

# Framing the benefits of Indi Kindi | Final Report

Understanding the health, educational and social impacts on the Borroloola (NT) community

19 April 2024

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## Acknowledgement of Country

*In my culture we bring our children close to the campfire, they learn with us, they listen with us, they are cared for collectively in our community. They are not kept apart, they are not forced to the edges or the back. They are at the centre of a circle that widens to accommodate them. We do that because our systems of support value the role of community.*

*But it doesn't always work and that's because the systems of community are disrupted, and all communities (Aboriginal and non-Aboriginal) are challenged. A nation of families and communities doing their best within a fluid system of economics, need and vulnerabilities, intersected by multiple layers of government policy and services, that often reminds families of their failings as much as their opportunities.*

*The early years for our children are times of freedom, connection, learning and love and they require us, as adults, business, community and policy leaders, to see beyond the surface economics, to the deeper fabric that recognises the long-term impact of healthy early years systems and the systemic consequence of unhealthy ones.*

*For us, family and community are defined by Country. It isn't just a location or a postcode but a member of our family and the core of our identity. Education systems that are grounded in Country aren't just an interesting pedagogical technique. They are the best way of connecting Aboriginal people to knowledge and building healthy development.*

*In my language (Gathang language for the Worimi nation) we speak of **'Maa-Bularrbu'**, which acknowledges that our responsibility as human beings is to the 'next seven again'. It is our responsibility to carry those next seven generations in the way we care for our community, our children, our knowledge and **'Nayiri Barray'** – our country.*

*It is why acknowledging country is such an important task. It connects us to the Country we are on and to each other. It reminds us of the responsibilities we have to our past, to our future, to our families and children and to the land that holds our lore for us. I want to acknowledge that this project is for all Australia; **Ngatha Ginyang Nayiri Barray gaba** and acknowledge the elders of this land – past and present; **Ngatha ngarrayn marrun dangaygal**. This land is sacred land, cared for and curated for tens of thousands of years by our people; **Wanyimbu wanyimbu ganyiy nyiirunba barray** – Always will be Aboriginal land.*

Professor Deen Sanders OAM  
Worimi Man



# Foreword

## A note from report co-authors, Lachlan Smirl and Professor Deen Sanders OAM

### **This project presents an opportunity.**

We know the early years are when we can have the greatest influence on life trajectories and where the return to effective investment is highest. More than that, we know that the children who stand to benefit most from effective early years investments are those experiencing vulnerability and disadvantage.

We also know that improvements in early years outcomes are proving stubbornly hard to attain and that in some critical areas gaps in development outcomes are widening. This is all the more sobering when the early years outcomes are reflected upon in the context of the nation's ongoing inability to make progress in redressing the disadvantage experienced by Indigenous communities.

Aspects of Australia's early years system are world leading. But we're still not doing as well as we need to in setting our children up for long term success (however defined). Change is required not just at the policy level, but also via new service delivery constructs – models that blend; that integrate; that innovate.

Fortunately, we find ourselves at a significant juncture in the nation's public policy discourse as it relates to early years policy. An array of major reviews and policy design processes herald the prospect of a new era for early years policy, delivery and, most importantly, early years outcomes in Australia. For those of us who have worked in the sector for some time, this represents the most significant opportunity for major, welfare-enhancing reform that we've seen in decades.

This backdrop makes the appraisal of Indi Kindi timely not just for the communities the program currently serves, but for the wider population of Indigenous families and children who stand to benefit from improvements in early years experiences.

In seeking to unearth the impact and potential of Indi Kindi we have found a program that seeks to deliver on quality through both an Indigenous lens as well as a traditionally non-Indigenous one, adopting the best pedagogical practices from both worldviews.

We hope this report can help provide an insight into what best practice looks like in delivering ECEC to Indigenous communities, but to all children, families and communities across Australia.

**Lachlan Smirl**  
**Deloitte Access Economics**  
**Education Lead Partner**

### **This project was always going to be important and difficult.**

Important, because it represents the great disconnect in our policy and funding systems that continue to disenfranchise community-led, culturally-framed solutions in the fields of Aboriginal policy, not just for early childhood services, but across the entire landscape of policy for health, education, justice and employment.

