

## **CONTENTS**

DNAS VISIOTI	4
A Message from our Chair	5
A Message from our CEO	6
Partnerships	7
DKA Solar Centre	8
Intyalheme Centre for Future Energy	10
Codes 4 Life	12
Respected Women: DKA Pilot Program	14
Desert Knowledge Research Institute	16
Digital Innovation	18
Our People	19
Possum Dreaming	20
Desert Knowledge Precinct	21
Our Financials	22
Our Events	24
Our Board	26
Our Elder-in-Residence	27

# DKA'S VISION IS A STRONGER DESERT AND REMOTE AUSTRALIA

### **OUR PURPOSE**

### Demonstrating the value of regional and remote Australia

We are based in a vibrant place where the oldest living cultures on the planet thrive; where the people are resilient and innovation is a way of life. Desert and remote Australia is unique and we share that value with the world.

### Connecting people, knowledge and opportunities

Desert and remote Australia and its knowledge base is a big place to navigate and DKA can be a guide. We create meaningful connections by bringing ideas and resources together.

### Looking to the future

We innovate and incubate. We seek opportunities to grow ideas into realities, creating lasting, positive change.

### **OUR VALUES**

### Work together

We build high-performing and positive teams, and we bring our commitment to teamwork into our external relationships and networks to maximise our shared impact.

#### Be creative - innovate!

We approach our work with creativity and innovation; we engage with possibilities and new ideas, creating an agile and responsive organisation.

### **Stay focused**

There are many different things we could do; we are focused and engage purposefully with everything we do.

### Come from strength

We work with our strengths and the strengths of those we engage with to create positivity and growth. We live and work across languages and cultures and use that experience as the foundation of our work.

### **Knowledge is powerful**

We have a role in collecting, curating and sharing the knowledge that exists in desert and remote Australia. We create opportunities to share knowledge.



# A MESSAGE FROM OUR CHAIR

**Chris Fry** 

In FY 2019-2020, DKA intensified its efforts to build stronger remote communities, generating meaningful outcomes for its key focus areas and flagship projects. DKA swiftly adapted to challenges stemming from the COVID-19 pandemic, implementing remote working arrangements to continue collaborating towards its community-focused operations, and adapting its programs to adhere to NT Government advice and community needs.

Under Dr Dan Tyson's capable leadership, DKA has strengthened its focused operations and stakeholder network, and expanded its activities relating to sustainable environments and social benefits for Central Australia.

DKA contributed to the COVID-19 response in remote communities, assisting with the dissemination of important information in language; improved understanding about health and cultural knowledge in Aboriginal men; and secured funding for a women's program to complement the Codes 4 Life vision.

It has been an honour to have held the role of Chair through the past financial year, and I look forward to continuing my association with DKA as it streamlines its strategic plan and enhances its core activities over the next 12 months.

I thank resigned Directors Dr Heron Loban and Pat Anderson AO, as well as our outgoing Director Dave Batic, for their expert guidance and valued contributions during their tenure on the DKA Board.

DKA's continuing Board members will continue to support and guide its strategic direction, and are committed to maintaining the momentum generated in the last year, ensuring DKA persists with its community-focused operations underpinned by its core values.

I am grateful to then NT Minister for Renewables, Energy and Essential Services and Minister for Territory Families, the Hon. Dale Wakefield, for her unwavering support of DKA's work in renewable energy and the social sector.

I thank NT Chief Minister and Minister for Business and Innovation, the Hon. Michael Gunner, and the Department of Trade, Business and Innovation's CEO Shaun Drabsch, Deputy CEO Sibylle Brautigam, Senior Executive Director Catherine White, and Executive Director Bill Sankey for their ongoing support and robust partnerships. I look forward to our ongoing collaboration as DKA continues to work towards a stronger desert and remote Australia.

#### **Chris Fry**

Interim Chair of the DKA Board



# A MESSAGE FROM OUR CEO

### **Dr Dan Tyson**

DKA has built on knowledge and efforts from past years to accomplish a fruitful 2019/20. In the midst of hurdles stemming from the COVID-19 pandemic, DKA has drawn strength from its values and reinvigorated its programs to continue working towards building a stronger community. I am grateful to work alongside an exuberant team comprising individuals who inspire one another to advance DKA's meaningful operations.

