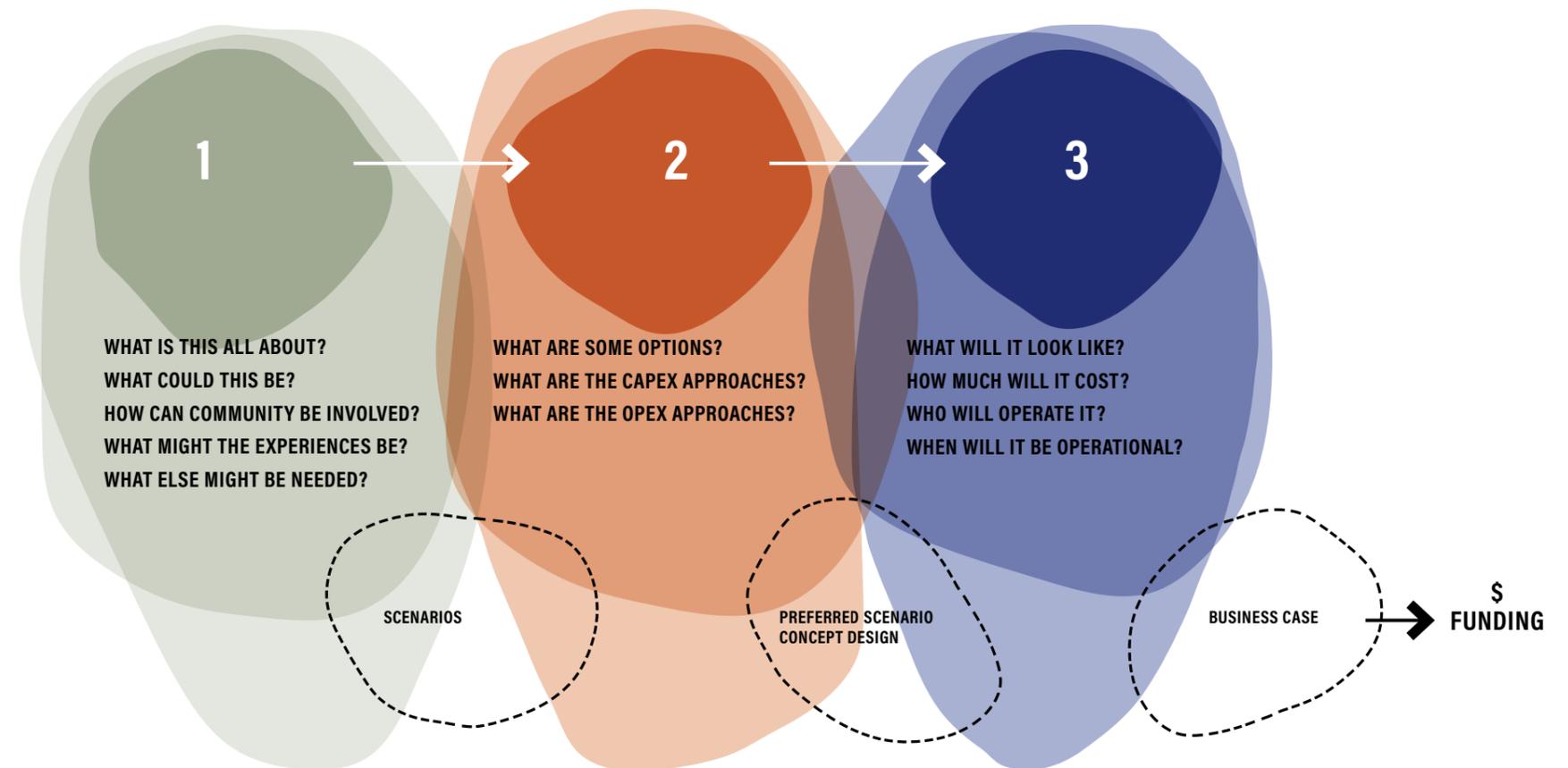
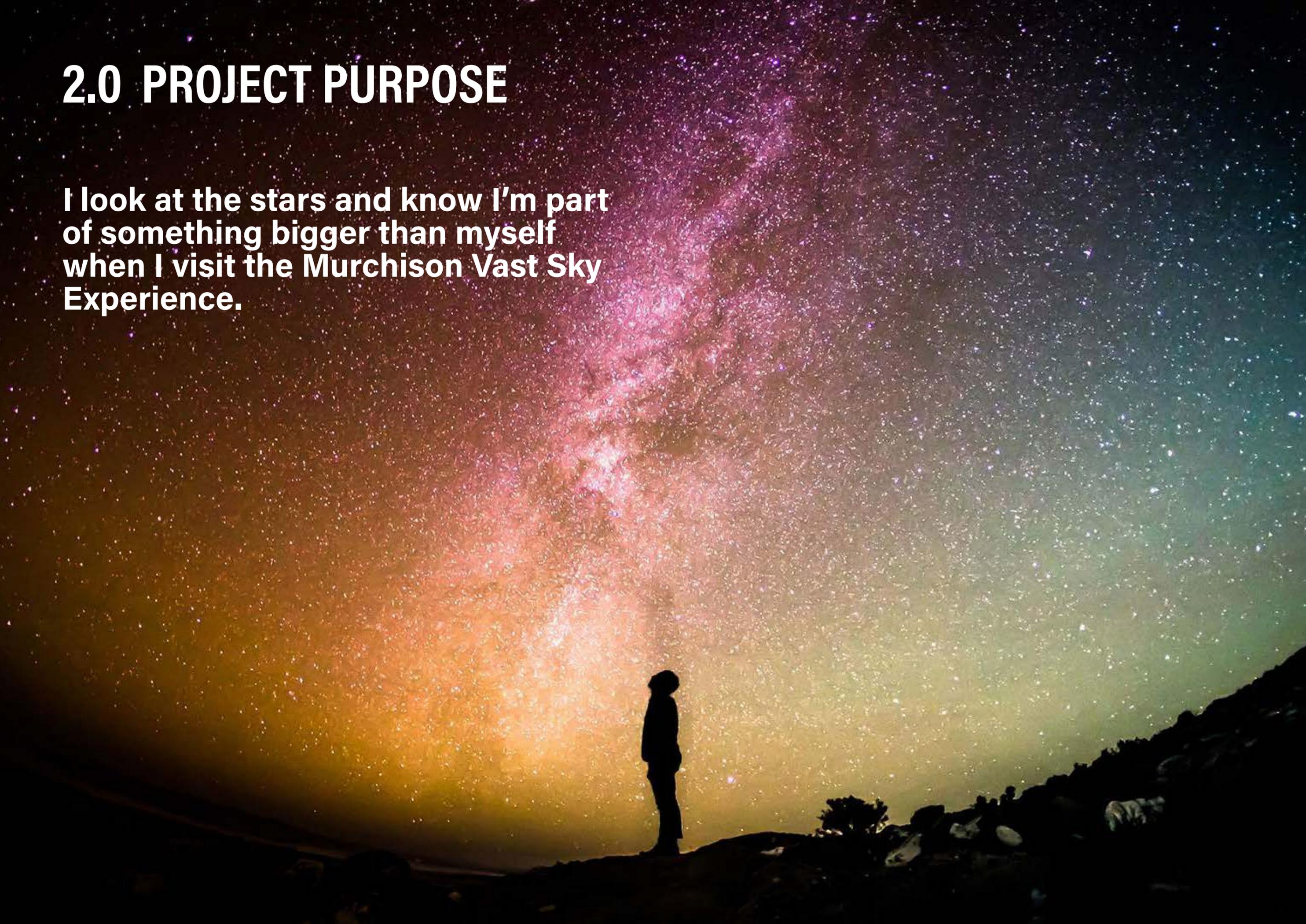


IMAGE: THREE WORKSHOP PROCESS (SOURCE: UDLA)

2.0 PROJECT PURPOSE

I look at the stars and know I'm part of something bigger than myself when I visit the Murchison Vast Sky Experience.



2.0 PROJECT PURPOSE

2.1 VISION

The Murchison Vast Sky Experience (the Vast Sky Project) will create an out-of-the-ordinary immersive experience that sparks feelings and understandings of being connected to something bigger. The sum of its parts will celebrate and share knowledge about the MRO and SKA, Wajarri Yamatji Culture, as well as the Murchison landscape and lifestyle. A connected network of 'of-the-place' experiences will facilitate the direct and indirect communication of Space Science, Universal Knowledge and Metaphysical Wellness.

Set within the Murchison Settlement, the Vast Sky Project will result in the provision of a suite of distinctive 'iconic' activities that are reliable, accessible and well-regarded accommodation options that make Murchison Settlement a memorable and attractive option for a broad spectrum of overnight visitors.

To summarise, the Vast Sky Project will:

- Create a 'must do' set of experiences that are unique to Murchison Settlement;
- Attract domestic and international visitors, leveraging off the proximity to the SKA;
- Communicate compelling information about the science being carried out at the MRO and SKA ;
- Holistically present Murchison life in addition to the SKA eg pastoralism, Wajarri* culture, Wajarri* art, geotourism, astrotourism etc;
- Facilitate broader local tourism priorities such as Wajarri* cultural tourism, Wajarri* artworks, astrotourism, geotourism, agritourism and station stay tourism;
- Incentivise local micro business opportunities; and
- Encourage overnight stays in the Settlement, generating new accommodation demands, economic opportunities and benefits for the Shire and community.

*Note: So far only early engagement with the Pia Wadjari Community has been possible. Further conversations required to ascertain level of interest in involvement.



IMAGE: STILL FROM STAR DREAMING OF AN ANIMATION OF THE EMU IN THE SKY BY MARGARET WHITEHURST

2.0 PROJECT PURPOSE

2.2 BACKGROUND

The SKA is a global mega-science project to build one of the world's largest and most sensitive radio telescopes. It will revolutionise our understanding of the Universe and operate for at least 50 years. The SKA-Low telescope is being built in the Shire of Murchison, in the heart of Wajarri country. Combined with the other precursor instruments at CSIRO's Murchison Radio-astronomy Observatory (MRO) - including the ASKAP radio telescope and the Curtin University-led Murchison Widefield Array (MWA), the SKA project is helping spotlight the Murchison and Mid West region of Western Australia to the world. Construction on SKA-Low began in 2022 and it is expected that it will begin being operational in 2030.

Murchison Settlement is the closest publicly accessible accommodation precinct to the MRO and the instruments on site, including the upcoming SKA.

Working towards the realisation of the Council's Strategic Community Plan, the Shire completed a Masterplan for the Murchison Settlement in 2021. Included within this plan is the intention for the Interpretive Experience to be integrated into the redevelopment to help create a 'must do' experience that is unique to the Murchison Settlement.

Located 644 km from Perth and 355 km from Geraldton, Murchison Settlement is a rural community, and like many rural communities, the Settlement experiences challenges in the attraction and retention of staff.



IMAGE: COMPOSITE IMAGE OF THE SKA COMBINING ALL ELEMENTS IN SOUTH AFRICA AND AUSTRALIA. (SOURCE: [HTTPS://WWW.SKATELESCOPE.ORG/THE-SKA-PROJECT/](https://www.skatelescope.org/the-ska-project/))

2.0 PROJECT PURPOSE

2.3 CONTEXT

Murchison Settlement is within the Shire of Murchison. The Shire covers a land area of 49,500 square kilometers. It is located within the Murchison subregion of the Mid West region. The Murchison subregion includes the Shires of Cue, Meekatharra, Mount Magnet, Murchison, Sandstone, Wiluna and Yalgoo.

The Shire of Murchison is in the process of upgrading and/or delivering several infrastructural assets within and around Murchison Settlement, including an Aarnet optic fibre cable (expected implementation late 2023-early 2024), a water supply upgrade (mid-2023), a Microgrid Power Upgrade (late 2023) and an ongoing road surfacing project. The Vast Sky Project that is the subject of this business case will connect up to, and where appropriate, capitalise on these infrastructural upgrades.

Other context considerations include:

- Murchison Settlement is within the Murchison **GeoRegion** and part of a self-drive trail visits 21 sites of national and international, natural and cultural significance.
- With brilliantly clear dark skies and minimal light spill, combined with the conceptual and locational link to the Astro Science being conducted at the MRO, Murchison Settlement has the potential to play a role as a key destination with AstroTourismWA's strategy to establish Western Australia as a **Dark Sky Tourism Destination**.
- Murchison Settlement is well placed to be a recognised destination of Western Australia's **wildflower tourism**.
- Located amongst large pastoral stations, and in close proximity to Wooleen Station, Murchison Settlement is well placed to be a destination within Western Australia's **agritourism**.

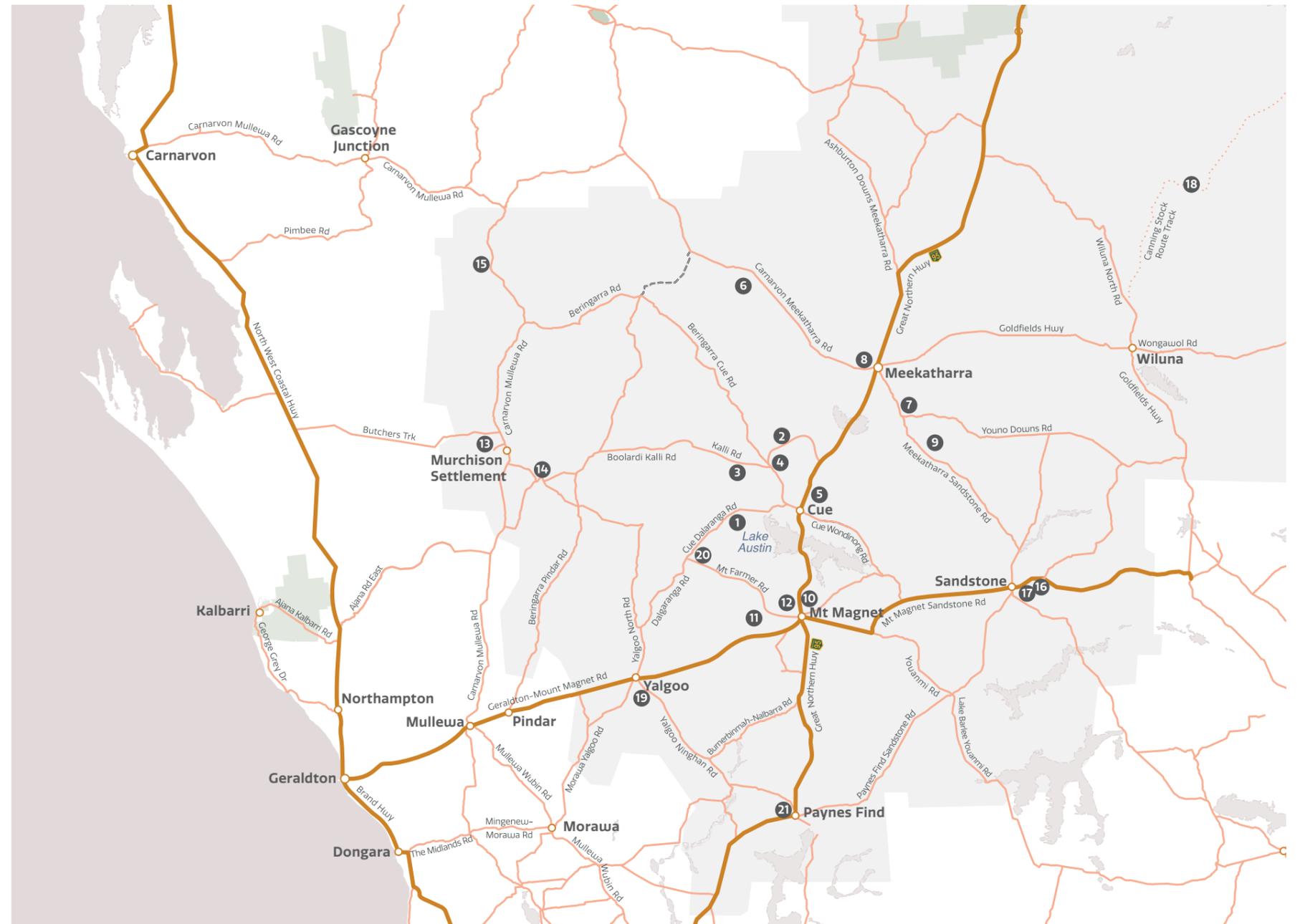


IMAGE: MURCHISON GEOREGION TRAIL (SOURCE: [HTTP://WWW.MURCHISONGEOREGION.COM/](http://www.murchisongeoregion.com/))

2.0 PROJECT PURPOSE

2.4 OPPORTUNITY (WHY MURCHISON SETTLEMENT)

Murchison Settlement presents a compelling opportunity for the siting of a series of Interpretive Experience and related accommodation and amenity facilities. While proximity to the MRO will be the 'anchor' experience in the overall offer, the real opportunity presented by the proposed Project is the attraction of domestic and international visitors to Murchison Settlement to enjoy a range of memorable and unique experiences. Collectively, what this Project presents is a unique package of experiences with broad appeal.