Difficult, because it is not merely an exercise of mapping between systems of policy and systems of disadvantage but because it is an exercise in translating two wholly different world views; when one of those worlds is self-evidently unable to be respected by the other, when neither of the worlds can agree on 'how to educate children' and when both worlds have their own benefits and their own challenges to offer each other. There is no easy translation. There is no easy answer. There is only the challenge of 'what is best for the child?'

Our ambition for this project was to *truthfully* see the educational experience for preschool children within the Borroloola community, where a combination of traditional, cultural education process has been applied as the foundation of the Indi Kindi program.

The truthful element is important. In my language we say *Dugul-Djuyal Naruwurriyn*, which means truth speaking because of sorrow. It is a way of getting to the truth of something by being able to sit in the non-judgemental space of life's complex discomforts and human experiences.

Members of our project team were fortunate to spend time embedded in the Borroloola and Tennant Creek communities with the Indi Kindi educators. In these weeks connecting with Country, with Eldership, and with the broad remit of service delivery leaders both remote and local, we were able to see the truthful experiences for this community – both joyful and disheartening.

What we ultimately took away from our visit, and what subsequently we have been able to demonstrate through our economic analysis, is that the Indi Kindi program is going some way to address a critical need in community that if unmet, would come at a direct cost to the quality of life for these children, their families and the educators.

**Professor Deen Sanders OAM**  
**Deloitte Access Economics**  
**Integrity Lead Partner**



# Executive Summary: Introduction

## Indi Kindi is a program born of community, anchored in knowledge and accepted through trust

What all families and caregivers know to be true, and what the best minds of research and academia have shown to be so, is that infants and children thrive in their early years when their health and nutritional needs are being met, when they feel supported and safe, when they are given opportunities to learn and grow, and when they are surrounded by those they love and trust.

Moreso, what the evidence has demonstrated is that without the right experiences in the formative period before five years of age, the likelihood of positive health, educational and social outcomes through later childhood and adulthood is starkly reduced.

Indi Kindi is a program that has been designed to see infants and children thrive. It is a program that has been designed with the view towards seeing these thriving children go on to become thriving teenagers and thriving adults. Throughout school, these children are further supported through the complementary program that is run by Moriarty Foundation, John Moriarty Football. Between Indi Kindi and the John Moriarty Football programs, there is an opportunity for children to be involved in a supported Moriarty Foundation community program from birth through to adulthood (see Figure i).

Moriarty Foundation, in developing Indi Kindi, recognised that to be an effective program for community, of community, and in community, knowledge must come from many sources. Knowledge comes from the landscape. Knowledge comes from the Law Women (Elders) of the lands. Knowledge comes from the families, parents, and caregivers. Knowledge comes from mainstream contemporary early childhood educational pedagogy; Indi Kindi educators have gained formal ECEC qualifications or are working towards them. Knowledge comes from global health and nutritional studies and from local medical practitioners.

Indi Kindi has demonstrated levels of success in integrating all these knowledges. However, the success is not just that all these sources of knowledge come into the design and ultimate delivery of the Indi Kindi program, it is how they come in. And critically, who brings them in.

Part of the success of what Moriarty Foundation and Indi Kindi have been able to achieve in a remote community is that they have achieved trust. In the town of Borroloola, the educators are among the most qualified and longest serving Aboriginal early childcare workers in the greater Roper Gulf region in the Northern Territory; this has only occurred through years of trust building. For over a decade, families and caregivers have been confident in sending their infants and children to an early years program with the Indi Kindi educators, because of this trust.

Figure i: Step Change



# Executive Summary: Introduction to Indi Kindi

## The story of Indi Kindi

Indi Kindi has been responding flexibly to the needs of the Borroloola community, families, and children for over 10 years – adapting to service delivery changes, new policies, and an uncertain funding landscape to ensure consistent service delivery can fill the gaps. At the heart of Indi Kindi is the goal of quality, safe and appropriate early education for children and, through this, supporting families and community to prioritise children’s development.