Under guidance from our Board and with the dedication of our team, DKA has intensified its efforts for a stronger desert Australia by expanding its projects' scope, establishing positive relationships with like-minded organisations, and swiftly adapting to changing times.

In the financial year 2019/20, we have:

- strengthened formal and informal partnerships with organisations that share our vision and goals, as well as our relationships with on-site organisations at the Precinct
- seen the Intyalheme Centre for Future Energy secure an additional \$9m in external funding crucial to the delivery of the Alice Springs Future Grid project
- expanded Codes 4 Life program deliveries; improved understanding about Aboriginal men's wellbeing through a focused presence

- at targeted locations; and assisted with the dissemination of important information in community languages during COVID-19 restrictions in the NT
- successfully secured funding from Territory
   Families to develop a pilot program for
   prevention practices against domestic, family
   and sexual violence, and bolstered our
   community-focused operations
- expanded the role and presence of the Desert Knowledge Research Institute, gaining momentum with projects of practicable value to Central Australia, with a focus on essential needs in remote communities
- hosted numerous events and hundreds of visitors at the Desert Knowledge Precinct, renewing its position as a hub for knowledge sharing and community-focused collaboration

Over the next year, DKA will refine its strategic plan to support a more targeted approach to its operations, while continuing its focus on tangible economic and environmental outcomes, and social benefits for the communities of Central Australia.

**Dr Dan Tyson** DKA CEO



# **PARTNERSHIPS**

DKA believes the best outcomes for Central Australia are achieved through strong partnerships, and collaborating with like-minded organisations to work towards a common goal. DKA thanks all its partners for their support, and for sharing our vision for a stronger desert and remote Australia.































The Desert Knowledge Australia Solar Centre (DKASC) is located at the Desert Knowledge Precinct in Alice Springs, and is the largest multi-technology solar demonstration facility in the Southern Hemisphere. It currently houses 41 installations from different manufacturers, and showcases live demonstrations of photovoltaic technologies spanning many types, ages, makes, models and configurations. The site provides a space for different solar photovoltaic technologies to be installed, operated and monitored under the same conditions.

The arid region's typically sunny and cloud-free skies provide favourable weather conditions for the site. The Solar Centre supplies more than 40% of the electricity consumed by the Desert Knowledge Precinct, providing clean energy to the organisations on-site and reducing the amount of electricity drawn from the grid.

The DKA Solar Centre website hosts live openaccess energy performance data from its arrays and information from on-site weather stations. Catering to more than 10,000 website visitors each year, the data is accessed for research, investment, technology development, education and private use.

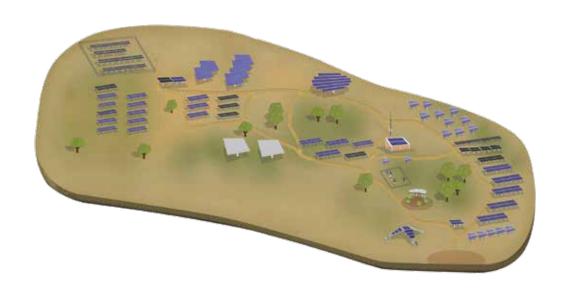
The data also supports research initiatives from Australian and international organisations undertaking scientific studies in photovoltaic systems, power grids, clean energy, and related fields. Research has covered topics such as solar penetration in Australia, PV power forecasting, the impact of grid voltage on PV system performance, and assessments of PV modelling software.

In the last financial year, datasets from the DKA Solar Centre have contributed to the research behind 11 academic studies, which have been undertaken at universities across Europe, the United States, and Asia; and published by reputable groups such as Elsevier.

Established in 2008 with \$3.1 million Commonwealth funding, the site is now commercially self-sustainable. DKA partners with engineering firm Ekistica to manage the Solar Centre's ongoing operations.

In addition to members of the public and school groups freely exploring the facility, the DKA Solar Centre has hosted several tours over the past year including groups from a Japanese trade delegation, the NT Utilities Commission, the desertSMART EcoFair and the launch of the Off-Grid Guide, and school groups from Centralian Middle School, Yirara College, and the Alice Springs Swimming Club.