Specifically, the proposed experiences and related offer will leverage the following:

- Murchison Settlement's proximity to the MRO and SKA-Low;
- Murchison Settlement's connection to multiple tourism strategies (Dark Sky Tourism, GeoRegion Tourism, Wildflower Tourism and Agritourism);
- Murchison Settlement's connection and proximity to the Pia Wadjari community;
- Murchison Settlement's already established unique local character and events (eg. the yearly Polocrosse tournament) and
- A distinct lack of accommodation provisions and options within a 250km radius (with the exception of Wooleen Station, which is regularly and consistently fully booked).

Murchison Settlement is exceptionally well positioned to service, contribute to and benefit from several key investment priorities and opportunities for Western Australia, including those listed below.

A Cutting-Edge Space Science Industry

Western Australia is a strategic location for space industry investment. We are home to world-class space science projects with international links. These include:

- The \$1.3B SKA radio telescope being built at the MRO in the Mid West will look back 13 billion years to discover how stars and black holes formed;
- International Centre for Radio Astronomy Research (ICRAR) is a multi-disciplinary research centre for science, engineering and data intensive astronomy supporting the SKA.

The Vast Sky Project is the closest serviced publicly accessible location to the MRO and future SKA and is uniquely positioned to communicate the importance of the research being undertaken by the MRO and SKA.

Astrotourism and Dark-Sky Tourism Economy

Western Australia has the right conditions for optimal stargazing and astronomy-related tourism activities, as recognised by DPLH's and WAPC's Position Statement on Dark Sky and astrotourism (2022) and AstroTourism WA's Strategic Plan (2019-2023). Western Australia's strengths in the context of astrotourism include:

- Low artificial light pollution for a dark night sky;
- Low air pollution for a clean atmosphere to look through;
- Clear and dry weather for good access to the night sky;
- Wide open landscapes and space for a big dark night sky stretching from horizon to horizon;
- Low noise pollution for peaceful contemplation of the landscape and night sky;
- Radio quietness for an ideal location to build the Square Kilometre Array (SKA) radio telescope mega science project; and



IMAGES: SKA-LOW (SOURCE: MICHAEL GOH, CURTIN UNIVERSITY NODE OF THE INTERNATIONAL CENTRE OF RADIO ASTRONOMY RESEARCH), POLO-CROSSE, VAST NIGHT SKY (SOURCE: MICHAEL GOH)

2.0 PROJECT PURPOSE

2.4 OPPORTUNITY (WHY MURCHISON SETTLEMENT)

- Position within the Southern Hemisphere resulting in the ability to look into the heart of the Milky Way Galaxy, see the Magellanic Clouds, the Southern Cross, the Jewel Box star cluster and much more.

Whilst not unique to the above, when considering its close proximity to the MRO and SKA, the Vast Sky Project will be a priority for International Dark Sky Association accreditation as WA's first 'Dark Sky Sanctuary'.

Western Australian Aboriginal Tourism

In May 2021, Tourism WA launched 'Jina: Western Australian Aboriginal Tourism Action Plan 2021-2025'. The plan, backed by the \$20 million Aboriginal Tourism Fund, will help position WA as the nation's premier destination for authentic Aboriginal tourism, create exciting new Aboriginal tourism experiences and help to grow the number of Aboriginal people participating in the tourism industry. To note: continued and ongoing conversations with the Pia Wadjari community needs to be incorporated into this Project moving forward if the Aboriginal Tourism market is to be a part of the overall strategy. As the saying goes – "Nothing about us without us".

"Walking On A Dream"

In September 2022, Tourism WA launched "Walking On A Dream" – a new campaign that promotes Western Australia to the world. The campaign invites travellers to visit Western Australia to explore the awe-inspiring attributes that make Western Australia a wondrous, otherworldly, and dream-like place. Walking On A Dream was built upon the four destination-defining pillars of Time, Space, Connection and Freedom – a metaphor for the natural, deep connection to the landscapes, wildlife, coastline, people and culture, that is felt by those who come here.

The Vast Sky Project will be an important and engaging experience that complements the "Walking On A Dream" messages.

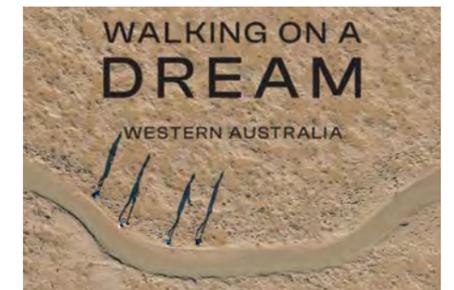
Unique Immersive Accommodation Market

The Grand View Research 'Glamping Market -Market Analysis Report 2020' estimates that growth in the global glamping and unique accommodation market is exponential as people look for immersive accommodation and engaging experiences on their travels. This research report indicated that the global glamping market is expected to experience continued growth in the future, at a rate of 14.1% Compound Annual Growth Rate (CAGR). This growth is driven by consumer willingness to spend on modern amenities while camping, high disposable income among consumers, a rising need for getaways from the stresses of daily life, an increasing desire to unwind in healthy ways and a desire for eco-friendly vacations.

The unique integration of the 'wide net light touch' approach associated with the Vast Sky Project includes a variety of new accommodation options, including 15 new cabin-like pods providing a unique, high quality and immersive day and night time accommodation experience.

Wildflower Tourism Market

Western Australia is famous for its wildflowers and is home to one of the largest collections on Earth, more than half of which cannot be found anywhere else on the planet. Murchison Settlement is located within a wildflower hotspot. In October 2021, Tourism WA engaged Metrix to undertake research to inform the strategic development of WA as a wildflower destination across domestic and international markets. Overall, the research found that there is broad interest in wildflower tourism. Growth audiences often take a simple view of wildflower tourism and consider it as part



IMAGES: REGIONAL WILDFLOWERS (SOURCE: WOOLEEN), BILLUNG POOL (SOURCE: WWW.MURCHISON.WA.GOV.AU), WALKING ON A DREAM STILL (SOURCE: TOURISM WA)

2.0 PROJECT PURPOSE

2.4 OPPORTUNITY (WHY MURCHISON SETTLEMENT)

of a broader tourism offering. Tourism facilities, amenities, quality accommodation and complementary experiences are an important consideration for the growth audience.

The Vast Sky Project will provide interpretation and accommodation experiences that complement the growing awareness and visitation relating to Wildflower tourism.

The Murchison GeoRegion

Interest in geotourism is growing. Launched in September 2020, The Murchison GeoRegion is Australia's first major geotourism development. It highlights the abiotic, biotic and cultural features of significant sites in the region to encourage a deeper understanding of, and connection with, the land.

The Vast Sky Project will provide interpretation and accommodation experiences that complement the growing awareness and visitation relating to GeoRegion tourism.

Agritourism

Interest in unique country holiday experiences is growing, as indicated in Tourism WA's 'Agritourism Market Segmentation Key Findings' document of November 2021. Wooleen Station is one of Australia's most widely recognised regenerative pastoral stations. Wooleen is investing in a new visitor and arrival centre that will complement the Vast Sky Project. Visitation to Wooleen has increased such that bookings for all accommodation types are required at least six months in advance. The Vast Sky Project will be a complementary interpretation and accommodation option being located less than an hour's drive from Wooleen.



IMAGES: MURCHISON SETTLEMENT (SOURCE: JARRAD SENG), WOOLEEN STATION (SOURCE: VISITWA.COM.AU)

2.0 PROJECT PURPOSE

2.5 RATIONALE FOR STATE INVESTMENT

As a globally significant project with the potential to answer some of humanity's biggest questions, interest in the SKA-Low project and the MRO are escalating rapidly will continue to increase.

Without the Vast Sky project, there will be no opportunity for the State, CSIRO, SKAO, the Shire of Murchison, the Wajarri community and community members to showcase the SKA in its remote, host environment.

Without the Vast Sky project:

1. Capacity for Murchison residents to participate in, and benefit from, the SKA in a proactive and meaningful way will be minimal;
2. The ability to share the SKA (in as close a proximity as possible) in its remote context with visitors, and inspire young people to pursue careers in the SKA realm will be diminished;
3. The ability for Western Australia to showcase its role in the globally important project, again in its remote host locale, will be limited;
4. The gradual and sustainable new employment potential for the Murchison community, in diversified economic sectors, will be tragically lost; and
5. The strong partnership built with the Shire, CSIRO, SKAO, Wajarri, residents, Mid West Development Commission and others through development of the Project will fail.

All funding for the SKA-Low and MRO is from Government agencies (primarily Commonwealth, as part of the international collaboration (~15 countries)), and the budget for the project already exceeds available funds. The SKAO is already having to seek additional funds from member nations to enable the preferred model to be delivered.

In its early years the Vast Sky Project is unlikely to generate sufficient private investment to initiate the project. The

Shire of Murchison has only 164 residents (2021 Estimated Resident Population), most of whom reside at Pia Wadjari Aboriginal Community or work as pastoralists. The rate base of the Shire is very low with minimal growth, and is very reliant on grant funds for capital works eg road sealing, power plant upgrade etc.

Due to the remote nature of the Settlement, being the only local government in Australia without a town, the Shire of Murchison spends around \$900k more than other local governments to deliver basic services. The Murchison is also one of the largest shires geographically in Australia, with its landmass and isolation being a key factor in the site being selected for the MRO and SKA-Low. The financial constraints on this local government shouldn't be underestimated.

Recognising the State's strong focus on tourism and TWA's 'living on a dream' campaign, the Shire is looking to be a partner in this vision rather than just a recipient of funds. Without seed funding the Vast Sky project can't proceed, representing a missed opportunity for the State to establish of an engaging public 'home' for the SKA project that celebrates the site and its nearby community.

Visitors can't get any closer to the site than the Settlement, meaning if the Vast Sky experience isn't realised, enthusiasts will have to seek information and interpretation 500km away in Geraldton or further away in Perth. This would be a huge lost opportunity.

The benefits of this Vast Sky project are skewed heavily to other parts of the region and State, with revenue expected in nearby towns through travel, accommodation, food and experiences in transit to and from the Settlement. Clearly, the focus of the Project isn't just on radio-astronomy, meaning surrounding communities can benefit through

agritourism, dark sky tourism, geotourism and of course genuine Aboriginal cultural experiences. Obviously the Vast Sky project also creates a rare opportunity for the new social and economic development benefits to be realised by Murchison community members. The loss of the SKA component severely diminishes the Murchison's strategy to build a diverse tourism brand and appeal (SKA, dark sky, geo, Wajarri, agri, wildflower etc). The SKA is clearly the Murchison's point of difference and failure to invest in this elements would again be a significant loss.

This is a rare opportunity for Wajarri people to engage meaningfully in the SKA project and be the 'face' of the SKA's public engagement effort. Without a significant public offering at the Settlement (the Vast Sky project), there will be little to draw visitors to the area and a huge lost opportunity for Wajarri people to engage and benefit economically. The Wajarri community are critical to the success of the SKA.

The request to government is for capital only, with business modelling indicating the project will become revenue-positive within around three years.

The Shire of Murchison has asked for very little from government in recent years and hence, has received very little public investment. The Shire has committed to sealing the road between the Settlement and its southern boundary, and without the Vast Sky investment, the value of this road (in part to deliver tourists to the Settlement) will be diminished.

2.0 PROJECT PURPOSE

2.6 TIMING CONSIDERATIONS

In the interests of the state of Western Australia, the Mid-West region, the Murchison sub-region and Murchison Settlement and the multiple stakeholders involved, now is an ideal time to realise the Vast Sky Project in Murchison Settlement. Key reasons are as follows:

Alignment with SKA-Low Timeline

The multi-billion dollar SKA-Low project is currently in construction at the MRO, with an expected completion date of 2030. Interest in it is only going to grow, given its international significance and growing publicity. Whilst physically visiting it is not a possibility for the vast majority of people (given the requirement for radio quietness), the experience of arriving within 100 kilometers of the SKA-Low, spending time in landscapes similar to the landscapes that the SKA-Low is positioned within, looking at the 'same sky' that it does and being immersed in a series of interpretive displays, spaces and activities related to what it is, what it does, how it does it and how the context relates will be increasingly appealing to growing audiences.

Alignment with growing interest in Astro-tourism

There is demonstrable growing interest in Astro-tourism. The Vast Sky Project has been designed to capitalise on this interest, linking up to the other dark sky attractions in the region, and complementing the region's collective offering by presenting something of a scale and significance that stands out from the crowd.

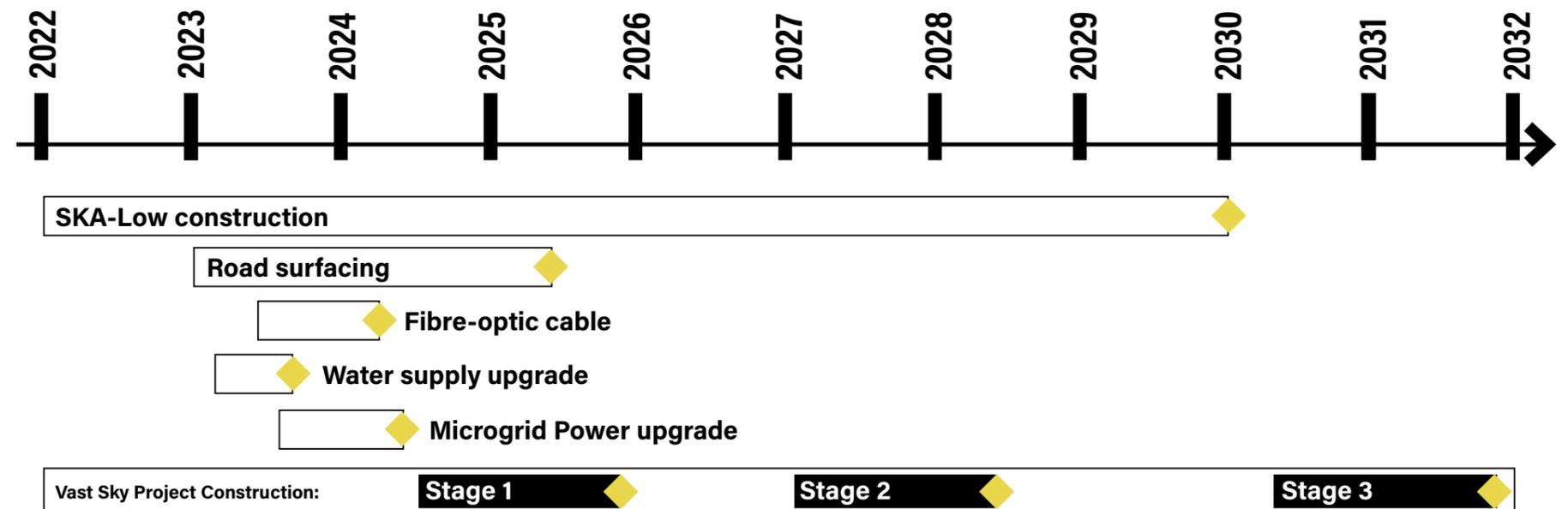
Alignment with existing activities at MRO

The yearly open day tour to the MRO, which attracted ~110 people over 2 days in 2018, is set to depart from Murchison Settlement for some participants in 2022/23, with most departing from Geraldton. Increased accommodation

options, F&B capabilities and bolstered community amenities - like those presented in this business case - will support the case for Murchison Settlement being the main departure point for these tours. This is favourable for several reasons, including that it will allow more time for the tour, with less time spent driving from Geraldton.