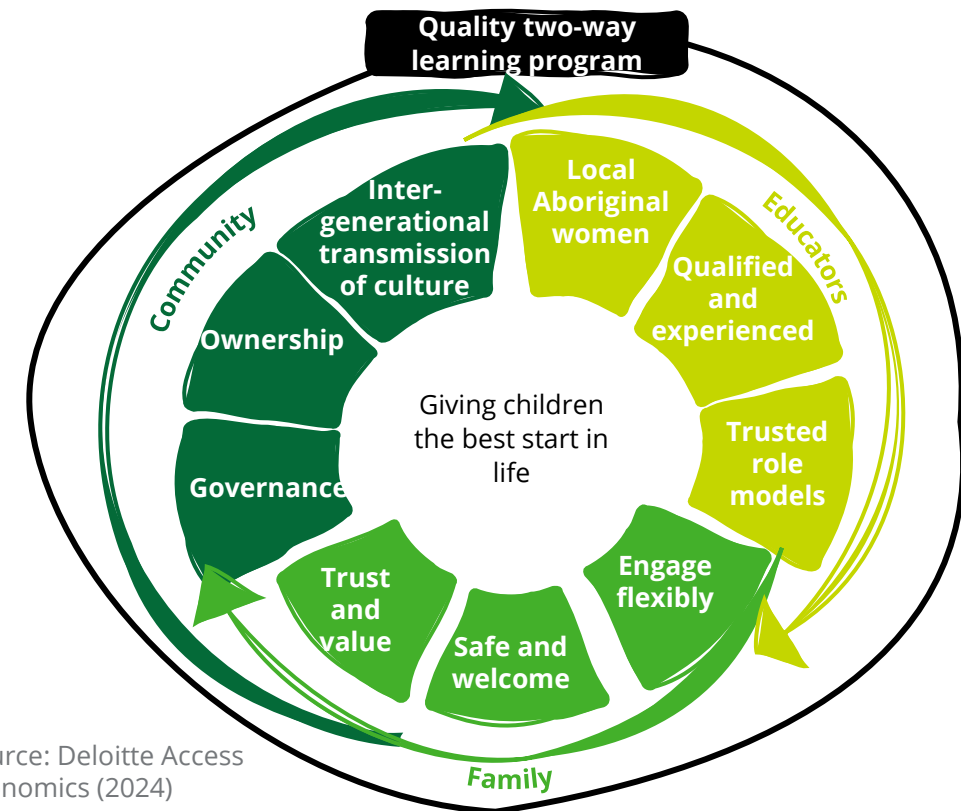
Indi Kindi takes place at different locations in and around community, primarily outdoors. The Indi Kindi bus not only picks up children from their homes around Borroloola, plus any family members joining for the day, but the educators’ strong relationships with families mean they can encourage attendance, even from those visiting for a short while. The choice of locations is determined through practical and cultural considerations in accordance with the seasons. The daily program is designed to respond with agility to both the children who attend as well as the specifics of the environment. While there is variety between days, each day provides the children with opportunities for self-directed sensory and imaginative play, a structured group learning experience, book reading, singing, and exposure to both spoken English as well as the children’s first languages (i.e., the local Aboriginal languages).

At every session, fresh fruit, clean water and a hot, nutritious meal is provided, and hand-washing and hygiene practices are undertaken. The program has a focus on healthy behaviours, including visits to the health clinic or from visiting specialists. As families may not have access to transport to enable these visits, the wrap around support provided by Indi Kindi enables wider developmental domain outcomes.

Moriarty Foundation recruits local women to study and work as early childhood educators, supporting their development on the job and enabling the women to attain accredited early childhood learning qualifications through Accredited Higher Education providers. The program delivers an integrated learning curriculum that combines traditionally Western pedagogy with traditionally Aboriginal approaches to child development.

Indi Kindi has designed a program that is carefully tailored to the Borroloola context. A consequence of this is that it does not fit neatly into standardised categories of programs, models, or government portfolios. Indi Kindi’s ability to evolve and grow with the community’s needs, not limited by a particular operating model, has incorporated features that combine into a unique delivery profile that includes no fees, free transport, an easy enrolment processes, optional family attendance and a 100% local Aboriginal team, who are qualified or studying nationally recognised ECEC qualifications.

Figure ii: Core features of Indi Kindi



Source: Deloitte Access Economics (2024)

# Executive Summary: Overview

## Overview of key findings, and considerations for the future

### Benefits for children...

Since Indi Kindi started, the share of vulnerable children in Borroloola fell from 74% in 2012 to 42% in 2021

Healthy practices are embedded in the everyday delivery of Indi Kindi, driving health literacy in the early years, and lowering the prevalence of chronic and other health conditions

...are unlocked by a focus on access and a trusted, innovative program

Most children in Borroloola benefit from attending Indi Kindi, and attend flexibly according to the needs and choices of their families