The DKA Solar Centre is open to the public during the Precinct's business hours, and has explanatory signage for those seeking to embark on a self-guided tour.



# 2019-2020

### 486,591 kwh

of solar energy generated, equivalent to



### 287 tonnes

of avoided CO2 emissions



# **Jutil 2019**

### 4.5 million kwh

generated between 2008 and 2019, equivalent to



**2,940 tonnes** of avoided CO2 emissions



### **DESERT KNOWLEDGE** PRECINCT ELECTRICITY **SUPPLY SOURCES**

**TOTAL SOLAR PV GENERATION** 









### WHERE ARE DKASC WEBSITE USERS FROM?

### THE DKASC WEBSITE

Many people from across the world download long-term data from the installations via the DKASC website to study and better understand the different technologies and environmental factors at play. People in Alice Springs can also freely walk through the facility and see the various installations up-close.

www.dkasolarcentre.com.au



### WHO DOWNLOADS DATA FROM THE **DKASC WEBSITE?**







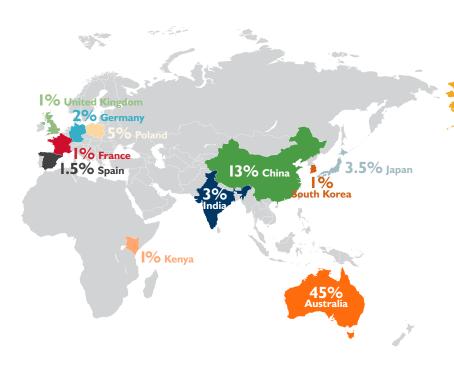












**7.5%** us data downloads FY2019/20



**Tristan Simons Intyalheme General Manager** 

### OVERCOMING BARRIERS TO FURTHER RENEWABLE ENERGY PENETRATION ACROSS THE NORTHERN TERRITORY.



a flagship project of





Intyalheme's primary focus during the financial year 2019/20 was the development of the Alice Springs Future Grid project, and seeking the necessary funding to implement it. The project's vision is to remove barriers to further renewable energy investment in Alice Springs, ultimately contributing to Intyalheme's primary objective of assisting the NT in meeting its 50% by 2030 renewable energy target.

Building on the work of the previous year, Intyalheme refined the Future Grid scope and objectives. A workshop, held at the Desert Knowledge Precinct in July 2019, was attended by energy experts from across Australia. This culminated in burgeoning plans for Future Grid's five sub-projects. These formed the basis for a full application to the Australian Renewable Energy Agency (ARENA) in September 2019, with Intyalheme awarded \$2.1m funding in February 2020.

To complement the ARENA funding, Intyalheme was also granted \$3.2m funding from the Regional and Remote Communities Reliability Fund – Microgrids Program (RRCRF-M) in June 2020. With Intyalheme's contribution of \$3m and in-kind contributions from Project Partners, Alice Springs Future Grid is worth a total of \$12.5m. It will run for two years, until mid-2022.

While the sub-projects continued to be developed alongside the formalisation of relationships within the Future Grid project, Intyalheme continued work in its core areas of sharing knowledge; delivering collaborative projects; and being a conduit between energy industry stakeholders, related organisations, and the Alice Springs public.

In August, Intyalheme facilitated a panel discussion as part of the DesertSMART EcoFair, Central Australia's premier science and sustainability festival. The event drew more than 100 attendees and provided the public with an opportunity to learn

more about the Alice Springs electricity system, and the challenges associated with integrating a high proportion of renewable energy. Guest speakers included then NT Minister for Renewables, Energy and Essential Services, the Hon. Dale Wakefield MLA, and industry representatives from across the NT.

The event also provided an opportunity to launch the Off-Grid Guide; the result of a collaboration between Intyalheme and Alice Springs-based technical consultancy Ekistica. The manual leveraged knowledge generated during the Bushlight program, with the aim of supporting best practice in the procurement and deployment of stand-alone power systems in remote Australia. The launch was followed by an information session for industry stakeholders in Darwin.