Alignment with infrastructural investments in the region

- Road surfacing Carnarvon Mullewa Road (fully sealed from Perth to Murchison Settlement) - contingent on final kms to be funded by City of Greater Geraldton
- Fibre-optic cable
- Water supply upgrade
- Provision of solar power
- Settlement amenities and facilities upgrades
- Space Science Education and capacity building facility in Geraldton



3.0 INVESTMENT PROPOSAL



3.0 INVESTMENT PROPOSAL

3.1 OBJECTIVES

The following objectives were developed in consultation and collaboration with the Vast Sky Project stakeholders before and during the three workshop process.

Create a 'must do' experience that is unique to the Murchison Settlement

Attract domestic and international visitors to enjoy a range of world class experiences, leveraging off the proximity to the SKA.

Holistically present Murchison life in addition to the SKA eg pastoralism, Wajarri culture, Wajarri art, geotourism, astrotourism etc.

Align with CSIRO's vision for sharing the SKA, SKAO (and other applicable MRO projects) and their outputs with the public.

Involve management and operating models that suit the remote location and limited human resourcing (at least in the short term).

Facilitate broader local tourism priorities such as Wajarri tourism, Wajarri artworks, astrotourism, geotourism, agritourism and station stay tourism.

Incentivise and/or enable local micro business opportunities.

Encourage overnight stays in the Settlement, generating new accommodation demands, economic opportunities and benefits for the Shire and community.

Visitor Experience Think:

- Know what the SKA is, does and is producing.
 - Leave with an increased appreciation for the jobs, skills and infrastructure that hosting the Vast Sky Project brings.
 - Understand that big projects like the SKA generate spinoff technologies that change the world.
 - Gain appreciation for the linkages with Wajarri culture and other unique aspects of the Murchison.
 - See the support for the SKA project locally, from traditional owners (Wajarri) through to neighbouring community members.
 - Recognise the long Wajarri history of the local area and leave with a greater appreciation for long-standing Wajarri astronomy knowledge.
-

Visitor Experience Feel:

- Be inspired by the aspirational scale of the SKA and feel proud of Australia's / WA's / the Murchison's / the Mid West's participation and investment in science.
 - Feel a positive connection to the MRO and SKA project.
 - Feel connected to something bigger, to ourselves, to each other
-

Visitor Experience Do (whilst there):

- Stay longer to enjoy other aspects of the Murchison community, culture and way of life
 - Slow down
 - Look at the night sky
 - Sit around a fire
 - Spend time in Murchison Settlement (eg. Interp and Cultural Experiences, Art, Events, Museum, Flora trail, community facilities, Oasis)
 - Do something nearby (Station stay, Errabiddy Bluff, Bilung Pool, Wooleen Lake, etc)
-

Visitor Experience Do (after the visit):

- Tell people about Murchison
 - Share some information about the SKA or the experiences they've had at the Murchison Settlement via word of mouth or social media.
 - Learn more about The SKA project by reading more online and Indigenous Astronomy by researching online.
 - Engage in another astronomy-themed experience in another part of WA eg An Indigenous night sky tour, a public lecture, a visit to an observatory or the planetarium.
-

3.0 INVESTMENT PROPOSAL

3.2 BENEFITS TO BE DELIVERED

BENEFIT	DESCRIPTION
Boost Shire Tourism Attractions	<ul style="list-style-type: none"> Elements of the Vast Sky Project will be of a calibre and subject matter to attract people from Perth, Geraldton and regional neighbours, as well as intrastate, interstate and international visitors.. This aligns with the Shire of Murchison’s ‘Local Planning Strategy’ (2014) objective to facilitate growth with the tourism industry to diversify the local economic base for the area, to facilitate a progressive expansion of the Shire’s ‘tourism offer’ through the promotion of existing attractions, to leverage the potential for tourism associated with radio-astronomy and space science activities.
Bolster Accommodation Provisions and Accommodation Options	<ul style="list-style-type: none"> This Project responds to the distinct lack of accommodation provision and options within a 250km radius from Murchison Settlement, especially ‘dorm style’ accommodation that caters for groups (eg. school groups and tours with international tourists) and ‘glamping-style’ accommodation that caters for higher spend visitors. In its combination of Interpretive Experience facilities with accommodation facilities, this Project looks to provide incremental increases in accommodation to support the growth in visitation to the interpretation experiences.
Improve Community Facilities and Amenities	<ul style="list-style-type: none"> This Project, combined with the Masterplan, and in alignment with the infrastructural and road improvements that are being carried out by the Shire, will result in a series of adaptable, place-appropriate assets for the local community. Specific to this project, those assets that will directly benefit the community include: A multi-functional Interpretive Centre that can double as a large shaded gathering space for community events; a “Skybox” AV facility with viewing deck; multiple camp fire seating nodes, trails and pathways, site-responsive artworks, an accommodation facility within the caravan park with shared amenities including a camp kitchen.
Support and Grow the Local Economy	<ul style="list-style-type: none"> The Vast Sky Project is directly aligned with the Federal government’s Smart Cities Plan to prioritise investment that will meet broader economic opportunities, infrastructure that provides amenity, and creates job opportunities in regional tourism and services. With its mix of facilities and amenities, including places to sell local products and flexible external and internal places and amenities to run tours or hold events, the Vast Sky Project facilitates local microbusiness opportunities. The Vast Sky Project will provide significant construction phase and ongoing employment benefits.
Attract and Retain Staff in the Region	<ul style="list-style-type: none"> In bringing a greater diversity of job and business opportunities and improved community facilities and amenities, the Vast Sky Project will, in effect, help to make Murchison Settlement a viable and enjoyable place for current and future staff and their families to live and prosper.

3.0 INVESTMENT PROPOSAL

3.3 ALIGNMENT TO POLICIES AND STRATEGIES

The Vast Sky Project was identified as a key initiative to fill a gap in the provision of culture, education and tourism-related facilities in the Shire, and to respond to the Settlement's unique location in proximity to the globally-significant research institution of the MRO and SKA-Low - knowledge of and interest in which is expected to increase in the lead up to the SKA-Low's 'switch-on' date in 2030.

Importantly, the Vast Sky Project will support and form a key implementation measure for a range of national, state and local government objectives, ensuring the delivery of important infrastructure that meets community needs provided that adequate levels of government support can be secured.

Specifically, the Murchison Vast Sky Experience Project would help deliver the aims of the following policies;

State Government Policies

- Foundations for a Stronger Tomorrow State Infrastructure Strategy (Draft, 2021);
- Regional Development Strategy 2016-2025;
- Our Priorities Sharing Prosperity, 2019
- Strategic Directions: 2020-2023 (DLGSC); and
- Community Infrastructure and Open Space Strategy and Community Infrastructure Implementation Plan (DLGSC).

Shire of Murchison Policies

- Shire of Murchison Strategic Community Plan 2016/16 - 2026/27

POLICY / STRATEGY	RELEVANCE TO THE VAST SKY PROJECT
Foundations for a Stronger Tomorrow State Infrastructure Strategy (Draft, 2021)	<ul style="list-style-type: none"> • The long-term success of WA relies on generating strong and inclusive growth across the State's regions. • Investment in cultural infrastructure and tourism experiences that recognise and celebrate the world's oldest continuous culture and develop pathways for Aboriginal enterprise in domestic and international markets • Expand industry co-contributions to improve regional education and training opportunities
Regional Development Strategy 2016-2025, Government of Western Australia	<ul style="list-style-type: none"> • Capacity building: Develop people's capability to drive growth and prosperity • Integrated common-use infrastructure: Invest in economic infrastructure to drive growth • Microbusiness opportunities: Identify and promote opportunities for private sector capital and capability. • Commitment to communities
Our Priorities Sharing Prosperity, Government of Western Australia, 2019	<ul style="list-style-type: none"> • Job creation and economic diversification in regional economies • Partnerships between local government, industry and local businesses in regional economies
Strategic Directions: 2020-2023 (DLGSC)	<ul style="list-style-type: none"> • Promote participation and achievement in culture and arts • Local Government capability building
Community Infrastructure and Open Space Strategy and Community Infrastructure Implementation Plan (DLGSC)	<ul style="list-style-type: none"> • Consider shared use/co-location of open spaces and community infrastructure facilities and develop appropriate procedures and management requirements
Shire of Murchison Strategic Community Plan 2016/16 - 2026/27	<ul style="list-style-type: none"> • Interpretive centre and decentralisation of tourism infrastructure were featured as high priorities with community members • Develop the region's economic potential to encourage families and businesses to stay in the area. • Develop tourism in the Settlement, building on the presence of SKA. More economic activity = more people = more opportunities for the Murchison.

3.0 INVESTMENT PROPOSAL

3.4 PARTNERS AND STAKEHOLDERS

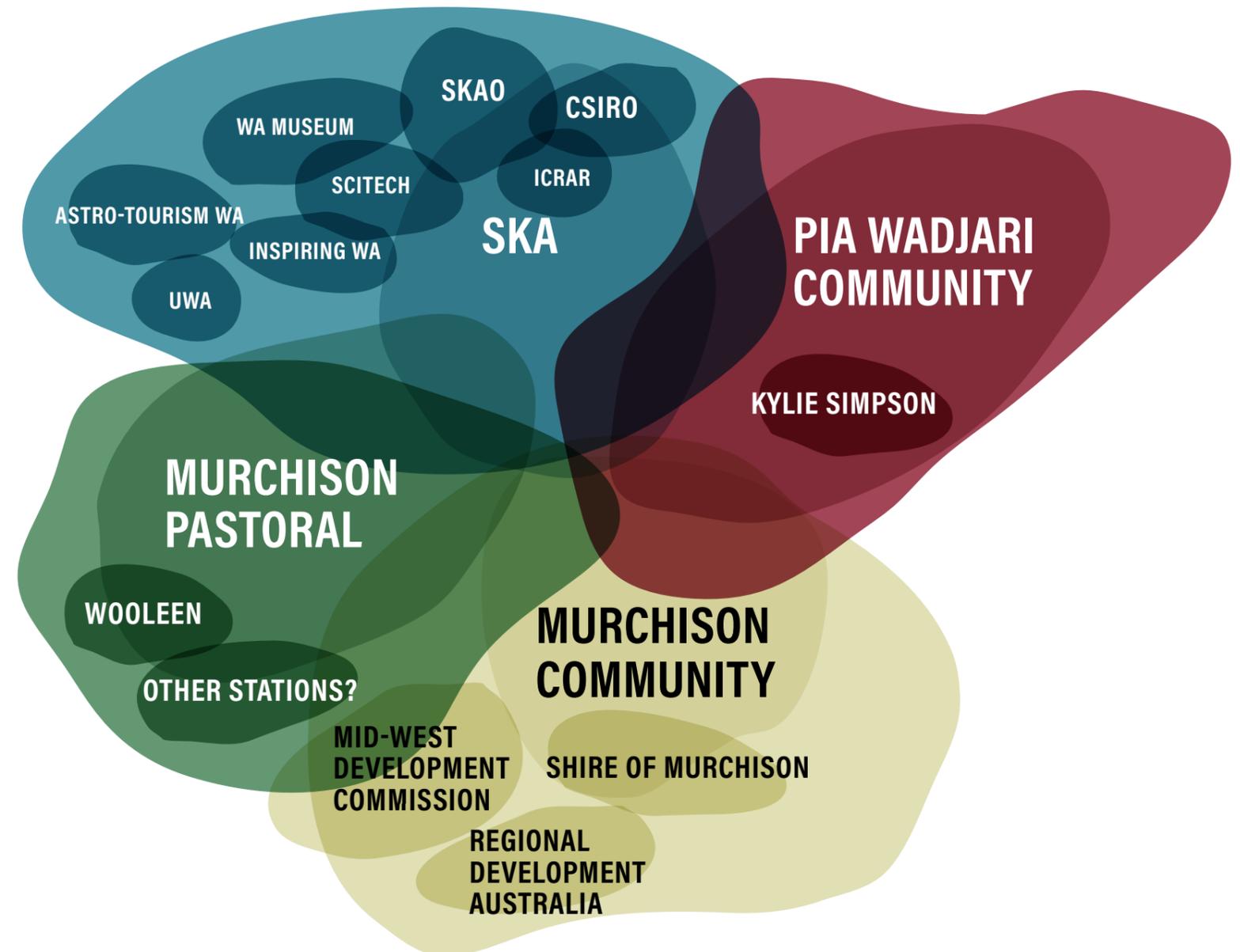
The nature of this project means that buy-in and ongoing participation from key stakeholders is critical to its success in meeting its objectives.

Stakeholders contacted and consulted with as part of the process of this business plan include:

- Shire of Murchison / Murchison Community
- Mid West Development Commission
- Regional Development Australia
- Pia Wadjari Community*
- International Centre for Radio Astronomy Research
- CSIRO
- Astrotourism WA
- Tourism WA
- SKAO
- Scitech
- WA Museum
- Inspiring Australia / WA
- Frances Pollock, Wooleen Station

The table overleaf summarises their respective roles in the development, implementation and operation of the Vast Sky Project.

*Note: So far only early engagement with the Pia Wadjari Community has been possible. See Appendix 1 for more information on the potential opportunities that have been communicated with the community in relation to the Vast Sky Project.