Indi Kindi has delivered consistently and flexibly in Borroloola amid inconsistent funding and changing need

...are not easily quantifiable

The quantifiable benefits are a starting point for understanding the true impact that Indi Kindi is delivering

...but deserve reliable and sufficient investment

Delivering a program as multi-dimensional as Indi Kindi in a context as unique as Borroloola necessarily involves above-average levels of investment

Indi Kindi is associated with direct developmental and educational benefits and a soft entry point into preschool and school

Borroloola has strong preschool attendance compared to other communities, supported by a deliberate transition approach employed by Indi Kindi

Indi Kindi embodies best practice features across a range of domains, tailored to the context of Borroloola

**There are significant opportunities to scale and measure impact given the success in Borroloola**

There is an opportunity to build the outcomes evidence base of an innovative program exemplifying a best practice approach to Closing the Gap

There are three clear avenues of extension to explore that would each enable Indi Kindi to scale its impact and deliver more benefits to community

...are underpinned by benefits for local women, families and the community

Indi Kindi supports families however they choose to engage, allowing them to do other things while their child is at Indi Kindi, or to join the sessions too

By placing children at the centre, Indi Kindi is able to have wide ranging impacts on Borroloola, including the intergenerational transmission of culture

Indi Kindi provides fulfilling and meaningful employment opportunities for Aboriginal women

# Executive Summary: Introduction to this report

## The purpose and basis of this report

### The purpose of this report

This report seeks to identify and frame the health, educational and social impacts of the Indi Kindi program on the children, families and community of Borroloola in the Northern Territory. It provides an assessment of the likely impacts of the program and makes recommendations regarding data needed for further assessment. Its purpose is to provide an evidence base of the program activities and outcomes, on which future funding opportunities within corporate organisations, governments and philanthropic agents can be explored. The evidence laid out in this report is intended to directly inform future measurement and evaluation of Indi Kindi, and the implications of ongoing measurement are explored in a separate document provided to the Moriarty Foundation.

More broadly, this report is intended to contribute to and shape Early Years Policy by describing an innovative place-based intervention supporting Aboriginal children's development outcomes. Through sharing an exemplar approach to achieving outcomes, the intention is to support more children and families across Australia.

### The basis for this report

The report synthesises the results from a range of primary and secondary data sources, including consultations and direct observations of the program in Borroloola, and records provided by Moriarty Foundation and analyses these through the application of a social return on investment (SROI) framework.



Evidence and data were collated from an array of sources to tell the story of Indi Kindi and its impact through an SROI lens. The program's impact and benefits are assessed with reference to both current provision and utilisation and its potential – that is, what the program might be capable of delivering in its journey, given the potential it has demonstrated.

In the absence of data on direct outcomes, the analysis looks to the known predictors of outcomes – as evidenced through published research – and appraises Indi Kindi

with respect to the presence of these predictors. This in turn provides a basis for applying estimates of impact, outcomes and benefits that have been measured elsewhere to Indi Kindi and its community context.

It also looks to community-level indicators as a basis for comparing developmental and socio-economic outcomes in Borroloola relative to similar remote Indigenous communities across the nation. While conclusions from such analysis must be drawn carefully, especially as far as attribution to individual programs or initiatives is concerned, it nevertheless provides a population-level reference point for the program's potential impacts.

### Evidence and data used in this report

-  2-week immersive visit to Borroloola
-  Interviews and consultations
-  Program and administrative data
-  Secondary data
-  Published research
-  Theory of change, developed by UNICEF

### Limitations of the current evidence base

Measuring the impact of early years programs is always challenging. Benefits accrue over a long period of time – often over whole lifetimes. Such a forecasting exercise faces significant uncertainty and data challenges. These challenges are exacerbated in the Indi Kindi setting, where remote delivery and resource constraints, limit the ability for sophisticated data collection systems. Public data is limited and often known to be inaccurate. Indi Kindi is also rare in its combination of program attributes and the resulting benefits, across education, health, wellbeing and more, which increases the complexity of evidence gathering (for example, it is not straightforward to compare Indi Kindi to other similar programs, as there are few). Moreover, the benefits are expected to accrue *inter-generationally*, across multiple generations.