Intyalheme also held an October Business Month event called 'Sunset Stories at the Solar Centre', which highlighted the results of Power and Water Corporation's NT Solar Energy Transformation Program (SETuP), and previewed the World Solar Challenge. In early 2020, Intyalheme hosted a knowledge sharing event for a research project called 'End-of-Life Management of Solar PV Panels', which was led by Charles Darwin University, with Intyalheme contributing to the research and review process.

To further support renewable energy research and development in the Northern Territory, Intyalheme funded a meteorological station in Tennant Creek; one of four sites that form the Northern Territory Solar Resource (NTSR) Project. The weather stations are strategically placed to represent different climatic zones of the Territory, and deliver high-grade solar and climate resource data. Live datasets from the NTSR Project are hosted on the DKA Solar Centre website, and are publicly available.

# RECONNECTING ABORIGINAL MEN WITH CULTURAL IDENTITY, RESPONSIBILITIES AND COMMUNITY.



Codes 4 Life is a flagship project of Desert Knowledge Australia. It is an Aboriginal men's program that seeks to address and curb unlawful behaviour stemming from alcohol and substance abuse, including drink driving, domestic violence, and sexual assault. The program drives reformation and personal change by delivering workshops designed to reconnect Aboriginal men with their cultural responsibilities, and find strength in one's role in their community. Embracing culture helps men understand their place in the world and their obligations to family, community, law and country.

All workshops are designed and facilitated by Program Manager Michael Liddle, supported by Project Officer Wayne Scrutton, and overseen by Aboriginal Elders or senior community leaders. Codes 4 Life also works closely with the police and community support providers to effectively deliver comprehensive programs.

During the last financial year, Codes 4 Life delivered 10 workshops in six different locations: Alice Springs, Tennant Creek, Ampilatwatja, Alpurrurulam (Lake Nash), Laramba and Ltyentye Apurte (Santa Teresa). These workshops had a combined attendance of 148 Indigenous participants between 18 to 50 years old, with over 90% of participants reporting positive outcomes and cultural knowledge improvement. In addition to the involvement of the Codes 4 Life team and guest speakers from support programs, the workshops have supported the employment of seven co-facilitators and 20 Elders.

Amidst the COVID-19 pandemic response in the Northern Territory, the Codes 4 Life team adapted the project's work to strengthen community efforts while adhering to guidelines and travel restrictions set by the Northern Territory Government.

The team worked closely with Elders, local organisations and essential services to keep communities safe; delivered messages in language to assist with communicating important information in communities; and hosted workshops on hygiene and preventive measures. During this time, the team also continued initiating discussions around substance abuse and violence in communities.

In addition to their community efforts, Codes 4 Life established a formal partnership with CASSE Australia, which supported the continued delivery of CASSE's Shields for Living, Tools for Life program during the pandemic. The two programs are mutually supportive, and continue to work closely together.



In addition to our main program deliveries, we have conducted adapted workshops in high-impact locations. Over the last year, we have promoted ourselves with a focused presence at locations such as the Alice Springs Correctional Centre, the Alice Springs Youth Detention Centre, and Ingkintja Male Health Service.

These consistent efforts have set a platform to improve the delivery of programs for Aboriginal men's wellbeing. By doing the work that we do, we have improved understanding about men's health; increased awareness about the issues around alcohol, marijuana, domestic violence and sexual health; and drawn attention to how bad habits affect Aboriginal men's wellbeing.

In the next year, we hope to follow the journey of about six participants to see how the Codes 4 Life program has influenced their lives, and whether they have changed their behaviour."

**Michael Liddle** 

Codes 4 Life Manager

DKA AND CODES 4 LIFE ACKNOWLEDGE THE NATIONAL INDIGENOUS AUSTRALIANS AGENCY (NIAA) FOR THEIR FINANCIAL SUPPORT TOWARDS THE PROGRAM AND ITS WORKSHOPS.