3.0 INVESTMENT PROPOSAL

3.4 PARTNERS AND STAKEHOLDERS

Key Stakeholder Roles

STAKEHOLDER	POTENTIAL ROLES/OPPORTUNITIES
Shire of Murchison, Murchison Community	<ul style="list-style-type: none"> • Ensure Murchison Settlement feature survey is carried out prior to detailed design of the Vast Sky Project • Ensure continuation of delivery of services and infrastructure upgrades • Lead and manage the development of the Murchison Vast Sky Interpretive Experience Project • Manage the ongoing staffing requirements • Commit to yearly commissioning of "...-in-residence" participants • Engage with the "...-in-residence" participants • Support and participate in voluntary roles in existing and new facilities eg. Museum and Interpretive Centre • Sit on the Advisory Board of this Project - see 7.2 Project Management and Governance
Mid West Development Commission	<ul style="list-style-type: none"> • Assist with securing funding and contributing to / direct funding additional research / investigations for the Vast Sky Project
Regional Development Australia	<ul style="list-style-type: none"> • Assist with securing funding and contributing to / direct funding additional research / investigations for the Vast Sky Project
Pia Wadjari Community	<ul style="list-style-type: none"> • Engage with the potential opportunities when and if they're ready. This could include direct employment in the construction and/or ongoing operations of the facilities and/or micro-business opportunities eg. cultural tours, events, market days and/or in the appropriate incorporation of Cultural Knowledge within the Interpretive displays. • Sit on the Advisory Board of this Project - see 7.2 Project Management and Governance (if desired)
International Centre for Radio Astronomy Research	<ul style="list-style-type: none"> • Sit on the Advisory Board of this Project - see 7.2 Project Management and Governance • Potential ongoing financial contributions
CSIRO, MRO	<ul style="list-style-type: none"> • Sit on the Advisory Board of this Project - see 7.2 Project Management and Governance • Assist with the development of Space Science content for the interpretive displays and signs, including their ongoing updates • Provide funding for the Space Themed Playground, as per Murchison Settlement Masterplan (2021) • Potential ongoing financial contributions • Plan MRO Open Days to have main departure point as Murchison Settlement, increase quantity of Open Days in alignment with construction outages • Sell products in Oasis Shop eg. Wajarri Astronomy Planisphere • Engage with the "...-in-residence" participants
SKAO	<ul style="list-style-type: none"> • Sit on the Advisory Board of this Project - see 7.2 Project Management and Governance • Assist with the development of Space Science content for the interpretive displays and signs, including their ongoing updates • Engage with the "...-in-residence" participants • Potential ongoing financial contributions
Astrotourism WA	<ul style="list-style-type: none"> • Assist in the coordination of achieving 'International Dark Sky Place' 'Sanctuary Accreditation' with the International Dark-Sky Association • Include Murchison Settlement in the 'Rockstars' touring route • Include Murchison Settlement in the list of Astrotourism Towns • Promote the "...-in-residence" programme
Inspiring Australia / WA, Scitech	<ul style="list-style-type: none"> • Assist in the coordination or hosting of science engagement activities and events (eg. National Science Week) in Murchison Settlement • Promote the "...-in-residence" programme • Sit on the Advisory Board of this Project - see 7.2 Project Management and Governance
Geraldton Regional Art Gallery (GRAG)	<ul style="list-style-type: none"> • Partner with the Murchison Vast Sky Interpretive Experience Project and its exhibition and digital display capabilities to display artworks of curatorial relevance • Engage with the "...-in-residence" participants • Sit on the Advisory Board of this Project - see 7.2 Project Management and Governance
Pastoral Stations (including Wooleen)	<ul style="list-style-type: none"> • Communicate to visitors about what's on offer in Murchison Settlement • Sell produce/products in Oasis Shop • Engage with the "...-in-residence" participants • Offer 'station stays' accommodation, tours and events • Sit on the Advisory Board of this Project - see 7.2 Project Management and Governance

4.0 PROJECT SCOPE



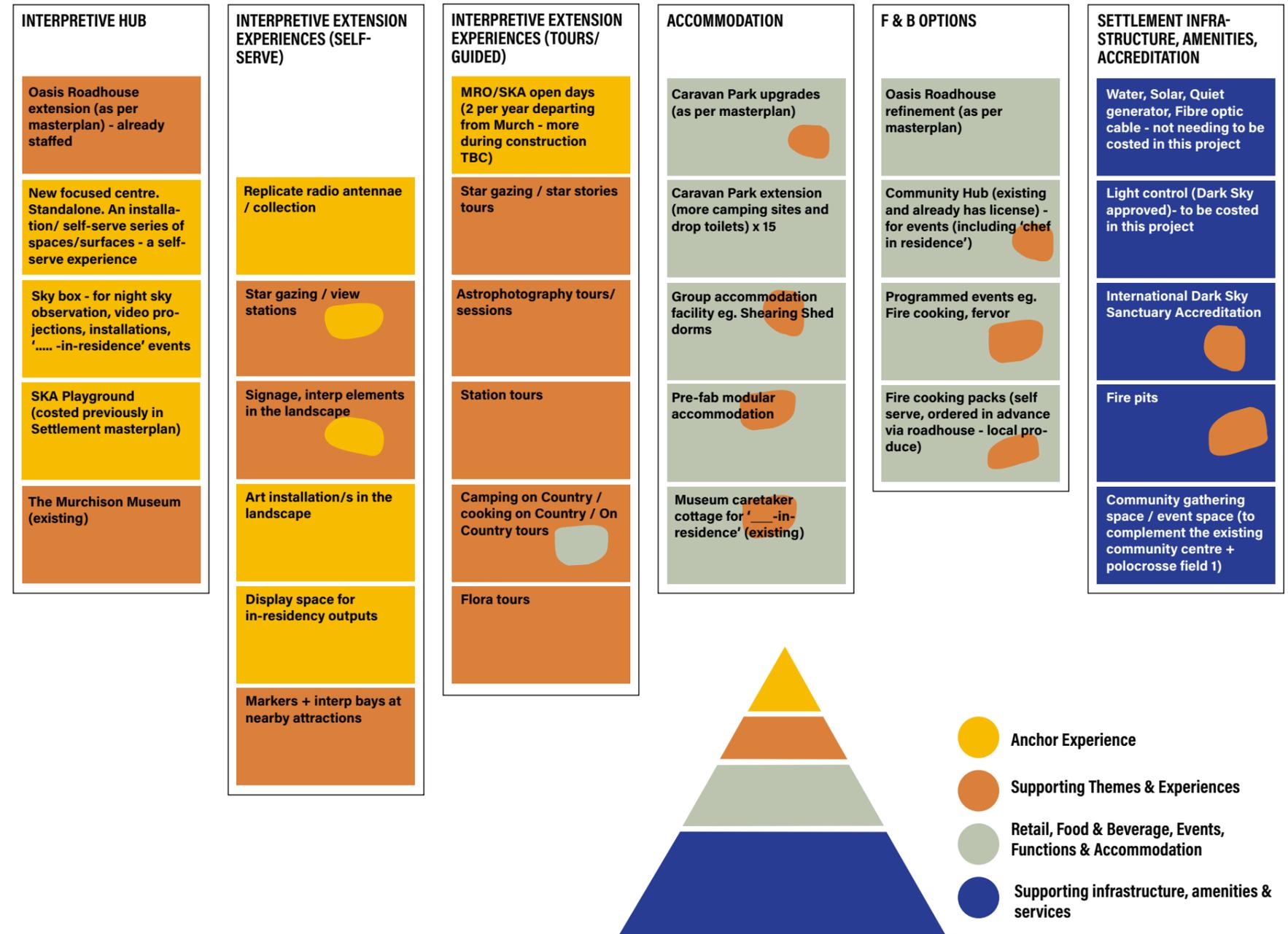
4.0 PROJECT SCOPE

4.1 PROJECT APPROACH

The approach for the proposed Project is a 'wide-net, light-touch' scenario that builds on the Murchison Masterplan and connects with the existing assets and attractions in and around Murchison Settlement. It locates a number of different spaces and built forms in a connected network of new elements that complement and connect to existing assets, attractions and amenities of Murchison Settlement to collectively provide for a series of experiences and opportunities. It has been conceived to be delivered in three stages.

The scenario has been configured as follows:

- The SKA Interpretive Experience is the anchor experience, presenting the components that are essential for a quality experience.
- The infrastructure, services, and amenities need to meet the basic needs of visitors and make it easy to get around.
- The retail and food offering and accommodation provisions make it accessible, encourage longer visitation (and spend) and further enrich the experience.
- The supporting and anchor experiences create an emotional connection, and act as key drivers of visitation, creating awareness of the Murchison and the SKA, nationally and internationally.



4.0 PROJECT SCOPE

4.2 PROJECT SUMMARY: ALL STAGES INCLUDING MASTERPLAN

DESCRIPTION	RATIONALE	SPATIALISATION
<p>Masterplan components:</p> <ul style="list-style-type: none"> • SKA / Space-themed playground; • Swimming Pool and splashpad; • Community Centre upgrades; • Caravan Park Extensions; • Museum Extension; and • Public open spaces and pathways. <p>Stage 1 components:</p> <ul style="list-style-type: none"> • A multi-functional Interpretive Centre; • A "Skybox" AV facility with viewing deck; • A "Skybox Out of Place" facility that exists elsewhere • 5 glamping-style accommodation cabins; • Oasis Caravan Park extension; • 2x "sky-view" camp fire seating nodes; • Multiple interpretive nodes of signage, replica SKA-Low antennas; • An "...-in-residence' program; and • Trails and pathways. <p>Stage 2 components:</p> <ul style="list-style-type: none"> • The large roof, slab, ablutions and kitchen of a dorm-style accommodation facility; • 5 glamping-style accommodation cabins; • 1x "sky-view" camp fire seating node; • Oasis Caravan Park extension; and • Site responsive sculptural artwork/s - an output of the inaugural '...-in-residence' program. <p>Stage 3 components:</p> <ul style="list-style-type: none"> • The room 'pods' of the dorm-style shared accommodation facility; • 5 glamping-style accommodation cabins; • 1x "sky-view" camp fire seating node; and • Final extension to the Oasis Caravan Park. 	<p>Estimated total cost:</p> <ul style="list-style-type: none"> • \$21,840,000 (Masterplan not included) <p>Required to:</p> <ul style="list-style-type: none"> • Provide multiple opportunities, spaces and facilities to communicate and present compelling, educational and insightful information about the science being carried out at the MRO and SKA ; • Holistically present Murchison life in addition to the SKA eg pastoralism, Wajarri culture, Wajarri art, geotourism, astrotourism etc; • Boost Shire tourism attractions to attract domestic and international visitors to the region and to the Settlement; • Bolster accommodation provisions and accommodation options; • Improve community facilities and amenities for locals and visitors of all ages; • Support and grow the local economy; and • Attract and retain staff in the region. 	<p>STAGE 1</p> <ul style="list-style-type: none"> 1 Interpretive Centre 2 Sky box (in place) 3 Sky box (out of place - exists elsewhere) 4 Stars and fires pathway 5 Caravan Park Additional Extension Stage 1 6 Glamping cabins Stage 1 7 Flora + SKA Discovery Trail <p>STAGE 2</p> <ul style="list-style-type: none"> 8 Shared Accomm. Roof + Kitchen + Ablutions 9 Caravan Park Additional Extension Stage 2 10 Glamping cabins Stage 2 11 Art + Interpretation Installation <p>STAGE 3</p> <ul style="list-style-type: none"> 12 Shared Accomm. Rooms 13 Caravan Park Additional Extension Stage 3 14 Glamping cabins Stage 3 <p>MASTERPLAN</p> <ul style="list-style-type: none"> A SKA Playground B Swimming Pool and Splashpad C Community Centre D Caravan Park Extension E POS / Community Space Park F Perimeter Walk and Road Realignment G Oasis Roadhouse / Motel - extension + external space H Carpark and vehicular access to polocrosse fields I Main loop walk J Parking Edge K Museum Extension & Viewing Lawn

4.0 PROJECT SCOPE

4.2 PROJECT SUMMARY: ALL STAGES INCLUDING MASTERPLAN



- 1 Interpretive Centre (right) - Stage 1
- 2 Sky box In-place (left) - Stage 1
- A SKA Playground (behind) - Masterplan



- 1 Interpretive Centre (left) - Stage 1
- 2 Sky box In-place (right) - Stage 1
- A SKA Playground (right) - Masterplan



- 1 Interpretive Centre (left) - Stage 1
- 2 Sky box In-place (right) - Stage 1
- A SKA Playground (right) - Masterplan



- 8 12 Shared Accom. Roof + Kitchen + Ablutions (Stage 2) + Room Pods (Stage 3)



- 8 12 Shared Accom. Roof + Kitchen + Ablutions (Stage 2) + Room Pods (Stage 3)



- 2 Sky box In-place



- 4 'Sky view' campfire seating node (multiple locations, multiple stages)



- 10 Glamping Immersive Accommodation Cabin (multiple stages)

4.0 PROJECT SCOPE

4.3 STAGE 1

COMPONENTS	RATIONALE	SPATIALISATION
<p>Components include:</p> <ul style="list-style-type: none"> • A multi-functional, largely self-service Interpretive Centre that doubles as a large, shaded gathering and event space in the centre of the Settlement; • A "Skybox" facility that is equipped with interactive multimedia capabilities and doubles as a viewing deck; • A "Skybox Out of Place" facility that is located in places other than Murchison Settlement to communicate about the Murchison 'Vast Sky' Experience • 5 glamping-style accommodation cabins; • An extension to the Oasis Caravan Park to provide additional camp sites and ablutions; • 2x "sky-view" camp fire seating nodes; • Multiple interpretive nodes of signage, replica SKA-Low antennas; • An "....-in-residence" program that situates artists, scientists, chefs, researchers and more within the Settlement and results in artworks, events, guided tours and the sharing of specialist knowledge; and • Trails and pathways to connect and extend the experiences provided for. 	<p>Estimated total cost:</p> <ul style="list-style-type: none"> • \$10,396,000 <p>Required to:</p> <ul style="list-style-type: none"> • Bolster the priority assets and facilities within the Masterplan, with particular focus given to multi-purpose interpretive and community amenity spaces within the civic spine between Oasis Roadhouse and the Council Chambers; • Meet accommodation demands from growth in tourism; and • Extend the range of accommodation options within the Settlement <p>Operational by:</p> <ul style="list-style-type: none"> • 2025 	<p>STAGE 1</p> <ul style="list-style-type: none"> 1 Interpretive Centre 2 Sky box (in place) 3 Sky box (out of place - exists elsewhere) 4 Stars and fires pathway 5 Caravan Park Additional Extension Stage 1 6 Glamping Stage 1 7 Flora + SKA Discovery Trail <p>STAGE 2</p> <ul style="list-style-type: none"> 8 Shared Accom. Roof + Kitchen + Ablutions 9 Caravan Park Additional Extension Stage 2 10 Glamping Stage 2 11 Art + Interpretation Installation <p>STAGE 3</p> <ul style="list-style-type: none"> 12 Shared Accom. Rooms 13 Caravan Park Additional Extension Stage 3 14 Glamping Stage 3

4.0 PROJECT SCOPE

4.4 STAGE 2

COMPONENTS	RATIONALE	SPATIALISATION
<p>Key components:</p> <ul style="list-style-type: none"> The large roof, slab, ablutions and camp kitchen of a dorm-style shared accommodation facility; 5 glamping-style accommodation cabins, with central "sky-view" camp fire seating node; Another extension to the Oasis Caravan Park to provide additional camp sites and ablutions; and Site responsive sculptural artwork/s - the first output of the inaugural '...in-residence' program. 	<p>Estimated total cost:</p> <ul style="list-style-type: none"> \$6,208,000 <p>Required to:</p> <ul style="list-style-type: none"> Meet accommodation demands from growth in tourism; and Broaden the appeal of Murchison Settlement to potential visitors - with contemporary art and further accommodation choice added to the mix. <p>Operational by:</p> <ul style="list-style-type: none"> 2028 	<p>STAGE 1</p> <ul style="list-style-type: none"> 1 Interpretive Centre 2 Sky box (in place) 3 Sky box (out of place - exists elsewhere) 4 Stars and fires pathway 5 Caravan Park Additional Extension Stage 1 6 Glamping Stage 1 7 Flora + SKA Discovery Trail <p>STAGE 2</p> <ul style="list-style-type: none"> 8 Shared Accom. Roof + Kitchen + Ablutions 9 Caravan Park Additional Extension Stage 2 10 Glamping Stage 2 11 Art + Interpretation Installation <p>STAGE 3</p> <ul style="list-style-type: none"> 12 Shared Accom. Rooms 13 Caravan Park Additional Extension Stage 3 14 Glamping Stage 3