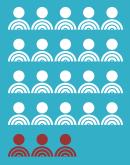
LARAMBA I WORKSHOP



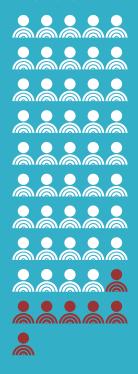
AMPILATWATJA I WORKSHOP



ALPURRURULAM (LAKE NASH) I WORKSHOP



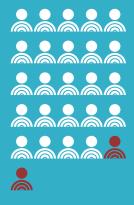
ALICE SPRINGS 2 WORKSHOPS



LTYENTYE APURTE (SANTA TERESA)
i WORKSHOP



ALICE SPRINGS
-CAAAPU
2 WORKSHOPS

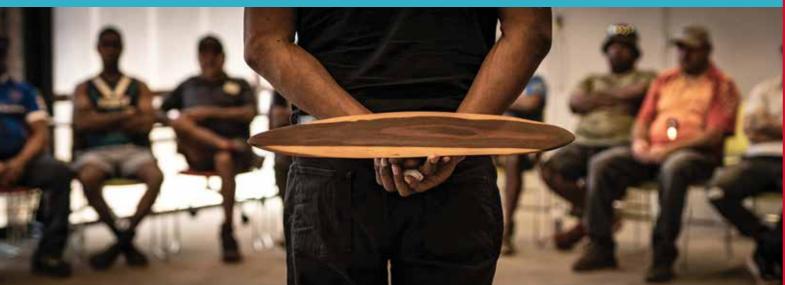


TENNANT CREEK 2 WORKSHOPS









# RESPECTED WOMEN: DKA PILOT PROGRAM



DKA was approved for \$150k grant funding in June 2020, to develop a pilot program for prevention practices against domestic, family and sexual violence (DFSV). The funding is under the "Safe, Respected and Free from Violence" Prevention Grant from Territory Families.

Respected Women: DKA Pilot Program will be built on the model of DKA's existing flagship project, Codes 4 Life. It will be co-designed by Aboriginal women, leaders and Elders, with the support of DKA.

The pilot program's development will be divided into three phases:

Phase 1: co-design the program with Elders and community members

Phase 2: pilot and evaluate the co-designed program

# Phase 3: develop and establish the program model from recommendations

Respected Women will be built on principles guiding the Northern Territory's DFSV Reduction Framework:

- Women and children's safety and wellbeing is at the centre
- Shared responsibility, partnerships and local responses
- Evidence and needs-based and outcomes focused
- · Focus on long term social and cultural change
- Shared awareness and understanding of domestic, family and sexual violence

DKA thanks Dale Wakefield, then Minister for Territory Families, for her support and consistent efforts to reduce violence against women.



### Domestic, Family & Sexual Violence Reduction Framework 2018–2028



Safe, respected and free from violence



"This is the story of the Patupiri (swallow) who is clever, knowledgeable and skilful.

Patupiri builds a safe, strong nest to protect its family against the rain and predators.

It uses sticks and branches to build a strong and secure shelter, finding and gathering grass, feathers and mud to make the nest warm and comfortable so that its babies can grow and develop."

Iluwanti Ken and Mary Katajuku Pan

"Tjulpu Wiltja Tjuta" (bird's nests) is an installation art work made by Yankunytjatjara and Pitjantjatjara artists lluwanti Ken and Mary Katajuku Pan. The artwork was a finalist in the 2017 Teistra National Indigenous and Torres Strait Islander Art Award. Tjala Arts

The swallows' nests, like the artists' work expresses our vision and approach for a future where women and children are safe, and families are supported to thrive.

This work, like the basket making art across central Australia and Arnhem Land represents what it takes to make this happen.

Innovation, cleverness, local knowledge and relationships, ways of sharing information and skills, helping and working together.

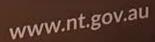
These are essential if we are to reduce violence so that our homes, communities, workplaces and schools across the Northern Territory are safe, respected and free from violence.



DKA is undertaking a research project to support the development and execution of the Respected Women program's framework. It will involve a literature review of academic publications and evidence-based studies, a statistical analysis of key figures surrounding domestic and sexual violence in the region, and an evaluation of available reports and other information sourced from local organisations.

Preliminary research findings include strong evidence that Indigenous programs are most successful when they are community-led, with community members defining their needs, and designing and controlling the program. This supports DKA's program model of building a community-focused framework to best respond to local needs. The model will allow community members to develop, implement and sustain their own solutions to DFSV under guidance from Aboriginal Elders.

In addition to data-driven findings, the pilot program's development will draw heavily on the learnings and cultural focus of DKA's existing Codes 4 Life program. This will put Elders and community members at the front of the program, placing a focus on culture and community.





RECOGNISING AND GROWING THE VALUE OF REMOTE AND REGIONAL AUSTRALIA THROUGH APPLIED RESEARCH.

The Desert Knowledge Research Institute (DKRI) is DKA's research arm, and was launched in 2018 with Approved Research Institute and Deductible Gift Recipient status. DKRI is committed to exploring tangible research topics applicable to desert and arid lands, and its three focus areas align with the strategic direction of DKA:

- Place
- People
- Knowledge

In the last year, DKRI has worked to develop the foundation for research projects of practicable value to Central Australia, with a focus on improving access to, and the quality of, utilities and basic needs in remote communities.

DKRI is part of a consortium of 33 partners who will work towards developing strategies to better manage shared water resources in Northern Australia. The Water in Northern Australia CRC (WiNA CRC) is a collaborative research program led by Charles Darwin University, which will fill information gaps, develop appropriate technology, improve planning and governance and develop tools to reach consensus on shared water development.

The consortium will work to address issues in a coordinated manner and bridge gaps in knowledge.

The project will result in understanding Indigenous water needs, increased water efficiency, improved health outcomes, building investor confidence, and a contribution to economic development.

The research will be delivered through four programs:

- · Indigenous-led water solutions
- Water for sustainable economic development
- Water technologies and services for the North
- Indigenous-led water education

DKRI is also working to develop a framework for better pandemic response strategies in remote communities. The project is led by Flinders University and is part of the Australian Research Council's Linkage Program. DKRI, Flinders University, the Royal Flying Doctor Service and Sunrise Health Service will work together to deliver the community-led project, which will build on existing strategies in Indigenous communities.

The project will explore best practices to strengthen communities' capacity to respond to future pandemics. Research questions will probe a better understanding of concepts surrounding wellbeing, self-determination, and cultural adaptations and innovations to the COVID-19 pandemic in remote Aboriginal communities.

# DIGITAL INNOVATION



DKA is committed to supporting the growth of technological skills in Central Australia, and developing social and economic opportunities in the space. DKA has been working to transform the Precinct's Business & Innovation Centre into a space for advanced communications technology, which can be accessed as a community hub or on a commercial basis.

To support this transformation, DKA has been working with Darwin Innovation Hub, the NT's leading start-up and growth ecosystem, which shares similar goals in this area. In September, DKA collaborated with Darwin Innovation Hub and GovHack to host GovHack NT 2019 at the Desert Knowledge Precinct. GovHack is the Southern Hemisphere's largest opendata hackathon, and is a free, open-to-all event. The 2019 event marked GovHack's 10th national anniversary.

Complementing DKA's vision for Central Australia, in December, CEO Dr Dan Tyson was appointed Innovator in Residence (IiR), by the NT Department of Trade, Business and Innovation (DTBI). The IiR program was created to provide proactive mentoring and support to small and medium enterprises in the Northern Territory, and improve the local economy.

Dr Tyson, on behalf of DKA, provides expert advice to remote and regional businesses, which will further economic development in the desert and promote a culture of innovation in Central Australia.

In February, a Business Innovation Workshop was hosted at the Desert Knowledge Precinct by the Department of Trade, Business and Innovation to educate and inspire local businesses to innovate. Dr Tyson was one of four speakers who detailed the support available to budding innovators, and discussed the expertise and insight he is able to provide to innovators who have a creative idea but are not sure what to do with it.