4.0 PROJECT SCOPE

4.5 STAGE 3

COMPONENTS	RATIONALE	SPATIALISATION
<p>Key components:</p> <ul style="list-style-type: none"> The room 'pods' of the dorm-style shared accommodation facility (placed beneath the large roof of Stage 2); 5 glamping-style accommodation cabins with central "sky-view" camp fire seating node; and Final extension to the Oasis Caravan Park to provide additional camp sites and ablutions. 	<p>Estimated total cost:</p> <ul style="list-style-type: none"> \$5,236,000 <p>Required to:</p> <ul style="list-style-type: none"> Meet accommodation demands from growth in tourism Boost Shire tourism attractions to attract domestic and international visitors to the region and to the Settlement; Support and grow the local economy <p>Operational by:</p> <ul style="list-style-type: none"> 2032 	<p>STAGE 1</p> <ul style="list-style-type: none"> 1 Interpretive Centre 2 Sky box (in place) 3 Sky box (out of place - exists elsewhere) 4 Stars and fires pathway 5 Caravan Park Additional Extension Stage 1 6 Glamping Stage 1 7 Flora + SKA Discovery Trail <p>STAGE 2</p> <ul style="list-style-type: none"> 8 Shared Accom. Roof + Kitchen + Ablutions 9 Caravan Park Additional Extension Stage 2 10 Glamping Stage 2 11 Art + Interpretation Installation <p>STAGE 3</p> <ul style="list-style-type: none"> 12 Shared Accom. Rooms 13 Caravan Park Additional Extension Stage 3 14 Glamping Stage 3

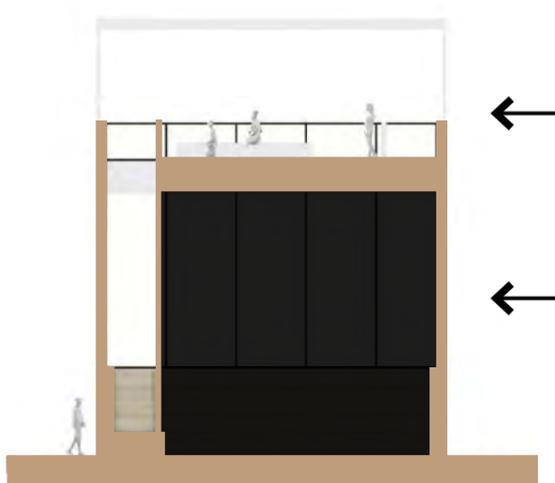
4.0 PROJECT SCOPE

4.6 COMPONENTS: 1 INTERPRETIVE CENTRE

DESCRIPTION	RATIONALE	VISUALISATION
<p>A multi-functional, largely self-service Interpretive Centre that doubles as a large, shaded gathering and event space in the centre of the Settlement.</p> <p>The interpretive centre comprises a large roof and a couple of rooms underneath which can be closed and climate-controlled to make them able to display digital and interactive interpretive content.</p> <p>The open spaces beneath the large roof can flexibly function as an semi indoor-outdoor display space for larger, non-digital interpretive content, or as an event space for community gatherings or regional events.</p> <p>The Interpretive Centre's location along the civic spine of the Settlement, in close proximity to the community centre and the polo-crosse field, means that it is well placed to serve the community in a variety of ways, including as a complementary amenity to existing events like the yearly Polo-crosse tournament, which currently attracts more than a hundred visitors over 2 days.</p>	<p>Required to:</p> <ul style="list-style-type: none"> Facilitate the display of varying types of interpretive content. Potentially display outputs of / provide space for events from the 'in-residence' program Add multi-pronged value to the community, as a flexible, comfortable and inclusive amenity space. Boost Shire tourism attractions to attract domestic and international visitors to the region and to the Settlement. <p>Operational by:</p> <ul style="list-style-type: none"> 2025 (Stage 1) 	 <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> ↑ Flexible, shaded areas with direct connection to Skybox, SKA space-themed playground, polocrosse fields and community centre </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> ↑ ↑ Rooms that can be closed and climate-controlled </div> </div>

4.0 PROJECT SCOPE

4.6 COMPONENTS: 2 SKYBOX IN-PLACE

DESCRIPTION	RATIONALE	VISUALISATION
<p>A "Skybox" facility that is equipped with interactive multimedia capabilities and doubles as a viewing deck for spectacular sunset and night sky views.</p> <p>The Skybox in-place facility comprises a climate-controlled 'black-box' room underneath an open air roof deck with shade canopy configured to allow for views to the night sky.</p> <p>The 'black-box' internal space allows for the display of digital media, such as the 360 degree immersive films 'Beyond the Milky Way' and 'Star Dreaming'. This space could also be used for sound, music and smaller-scale theatre performances, as well as art exhibitions.</p> <p>The roof deck is a space to capture views of the sky and across the landscape and Settlement from an elevated position. Its size caters for small groups to gather and smaller events to take place. The shade canopy is an opportunity for integrated artwork - it could potentially be a large-scale canvas for a local artist's work.</p>	<p>Required to:</p> <ul style="list-style-type: none"> Facilitate the display of varying types of interpretive content, especially interactive digital displays, immersive media and artworks within its interior. Potentially display outputs of / provide space for events from the 'in-residence' program Add multi-pronged value to the community, as a view point and collective gathering place. Instill pride in the community, especially if the opportunity to integrate artwork in the canopy is taken on. <p>Operational by:</p> <ul style="list-style-type: none"> 2025 (Stage 1) 	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">  <p style="text-align: center;">2</p> </div> <div style="width: 45%;">  <p>Integrated artwork opportunity</p>  <p>Expansive views</p> <p>Immersive media</p>  </div> </div> <div style="text-align: center; margin-top: 20px;"> <p>Flexible, shaded areas with direct connection to Skybox, SKA space-themed playground, polocrosse fields and community centre</p> </div>

4.0 PROJECT SCOPE

4.6 COMPONENTS: 3 SKY BOX OUT-OF-PLACE (EXISTS ELSEWHERE)

DESCRIPTION	RATIONALE	VISUALISATION
<p>The 'Sky Box Out-of-place' is configured to be a touring component of the Vast Sky experience - generating intrigue and interest in the project from a distance, be that from places within the region (eg. Geraldton), within the state (eg. Perth) or further afield within Australia.</p> <p>It is a straight-forward structure that can be assembled, dismantled and reassembled in multiple places over its lifetime.</p> <p>Its interior is configured to cater for small groups of people to view and experience immersive digital media that tells stories and reveals information.</p>	<p>Required to:</p> <ul style="list-style-type: none">• Generate intrigue and interest about the Vast Sky Project, the SKA-Low, the MRO, the Mid-West region and local characters and communities to entice more visitation. <p>Operational by:</p> <ul style="list-style-type: none">• 2025 (Stage 1)	 <p>Smaller in scale than the 'Sky Box In-place', the 'Sky Box Out-of-place' is configured to be a touring component of the Vast Sky experience - generating intrigue and interest in the project from a distance.</p>

4.0 PROJECT SCOPE

4.6 COMPONENTS: GLAMPING (IMMERSIVE ACCOMMODATION CABINS)

DESCRIPTION	RATIONALE	VISUALISATION
<p>The Vast Sky Project includes a total of 15 'glamping-style' 'immersive accommodation' cabins, located within the boundary of Murchison Settlement, but at enough of a distance that they prioritise the feeling of being surrounded by the sky and landscape.</p> <p>The cabins are planned to be implemented across all three proposed stages (5 cabins each stage), with each grouping of 5 being connected to a central 'sky-view campfire node' that facilitates memorable shared sky view experiences.</p>	<p>Required to:</p> <ul style="list-style-type: none"> • Bolster accommodation provisions and accommodation options within the Settlement, and to capitalise on the increased interest in 'glamping-style,' 'immersive accommodation' experiences. • Meet accommodation demands from growth in tourism; and <p>Operational by:</p> <ul style="list-style-type: none"> • 2025 (Stage 1), 2028 (Stage 2), 2032 (Stage 3) 	 <div> </div> <div> <p>Configured to facilitate sky views</p> </div> <div> <p>Immersive accommodation cabins, positioned within the settlement, but at enough of a distance that they enable the feeling of being surrounded by sky and landscape.</p> </div>

4.0 PROJECT SCOPE

4.6 COMPONENTS: SKY-VIEW CAMPFIRE NODES, PATHWAYS

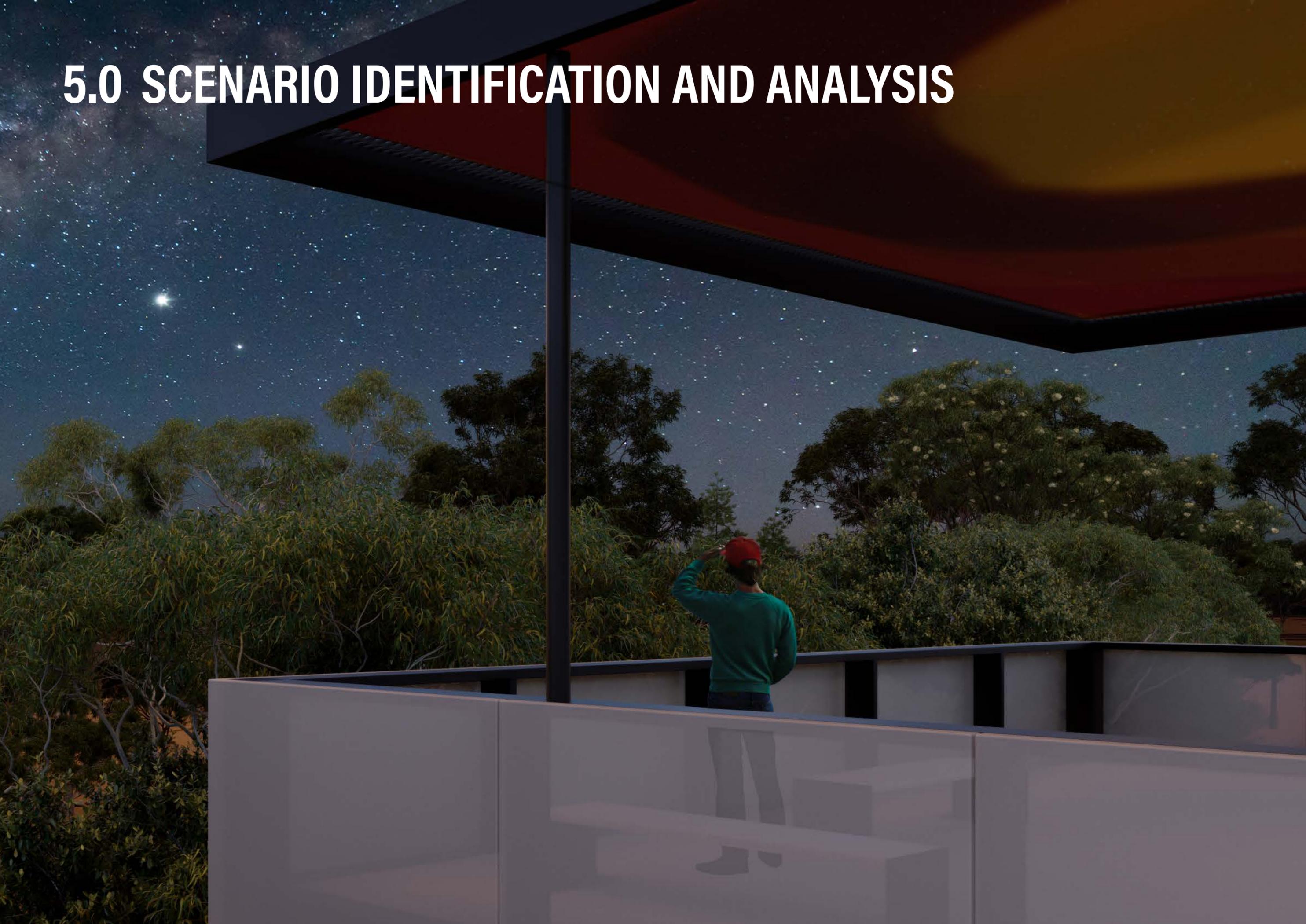
DESCRIPTION	RATIONALE	VISUALISATION
<p>The Vast Sky Project includes a total of 4 Sky-View campfire nodes - one positioned to the east of the main Polo-crosse field, for use by locals and visitors, including caravan park users and people who are in Murchison Settlement for events. The three other campfire nodes are positioned in the centre of each of the 5 glamping cabin groupings to facilitate memorable shared sky view experiences for visitors to the cabins.</p> <p>The nodes consist of reclining chairs that allow sitters to focus on the sky, around a central campfire made from local stone.</p>	<p>Required to:</p> <ul style="list-style-type: none">• Add multi-pronged value to the community, as a sky-focused gathering place, potentially adding opportunities for microbusinesses (eg. tours)• Boost Shire tourism attractions to attract domestic and international visitors to the region and to the Settlement.• Service the new accommodation types, adding value to their offer. <p>Operational by:</p> <ul style="list-style-type: none">• 2025 (Stage 1), 2028 (Stage 2), 2032 (Stage 3)	 <p>A series of reclining chairs that allow sitters to focus on the sky, around a central campfire made from local stone.</p>

4.0 PROJECT SCOPE

4.6 COMPONENTS: SHARED ACCOMMODATION

DESCRIPTION	RATIONALE	VISUALISATION
<p>Designed to be delivered in two stages, the shared accommodation is essentially a large roof with a shared 'camp kitchen,' ablutions and a series of room pods placed underneath, located in close proximity to the Oasis Caravan Park and main Polo-Crosse field.</p> <p>In Stage 2, the large roof and slab, shared kitchen and ablutions are constructed. The space under the roof could become a place for people to pull up their own swag during this time.</p> <p>In Stage 3, room pods are placed underneath.</p>	<p>Required to:</p> <ul style="list-style-type: none">• Bolster accommodation provisions and accommodation options within the Settlement, particularly the group tour, bus tour and education group markets.• Provide amenity to the Caravan Park and large-scale local events (eg. Polo-crosse tournaments) <p>Operational by:</p> <ul style="list-style-type: none">• 2028 (Stage 2), 2032 (Stage 3)	 <p>A large roof with a shared 'camp kitchen,' ablutions and a series of room pods placed underneath, located in close proximity to the Oasis Caravan Park and main Polo-Crosse field</p>

5.0 SCENARIO IDENTIFICATION AND ANALYSIS



5.0 SCENARIO IDENTIFICATION AND ANALYSIS

5.1 CONSIDERED SCENARIOS OVERVIEW

Multiple scenarios were considered by the Vast Sky Project team in the lead up to the second workshop, and three were identified, spatialised and discussed with the Working Group in June 2022. Common to each scenario is the aim of complementing and connecting to the Murchison Settlement Masterplan components and Murchison Settlement Infrastructure upgrades with a mixture of interpretive provisions, accommodation provisions, F&B provisions and additional public open space amenities.

The three scenarios presented and discussed were:

- Scenario 1: A 'Wide Net, Light Touch' scenario delivered in three stages. This scenario proposed the addition multiple smaller-scale interventions, including modular accommodation and a series of self-serve interpretive hubs and elements.
- Scenario 2: A 'Bold' scenario that proposed a single-stage delivery of two permanent new built facilities – a staffed Interpretive Hub and Visitor Centre and a dorm-style accommodation building added to the Oasis Caravan Park.
- Scenario 3: A scenario termed 'Opal' that proposed a single-stage delivery of one permanent new built facility that integrated an iconic interpretive experience centre with a limited offering of boutique accommodation.