## DKA TEAM

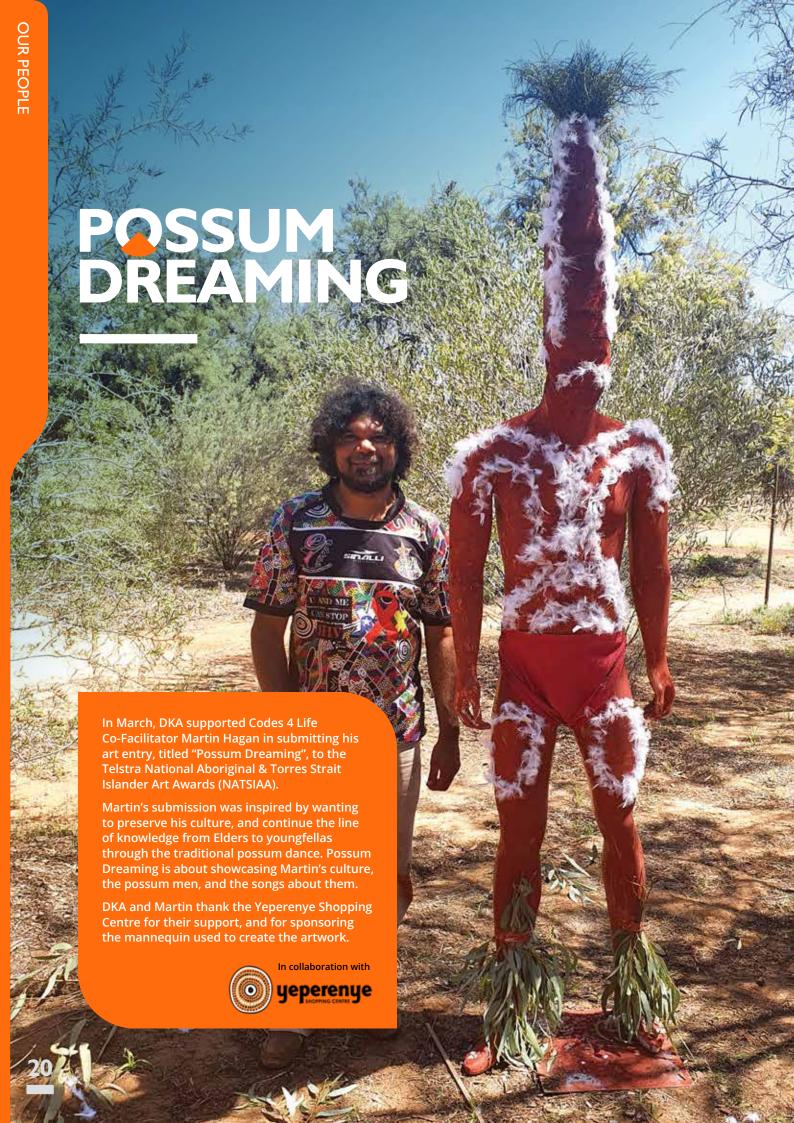


DKA staff as of 30 June 2020

6 women

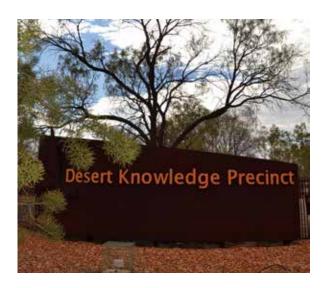
5 men







### Desert Knowledge Precinct



The Desert Knowledge Precinct is a welcoming environment that encourages learning, knowledge sharing and collaboration. It sits on 73 hectares of Arrernte bushland, located 9 km south of the Alice Springs town centre.

The Precinct's location is significant. It occupies the space where, in the past, travelling Aboriginal groups or messengers would stop and light smoke signals as a way of requesting passage through Heavitree Gap (Ntaripe). It was here that Elders or other group members from Alice Springs (Mparntwe) would meet the travellers and hear their stories. The Precinct embodies the essence of the land on which it stands, promoting knowledge sharing in a place where everyone is welcome.

It was established in 2006, and its management is underpinned by an Indigenous Land Use

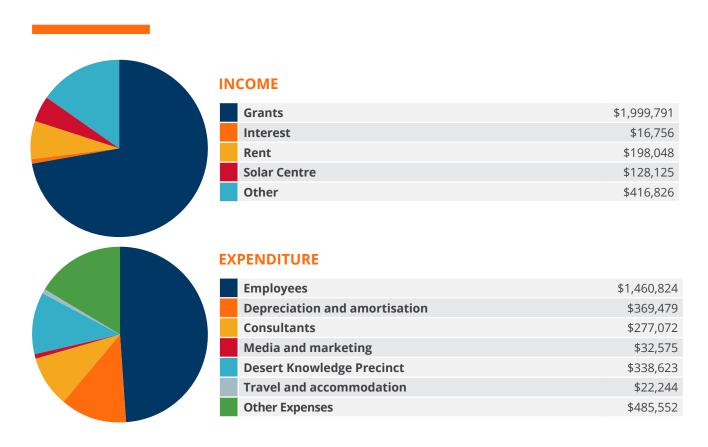
Agreement (ILUA). As landlord of the Desert Knowledge Precinct, DKA is responsible for its management and development. DKA proudly acknowledges the Arrernte people as the custodians and first knowledge holders of this land.