SCENARIO 1

SCENARIO 1 (SMALL) - THE PARTS

Interpretive Hub	Interpretive Extension Experiences (self-serve)	Interpretive Extension Experiences (non-permanent)	Accommodation	F & B options	Settlement infrastructure, amenities, accreditation
<ul style="list-style-type: none"> Dark Roadhouse extension (as per masterplan) - already staffed New focused centre, Standalone. An installation self-serve series of spaces/experiences - a self-serve experience New focused centre, Standalone, a building - requires upgrade New focused centre, small-scale accommodation - integrated 	<ul style="list-style-type: none"> Sky box Replicate radio antennae / collection Star gazing / view stations Signage, interpretive elements in the landscape Art installation/s in the landscape Display space for in-residency outputs Markers + interpretive at nearby locations - eg. "The end of the world" of Murchison Settlement, then there is a sandy beach 	<ul style="list-style-type: none"> MRO/SKA open days (2 per year departing from March) Star gazing / star stories tours Adoptive photography tours / sessions Station tours Camping on Country Flora tours 	<ul style="list-style-type: none"> Caravan Park upgrades (as per masterplan) Caravan Park extension (more camping sites and sleep hatches) Group accommodation facility eg. Shearling Shed dorms Pre-fab modular accommodation Museum caretaker cottage for "..." in-residence Small-scale accommodation integrated with interpretive centre 	<ul style="list-style-type: none"> Dark Roadhouse extension (as per masterplan) Community Hub (already has license), for events (including "Out in residence") Programmed events eg. Fire cooking, forer Fire cooking packs (self-serve, ordered in advance via roadside - local produce) Small-scale provider integrated with interpretive centre - day camp, coffee, light food for proximity 	<ul style="list-style-type: none"> Water Solar, Quiet generator Fire optic cable Light control International Dark Sky Sanctuary Accreditation Fire pits Community gathering space / event space

SCENARIO 1 (MED) - THE PARTS

Interpretive Hub	Interpretive Extension Experiences (self-serve)	Interpretive Extension Experiences (non-permanent)	Accommodation	F & B options	Settlement infrastructure, amenities, accreditation
<ul style="list-style-type: none"> Dark Roadhouse extension (as per masterplan) - already staffed New focused centre, Standalone. An installation self-serve series of spaces/experiences - a self-serve experience New focused centre, Standalone, a building - requires upgrade New focused centre, small-scale accommodation - integrated 	<ul style="list-style-type: none"> Sky box Replicate radio antennae / collection Star gazing / view stations Signage, interpretive elements in the landscape Art installation/s in the landscape Display space for in-residency outputs Markers + interpretive at nearby locations - eg. "The end of the world" of Murchison Settlement, then there is a sandy beach 	<ul style="list-style-type: none"> MRO/SKA open days (2 per year departing from March) Star gazing / star stories tours Adoptive photography tours / sessions Station tours Camping on Country / On Country tours Flora tours 	<ul style="list-style-type: none"> Caravan Park upgrades (as per masterplan) Caravan Park extension (more camping sites and sleep hatches) Group accommodation facility eg. Shearling Shed dorms Pre-fab modular accommodation Museum caretaker cottage for "..." in-residence Small-scale accommodation integrated with interpretive centre 	<ul style="list-style-type: none"> Dark Roadhouse extension (as per masterplan) Community Hub (already has license), for events (including "Out in residence") Programmed events eg. Fire cooking, forer Fire cooking packs (self-serve, ordered in advance via roadside - local produce) Small-scale provider integrated with interpretive centre - day camp, coffee, light food for proximity 	<ul style="list-style-type: none"> Water Solar, Quiet generator Fire optic cable Light control International Dark Sky Sanctuary Accreditation Fire pits Community gathering space / event space

SCENARIO 1 (LARGE) - THE PARTS

Interpretive Hub	Interpretive Extension Experiences (self-serve)	Interpretive Extension Experiences (non-permanent)	Accommodation	F & B options	Settlement infrastructure, amenities, accreditation
<ul style="list-style-type: none"> Dark Roadhouse extension (as per masterplan) - already staffed New focused centre, Standalone. An installation self-serve series of spaces/experiences - a self-serve experience New focused centre, Standalone, a building - requires upgrade New focused centre, small-scale accommodation - integrated 	<ul style="list-style-type: none"> Sky box Replicate radio antennae / collection Star gazing / view stations Signage, interpretive elements in the landscape Art installation/s in the landscape Display space for in-residency outputs Markers + interpretive at nearby locations - eg. "The end of the world" of Murchison Settlement, then there is a sandy beach 	<ul style="list-style-type: none"> MRO/SKA open days (2 per year departing from March) Star gazing / star stories tours Adoptive photography tours / sessions Station tours Camping on Country / On Country tours Flora tours 	<ul style="list-style-type: none"> Caravan Park upgrades (as per masterplan) Caravan Park extension (more camping sites and sleep hatches) Group accommodation facility eg. Shearling Shed dorms Pre-fab modular accommodation Museum caretaker cottage for "..." in-residence Small-scale accommodation integrated with interpretive centre 	<ul style="list-style-type: none"> Dark Roadhouse extension (as per masterplan) Community Hub (already has license), for events (including "Out in residence") Programmed events eg. Fire cooking, forer Fire cooking packs (self-serve, ordered in advance via roadside - local produce) Small-scale provider integrated with interpretive centre - day camp, coffee, light food for proximity 	<ul style="list-style-type: none"> Water Solar, Quiet generator Fire optic cable Light control International Dark Sky Sanctuary Accreditation Fire pits Community gathering space / event space

SCENARIO 2

SCENARIO 2 - THE PARTS

Interpretive Hub	Interpretive Extension Experiences (self-serve)	Interpretive Extension Experiences (non-permanent)	Accommodation	F & B options	Settlement infrastructure, amenities, accreditation
<ul style="list-style-type: none"> Dark Roadhouse extension (as per masterplan) - already staffed New focused centre, Standalone. An installation self-serve series of spaces/experiences - a self-serve experience New focused centre, Standalone, a building - requires upgrade New focused centre, small-scale accommodation - integrated 	<ul style="list-style-type: none"> Sky box Replicate radio antennae / collection Star gazing / view stations Signage, interpretive elements in the landscape Art installation/s in the landscape Display space for in-residency outputs Markers + interpretive at nearby locations - eg. "The end of the world" of Murchison Settlement, then there is a sandy beach 	<ul style="list-style-type: none"> MRO/SKA open days Star gazing / star stories tours Adoptive photography tours / sessions Station tours Camping on Country Flora tours 	<ul style="list-style-type: none"> Caravan Park upgrades (as per masterplan) Caravan Park extension (more camping sites and sleep hatches) Group accommodation facility eg. Shearling Shed dorms Pre-fab modular accommodation Museum caretaker cottage for "..." in-residence Small-scale accommodation integrated with interpretive centre 	<ul style="list-style-type: none"> Dark Roadhouse extension (as per masterplan) Community Hub (already has license), for events (including "Out in residence") Programmed events eg. Fire cooking, forer Fire cooking packs (self-serve, ordered in advance via roadside - local produce) Small-scale provider integrated with interpretive centre - day camp, coffee, light food for proximity 	<ul style="list-style-type: none"> Water Solar, Quiet generator Fire optic cable Light control International Dark Sky Sanctuary Accreditation Fire pits Community gathering space / event space

SCENARIO 3

SCENARIO 3 - THE PARTS

Interpretive Hub	Interpretive Extension Experiences (self-serve)	Interpretive Extension Experiences (non-permanent)	Accommodation	F & B options	Settlement infrastructure, amenities, accreditation
<ul style="list-style-type: none"> Dark Roadhouse extension (as per masterplan) - already staffed New focused centre, Standalone. An installation self-serve series of spaces/experiences - a self-serve experience New focused centre, Standalone, a building - requires upgrade New focused centre, small-scale accommodation - integrated 	<ul style="list-style-type: none"> Sky box Replicate radio antennae / collection Star gazing / view stations Signage, interpretive elements in the landscape Art installation/s in the landscape Display space for in-residency outputs Markers + interpretive at nearby locations - eg. "The end of the world" of Murchison Settlement, then there is a sandy beach 	<ul style="list-style-type: none"> MRO/SKA open days Star gazing / star stories tours Adoptive photography tours / sessions Station tours Camping on Country Flora tours 	<ul style="list-style-type: none"> Caravan Park upgrades (as per masterplan) Caravan Park extension (more camping sites and sleep hatches) Group accommodation facility eg. Shearling Shed dorms Pre-fab modular accommodation Museum caretaker cottage for "..." in-residence Small-scale accommodation integrated with interpretive centre 	<ul style="list-style-type: none"> Dark Roadhouse extension (as per masterplan) Community Hub (already has license), for events (including "Out in residence") Programmed events eg. Fire cooking, forer Fire cooking packs (self-serve, ordered in advance via roadside - local produce) Small-scale provider integrated with interpretive centre - day camp, coffee, light food for proximity 	<ul style="list-style-type: none"> Water Solar, Quiet generator Fire optic cable Light control International Dark Sky Sanctuary Accreditation Fire pits Community gathering space / event space

180 PEOPLE PER NIGHT 300 PEOPLE PER NIGHT 300 PEOPLE PER NIGHT

5.0 SCENARIO IDENTIFICATION AND ANALYSIS

5.2 CONSIDERED SCENARIO SPATIALISATIONS

Scenario 1 Components

Scenario 1: 'Wide Net, Light Touch' proposed the addition multiple smaller-scale interventions, including modular accommodation and a series of self-serve interpretive hubs and elements, delivered in three stages.

Once Stage 3 is complete and in operation, this scenario provides accommodation for 190 people within the Murchison Settlement.

Stage 1 (Small)

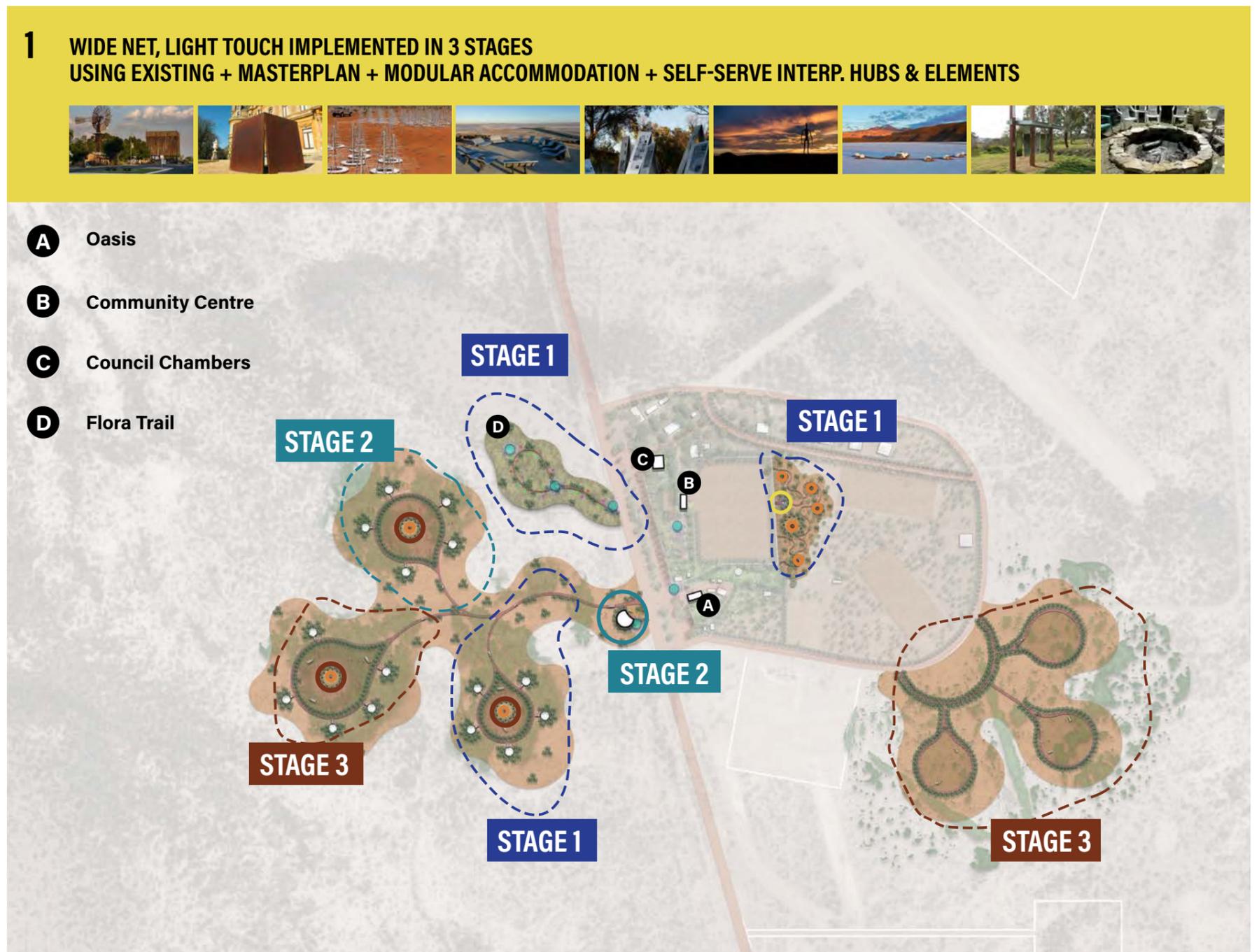
- Interpretive Info Station within Oasis Roadhouse
- Sky Box
- Firepits and stargazing stations / sky seats
- SKA Replica Antenna / Interp markers
- 5 Pre-fabricated Glamping domes
- Artist-in-residence sculptural installations

Stage 2 (Med)

- Standalone Interpretive Installation (self-serve)
- 5 Pre-fabricated Glamping domes

Stage 3 (Large)

- Camping sites and drop toilets
- 5 Pre-fabricated Glamping domes



5.0 SCENARIO IDENTIFICATION AND ANALYSIS

5.2 CONSIDERED SCENARIO SPATIALISATIONS

Scenario 2: 'Bold'

This scenario proposed a single-stage delivery of two permanent new built facilities – a staffed Interpretive Hub and Visitor Centre and a dorm-style accommodation building added to the Oasis Caravan Park.

Once in operation, this scenario provides accommodation for 170 people within the Murchison Settlement.

Components

- Standalone Interpretive Centre (staffed)
- Shearer's Quarters Style Dorms
- Firepits and stargazing stations / sky seats
- SKA Replica Antenna / Interpretive markers
- Artist-in-residence sculptural installations
- Camping sites and drop toilets

2 BOLD USING EXISTING + MASTERPLAN + 2X PERMANENT, NEW BUILDINGS



5.0 SCENARIO IDENTIFICATION AND ANALYSIS

5.2 CONSIDERED SCENARIO SPATIALISATIONS

Scenario 3: 'Opal'

This scenario proposed a single-stage delivery of one permanent new built facility that integrates an iconic interpretive experience centre with a limited offering of boutique accommodation.

Components

- Integrated interp + accom + daytime cafe (staffed)
- Firepits and stargazing stations / sky seats
- SKA Replica Antenna / Interpretive markers

Once in operation, this scenario provides accommodation for 150 people within the Murchison Settlement.

3 OPAL INTEGRATED INTERP WITH ACCOMMODATION



5.0 SCENARIO IDENTIFICATION AND ANALYSIS

5.3 CONSIDERED SCENARIO ANALYSIS

	SCENARIO				
	1 SMALL	1 MED	1 LARGE	2	3
Capital Cost (Masterplan + Roadhouse + Interp Facilities)	\$7.5 - 8.5M	\$8 - 9M	\$9 - 10M	\$20 - 25M	\$15 - 18M
Operating Costs (Labour + Lifecycle + Gen Maintenance)	\$0.5M	\$0.55M	\$0.6M	\$1.5 - \$2M	\$1 - 1.5M
Potential Revenue	\$0.7-1M	\$0.8-1M	\$1 - 1.2M	\$1.2 - 1.5M	\$1.5 - \$1.8M

REVENUE ASSUMPTIONS:

Peak Season - 100 nights

All visitors stay overnight

100% Capacity during peak

\$50, \$80, \$100pp/pn net spend

Lifecycle calculated at 4% Capital cost averaged annually

5.0 SCENARIO IDENTIFICATION AND ANALYSIS

5.3 CONSIDERED SCENARIO ANALYSIS

Based on feedback for the presented scenarios, this table represents a straightforward 'scoring' in relation to the Vast Sky Project's brief.

	SCENARIO				
	1 SMALL	1 MED	1 LARGE	2	3
Create a 'must do' experience that is unique to the Murchison Settlement	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓
Attract domestic and international visitors to enjoy a range of world class experiences, leveraging off the proximity to the SKA.	✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓
Holistically present Murchison life in addition to the SKA eg pastoralism, Wajarri culture, Wajarri art, geotourism, astrotourism etc.	✓ ✓	✓ ✓	✓ ✓	✓ ✓	
Align with CSIRO's vision for sharing the SKA, SKAO (and other applicable MRO projects) and their outputs with the public.	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓
Involve management and operating models that suit the remote location and limited human resourcing (at least in the short term).	✓ ✓	✓ ✓	✓ ✓		
Facilitate broader local tourism priorities such as Wajarri tourism, Wajarri artworks, astrotourism, geotourism, agritourism and station stay tourism.	✓	✓	✓	✓	✓
Incentivise and/or enable local micro business opportunities.	✓ ✓	✓ ✓	✓ ✓	✓ ✓	
Encourage overnight stays in the Settlement, generating new accommodation demands, economic opportunities and benefits for the Shire and community.	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓
Slow down, look at the night sky, sit around a fire	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓

Shortlisted scenario:

Via consensus with the Working Group, it was decided to take forward a hybrid of mostly Scenario 1 with the addition of the shared accommodation component from Scenario 2. For the modular accommodation component, it was decided to include glamping-style 'immersive accommodation' cabins, as opposed to domes.

6.0 IMPACT EVALUATION



6.0 IMPACT EVALUATION

6.1 VISITATION AND SPENDING IMPACT - VISITOR PROFILES AND EXPERIENCES

During the scenario testing process, different visitor profiles were identified to test the feasibility of the proposed accommodation and experience offerings. These conceptual visitor profiles were developed with reference to Tourism WA research, but also expanded to include overseas visitation opportunities, especially given the international gravitas of the SKA project.

WHO	PROFILE	TARGET MARKET	ACCOM. + STAY DURATION	EXPERIENCES	OTHER PURCHASES/SUPPLIES
BOB & SHIRLEY 	<ul style="list-style-type: none"> 2 people Grey nomads late 60s Very budget conscious From SA 	<ul style="list-style-type: none"> Relax & rewind "Let's stay a while" 	<ul style="list-style-type: none"> 3 NIGHTS: Oasis caravan park - unpowered site 	<ul style="list-style-type: none"> SKA interp. experience - shed \$ SKA interp. experience - skybox Flora trail Art installations \$ Movie Night \$ Weaving session Museum 	<ul style="list-style-type: none"> \$ BBQ pack \$ Locally-made gifts \$ Fuel \$ Food supplies
BEK & JO 	<ul style="list-style-type: none"> 2 people Digital nomads Early 50s Budget aware From Norway 	<ul style="list-style-type: none"> Off the beaten track "Getting away from it all" 	<ul style="list-style-type: none"> 5 NIGHTS: Wooleen Station river campsite 	<ul style="list-style-type: none"> \$ Erabiddy Bluff Tour \$ Stargazing session \$ Movie Night SKA interp. experience - shed \$ SKA interp. experience - skybox Flora trail 	<ul style="list-style-type: none"> \$ Oasis Burgers \$ Stubby Holder \$ Locally-made socks \$ Fuel \$ Food supplies
JONES FAMILY 	<ul style="list-style-type: none"> Young family of 4 Budget aware From VIC 	<ul style="list-style-type: none"> Family fun "Extended family roadtrip" 	<ul style="list-style-type: none"> 2 NIGHTS: Oasis caravan park - powered site 	<ul style="list-style-type: none"> SKA interp. experience - shed SKA interp. experience - skybox SKA playground Flora trail Fire pits 	<ul style="list-style-type: none"> \$ BBQ pack \$ Astrophotography book \$ Learning Packs \$ Wajarri Yamatji Astronomy Planisphere \$ Fuel \$ Food supplies \$ Some meals at Oasis
SONYA 	<ul style="list-style-type: none"> Women in stem network coordinator 100 girls, 20 teachers, 10 specialist lecturers, 7 statewide STEM curriculum leaders, 6 reps from our industry sponsors 	<ul style="list-style-type: none"> Niche market (Education) ICRAR/UWA STAR GIRLS STEM-SATIONAL CAMP "STEM-sational camping fun and learning" 	<ul style="list-style-type: none"> 4 NIGHTS Oasis caravan park - powered campsites (students + teachers) Oasis caravan park - Shearer's Quarters (students + teachers) Oasis caravan park - Cabins (teachers) Glamping Pods (specialist lecturers and industry sponsors) 	<ul style="list-style-type: none"> \$ MRO Open Day Telescopes \$ Evening Tour at Wooleen \$ Stargazing session with Wajarri Elder SKA interp. experience - shed \$ SKA interp. experience - skybox 	<ul style="list-style-type: none"> Camp kitchen Fuel Snacks Some meals at Oasis
SAJITH 	<ul style="list-style-type: none"> 1 person on a photo workshop with others Astro Enthusiast / Hobby photographer Happy to invest in premium experiences From Singapore 	<ul style="list-style-type: none"> Niche market (Astrotourism) Astrophotographer Dream Weekend 	<ul style="list-style-type: none"> 2 NIGHTS : Glamping Pods 1 NIGHT : Wooleen Station Guesthouse 	<ul style="list-style-type: none"> \$ Astrophotography workshop \$ Plating up WA regional event series Wooleen Lake \$ SKA interp. experience - skybox 	<ul style="list-style-type: none"> \$ Fuel \$ Snacks \$ Some meals at Oasis

6.0 IMPACT EVALUATION

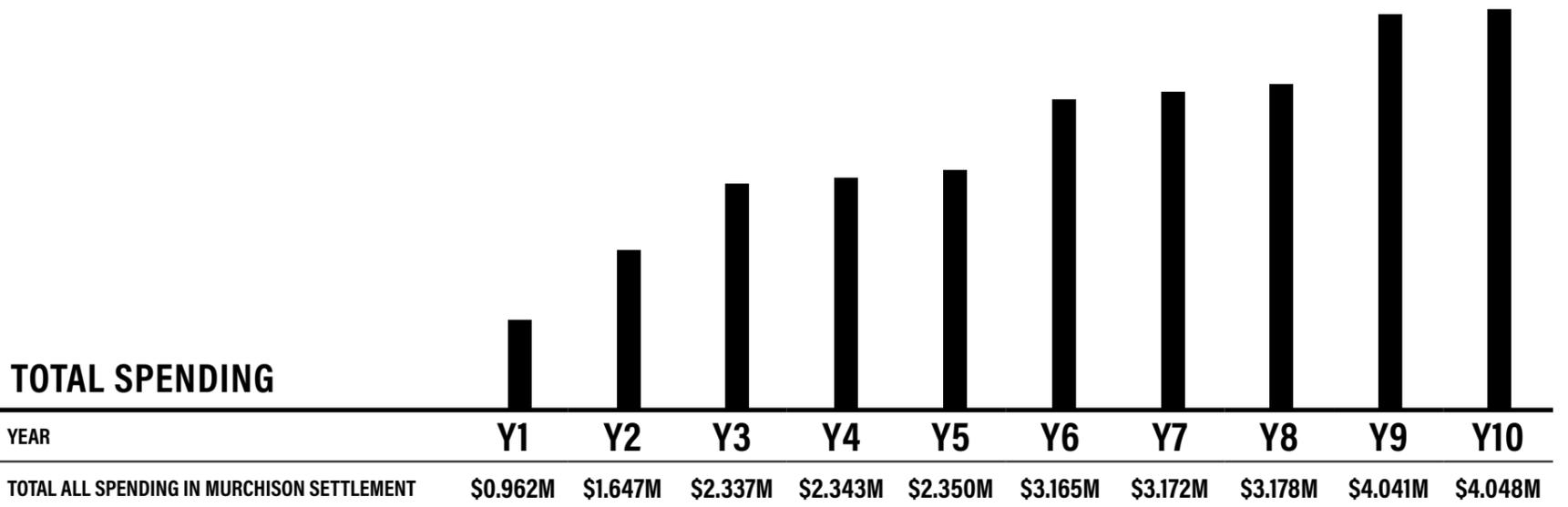
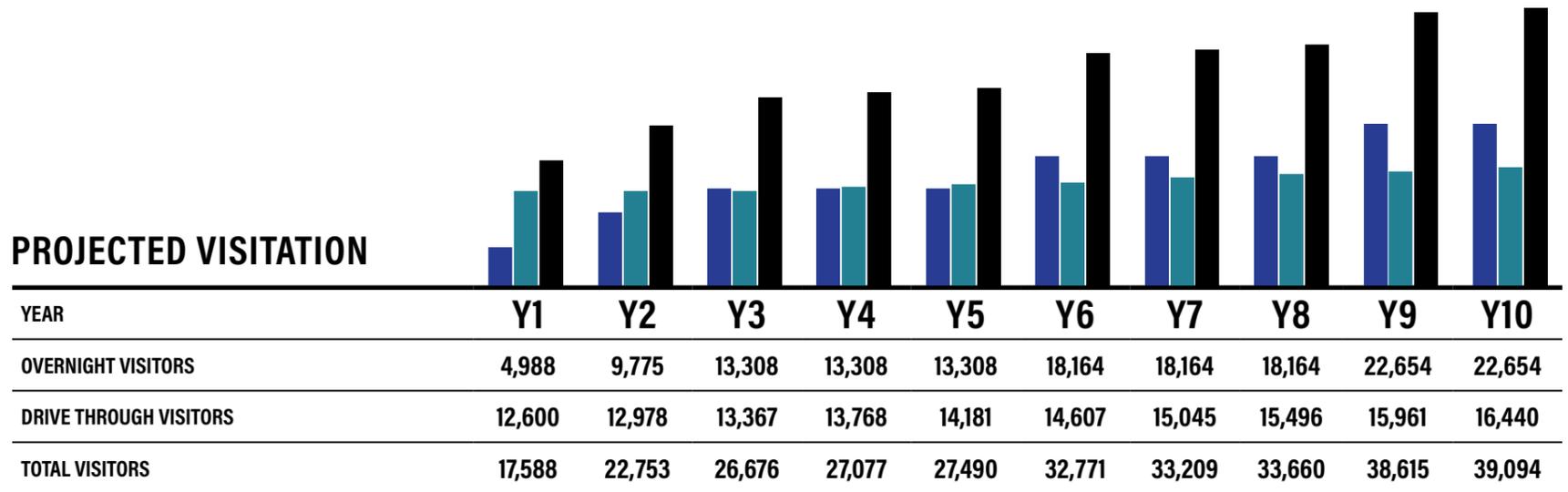
6.2 VISITATION AND SPENDING IMPACT

Preliminary indicative economic analysis of the proposed Project was undertaken. Impact relating to visitation and spending is summarised below.

Key Findings

Based on estimates of visitor numbers and spending over a 10 year period of operations (taking account of the three stages of development) key findings include:

- Accommodation data from the Murchison Roadhouse indicates approximate baseline current overnight visitors totalling 7560 visitors per annum
- Existing data on day visitors travelling through Murchison Settlement to Mt Augustus was reviewed and an annual growth rate of 3% was modelled. These day visitor estimates were used in modelling spending by those that stop at Murchison Settlement. The current estimate is 6300 vehicles (12,600 persons), increasing to 8220 vehicles (16,440 persons) in year 10.
- The increases to visitor modelling was the basis for estimating spending in Murchison by both overnight and day visitors. Total spending increases from around \$962,100 in year 1 to \$4.048 million in year 10 (this includes spending by Murchison overnight visitors elsewhere in the broader region).
- Spending on programs associated with the Vast Sky Project in around the Murchison Settlement by programs would increase from around \$82,700 in year 1 to \$253,200 in year 10.
- Overnight visitors staying at Murchison Settlement in the existing and new accommodation would also visit other locations. A conservative estimate is used, which assumes 1 night elsewhere within the region and average spending of \$100 per person. This spending by overnight visitors increases from around \$498,800 in year 1 to \$2.265 million in year 10.



6.0 IMPACT EVALUATION

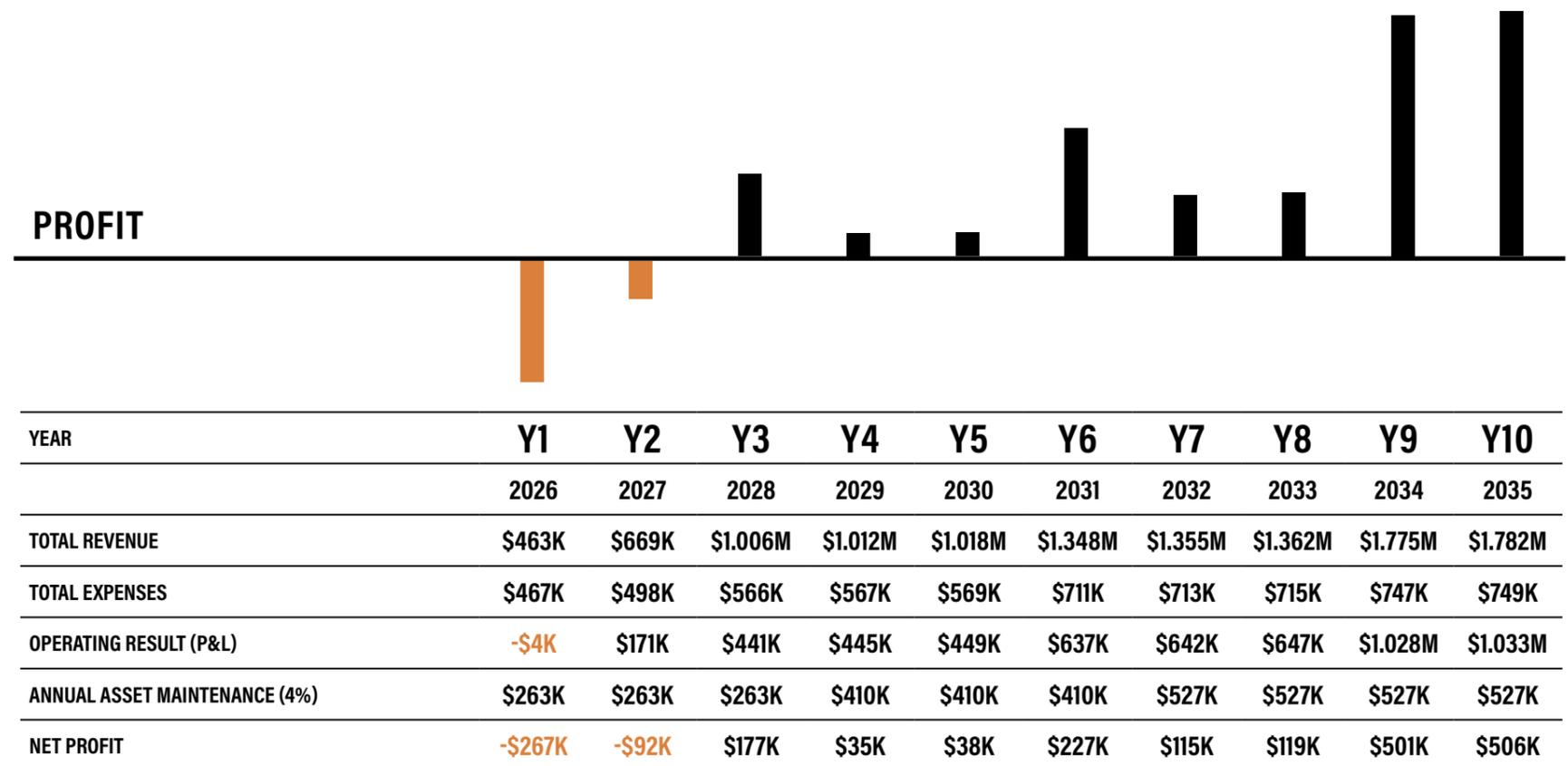
6.3 FINANCIAL ANALYSIS

Key Findings

- An indicative 10 year financial analysis was prepared. The Project achieves an operating profit from year 2, however when asset maintenance costs are taken into operating profit is achieved in year 3.