The Precinct's key partners, Desert Knowledge Australia (DKA), Batchelor Institute of Indigenous Tertiary Education and the Centre for Appropriate Technology (CfAT) are all based on-site, and work together to maintain its integrity and purpose. The Precinct is also home to the Desert Peoples Centre, a joint venture between Batchelor Institute and CfAT. In FY 2019, Tangentyere Council, Desert Support Services and Indigenous Business Australia were tenants at the Business & Innovation Centre. The Precinct partners and other organisations based at the site all share common goals and values, and work towards the development of Central Australia.

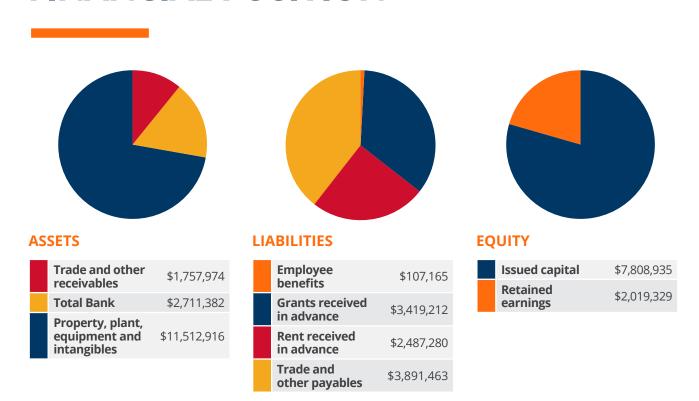
Over the last financial year, the Precinct has been the hub for numerous events, conferences and workshops, renewing its position as a space for knowledge sharing and collaboration. DKA's Business & Innovation Centre has welcomed over 1,000 visitors for internal and external events held in its conference rooms. Topics have covered Indigenous studies, culture, land and resource management, health and medicine, social services, mental health, domestic violence, engineering, renewable energy, digital innovation, education, and more.

The Precinct is also home to the famed DKA Solar Centre, the largest multi-technology solar demonstration facility in the Southern Hemisphere, which supplied 41% of the power consumed on-site in the last financial year.

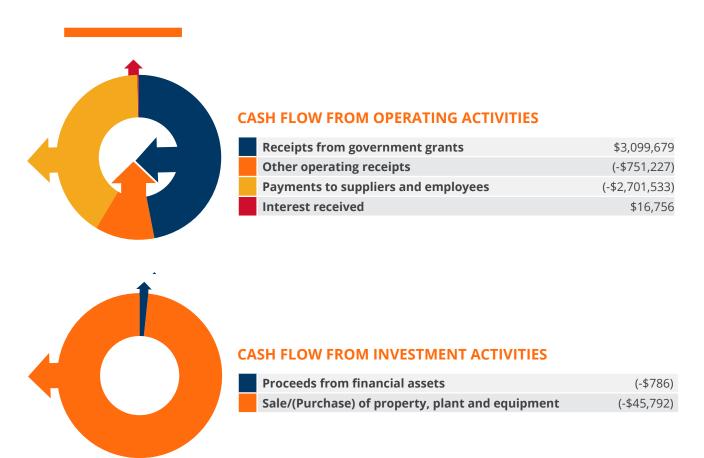
# INCOME AND EXPENDITURE



# STATEMENT OF FINANCIAL POSITION



### **CASH FLOW**











**Interim Chair** Chris Fry

#### **Directors**



Jimmy Cocking



Rede Ogden



Dave Batic



Vanessa Elliott



Robert Campbell



Pat Anderson AO



Dr Heron Loban



33% women 67% men



50% Aboriginal