Notes to accompany the graph to the right

- Revenue includes Accommodation, Programs, and sales from overnight visitors and drive through visitors.
- Expenses includes staffing wages and salaries and operating expenses.



SOURCE: MCA MODELLING & ANALYSIS, AUGUST 2022

6.0 IMPACT EVALUATION

6.4 JOBS AND OUTPUT - CONSTRUCTION & OPERATION

An economic impact assessment of the construction phase and the operations phase. In general conservative assumptions have been used in modelling visitors and spending and key findings include:

Construction

- In Stage 1, 23.2 Full Time Equivalent jobs (FTE) would be generated – 18.7 direct jobs and 4.5 indirect/induced jobs. Of the direct jobs , 13.5 FTE would be in onsite construction, 1.9 professional jobs and 3.2 in materials and equipment supply.
- In Stage 2, 13.0 FTE jobs would be generated – 10.5 direct jobs and 2.5 indirect/induced jobs. Of the direct jobs , 7.6 FTE would be in onsite construction, 1.1 professional jobs and 1.8 in materials and equipment supply.
- In Stage 3, 10.3 full time equivalent jobs would be generated – 8.3 direct jobs and 2.0 indirect/induced jobs. Of the direct jobs , 6.0 FTE would be in onsite construction, 0.9 professional jobs and 1.4 in materials and equipment supply.

Operation

- Jobs – Murchison Settlement : When the impacts of employee spending are taken into account (indirect/ induced jobs) total jobs increase from 4.0 FTE in year 1 to 5.8 jobs in year 10.
- Jobs - Broader Region: Spending by Murchison Settlement overnight visitors in the broader region will generate additional employment. The modelling indicates that 2.5 FTE jobs would be generated in year 1 increasing to 11.1 jobs in year 10.
- Total Jobs – Murchison Settlement & Broader Region: The jobs total 6.5 FTE in year 1 increasing to 16.9 jobs in year 10.
- Total Output (Murchison and State level): the activity at Murchison Settlement resulting from this project boosts total output (assuming constant \$2022 prices) by an estimated \$1.546 million in year 1 and increasing to \$6.822 million in year 10.

CONSTRUCTION JOBS	DIRECT JOBS	18.7 STAGE 1	13.0 STAGE 2	10.3 STAGE 3
	INDIRECT JOBS	4.5 STAGE 1	2.5 STAGE 2	2.0 STAGE 3
OPERATION JOBS	MURCHISON SETTLEMENT	4.0 YEAR 1	5.8 YEAR 10	
	BROADER REGION	2.5 YEAR 1	11.1 YEAR 10	
	TOTAL OUTPUT	\$1.546M YEAR 1		\$6.822M YEAR 10

6.0 IMPACT EVALUATION

6.5 SOCIAL IMPACT

Key Findings

The Vast Sky Project is expected to provide several social benefits for Murchison Settlement, the Shire of Murchison, the Mid-West Region and the state more broadly. In particular, the Vast Sky Project will:

- Encourage overnight stays in the Settlement, generating new accommodation demands and economic opportunities for the Shire and community;
- Provide State and National-level interpretive educational facilities that will attract visitors and tourists to the Shire and build on the unique existing relationship with CSIRO and the MRO;
- Provide employment and volunteer opportunities, as well as smaller-scale private business opportunities.
- Attract and retain staff for Murchison Settlement and nearby stations;
- Increase capacity and skillset building for community members;
- Increase opportunities for residents to have dual jobs;
- Improve facilities and amenities in the community for wide-ranging events, tours and programs that could be leveraged by existing and future locals as micro businesses;
- Improve community amenity, positively contributing to livability for current and future residents; and
- Increase appreciation for the Settlement, the community and the region.

There are also numerous potential opportunities and social impact benefits for the Pia Wadjari Community. See Appendix 1 for more information on the potential opportunities that have been communicated with the community in relation to the Vast Sky Project.



IMAGE: INTERPRETIVE CENTRE (LEFT), "SKYBOX IN-PLACE" (RIGHT, BACK), SKA / SPACE PLAYGROUND (FOREGROUND, RIGHT).

7.0 IMPLEMENTATION PLAN



7.0 IMPLEMENTATION PLAN

7.1 PROJECT PLAN

Key milestones and anticipated timeframes were identified to support the delivery of the Vast Sky Project.

Key tasks include:

- Endorsement of this business case;
- Ongoing engagement with the community, stakeholders and potential funding partners;
- Technical investigations and detailed design;
- Building and site works approvals;
- Contract procurement and award; and
- Construction of preferred option.

A more detailed timeline is appended to this business case and this will be further refined following endorsement of the business case.

MILESTONE	TIMING	STATUS
Shire of Murchison Interpretive Centre Community Workshop and Summary Report	2016	Completed
Murchison Settlement Masterplan	2020-21	Completed
Murchison Settlement Roadhouse Precinct Detailed Concept Design	2021	Completed
Murchison Interpretive Experience Working Group Established	2022	Ongoing
Stakeholder Engagement Workshops 1, 2 & 3, including scenario option testing and preliminary cost estimations	May-Aug 2022	Completed
Concept Design of Preferred Scenario	Aug-Sept 2022	Completed
Preparation of Business Case and supporting communication materials	Sept-Nov 2022	Ongoing
Endorsement of Business Case and Concept Design	Nov 2022	-
Feature survey of Murchison Settlement and Additional Studies (to be determined)	Dec-Feb 2023	-
Detailed Design procurement	Mar 2023	-
Approvals (eg. site works, building, etc)	Apr 2023 - Aug 2024	-
Detailed design	Apr-Nov 2023	-
Initial site preparation works	Sept-Nov 2023	-
Tender Stage 1	Dec 2023 - Mar 2024	-
Construction Stage 1 commences	Apr 2024	-
Stage 1 operational	Apr 2025	-
Stage 2 operational	2028	-
Stage 3 operational	2032	-

7.0 IMPLEMENTATION PLAN

7.2 PROJECT MANAGEMENT AND GOVERNANCE

The Shire of Murchison (Shire) has significant experience in delivering a variety of projects of a range of sizes, scope and complexity, including projects that utilise significant portions of grant funding. With excellent internal controls and best practice approaches in place, the Shire is confident it possesses the staff skills and resources to deliver the proposed project in a timely manner.

As indicated in the Project Governance Structure diagram to the right, the management and success of The Vast Sky Project will rely on a relationship between the Shire and an Advisory Board. The Project's owner will be the Shire, and the Project's ongoing management will be led by the Community Development Manager, who will be in direct communication with the Shire's CEO and the Advisory Board, to ensure the Vast Sky Project team remains accountable to its primary stakeholders.

As indicated, the Advisory Board will consist of representatives from the key stakeholders involved in the project. The role of the Advisory Board is to be a sounding board, an advisory group, and a bank of wisdom for the project. Members of the Advisory Board who have suggested financial stakes in the project are indicated with a (*).

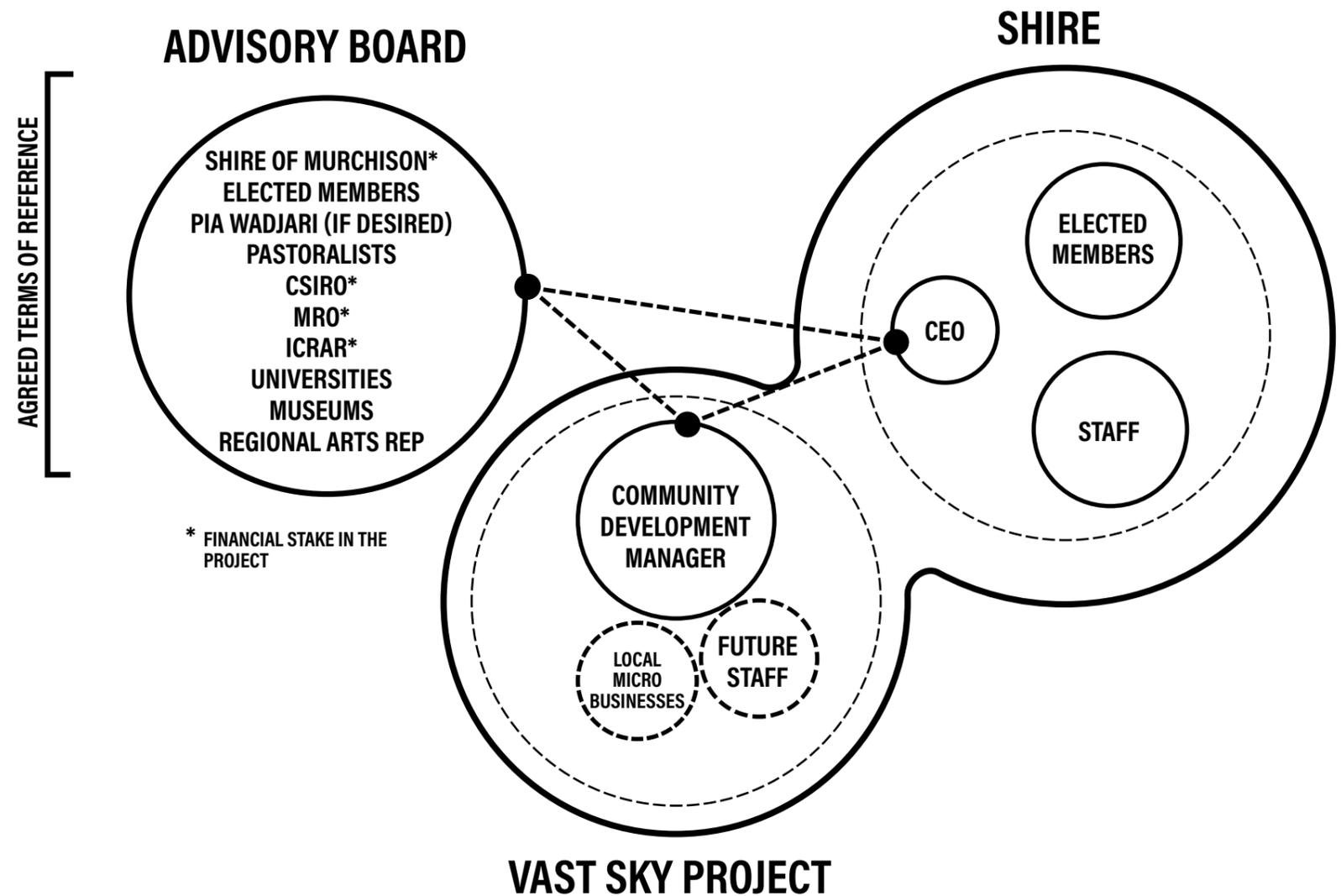


IMAGE: PROJECT GOVERNANCE STRUCTURE

7.0 IMPLEMENTATION PLAN

7.3 PROCUREMENT PLAN

The Shire of Murchison is committed to delivering best practice in the purchasing of goods, services and works that align with the principles of transparency, probity and good governance. The Shire has an established Purchasing Policy (2015). The purpose of this policy is to ensure openness, transparency, fairness and equity through the purchasing process to all potential suppliers and to ensure efficient and consistent purchasing processes are implemented and maintained across the organisation.

Purchasing that is below \$100,000 in total value (excluding GST) must utilise a Request for Quotation process, either direct to the market to through a panel of pre-qualified suppliers (such as a WALGA Preferred Supply Contract). Purchasing that exceeds \$100,000 in total value (excluding GST) must be put to a public Tender, except in a few instances as outlined in the Policy.

The services and roles expected to deliver the Vast Sky Project outlined in this Business Case are listed in the table to the right.

SERVICE REQUIRED	SERVICE PROVIDERS
Additional Stakeholder Engagement	Shire officers or external engagement consultant
Project Management	Shire officers or external project management consultant
Lead Consultant	External consultant (e.g. Landscape Architect, Architect, Environmental, Civil, Structural, Mechanical)
Building works supervisor/superintendent	Shire officers or external consultant
Head contractor	Shire officers or external project management consultant
Community Development Manager	Added roles and responsibilities to existing Shire position
Artist/chef/scientist etc (first '...in-residence' resident)	New 0.5 FTE role within Shire

7.0 IMPLEMENTATION PLAN

7.4 NEXT STEPS

Engagement with:

- Pia Wadjari. Ongoing conversations around the potential opportunities presented by the Vast Sky Project, when and if ready. This could include direct employment in the construction and/or ongoing operations of the facilities and/or micro-business opportunities eg. cultural tours, events, market days
- Broader Murchison Community, including Pastoralists
- Wajarri Yamatji Aboriginal Corporation (WYAC)
- Aarnet
- City of Greater Geraldton (CGG)
- Department of Science, Energy and Resources (DISER)

Other actions:

- Dark Sky accreditation - 'Sanctuary'
- Continued sealed road negotiations with City of Greater Geraldton
- Further alignment with GeoRegion WA Tourism messaging + actions
- Strategic communications (re. political landscape)
- Marketing



IMAGE: "SKY-VIEW" CAMP FIRE SEATING NODES

8.0 RECOMMENDATION

The Shire of Murchison, and the Vast Sky Project working group recommends this project and is seeking funding for the capital cost of the project only. This recommendation is based on the following:

- Land is secured, presenting no encumbrances to starting work;
- Concept design scope for all aspects of the Vast Sky Project are specified in this report. Additional information regarding servicing will be available at the next stage;
- Cost and time have been estimated, including contingencies;
- Present understanding is that major approvals are not required;
- Key stakeholders are aware and accepting of the proposal.
- An early draft of this Business Case was presented to the Murchison Shire Council on the 27th October, 2022. All attendees were in support of the proposed Vast Sky Project.
- On the 5th of November 2022, an Indigenous Land Use Agreement (ILUA) with the Wajarri people and the Commonwealth government was signed in relation to the building of the SKA-Low on Wajarri land. Consultation and engagement with the Pia Wadjari Community in relation to the multiple opportunities presented by the Vast Sky Project has taken place during the drafting of this Business Case, and is expected to continue to ensure ongoing agreement and trust. Appendix 1 'Pia Wadjari Opportunities' is included to communicate an overview of these potential impacts and opportunities.



IMAGE: "SKYBOX IN-PLACE" (BACK), SKA/SPACE PLAYGROUND (FOREGROUND)

APPENDICES

- 1 PIA WADJARI OPPORTUNITIES (UDLA, 2022)
- 2 ECONOMIC IMPACT REPORT (MCa, 2022)
- 3 CAPEX ESTIMATE (HWA, 2022)
- 4A MURCHISON ROADHOUSE FINAL (DRAFT)
- 4B MASTERPLAN (UDLA, 2021)
- 4C UPDATED MASTERPLAN (UDLA, 2022)
- 5 WORKSHOP 1 (UDLA, 2022)
- 6 WORKSHOP 2 (UDLA, 2022)
- 7 WORKSHOP 3 (UDLA, 2022)
- 8 INTERPRETIVE CENTRE WORKSHOP FINAL REPORT (NAJA, 2016)