# Executive Summary: Research methodology

## Approach to data and analysis used to frame the benefits of Indi Kindi

High quality and consistent measurement and outcomes data collection has long been a challenge of both early years learning systems and the broader context of remote community delivery. This is widely acknowledged by federal, state and territory governments across multiple policy settings and not least evidenced in the annual reporting on the National Agreement on Closing the Gap. Indi Kindi exists in this context and with the additional challenge of operating in a resource-constrained environment, with non-recurrent government funding.

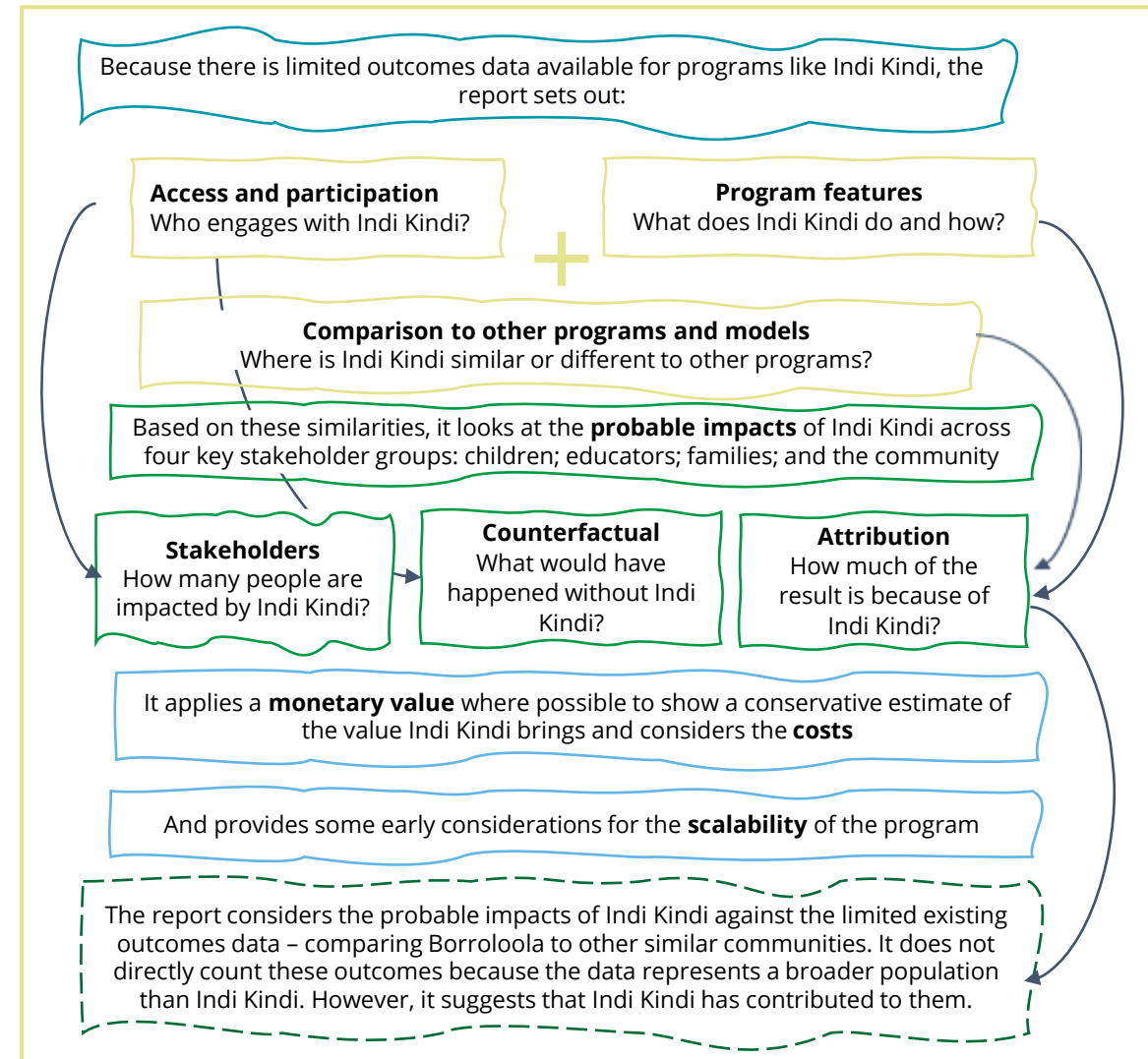
In the absence of robust outcomes data, including from comparable programs and from public sources, evidence and data has been gathered from multiple sources to compare known outcome predictors against what (and how) Indi Kindi delivers. This report also looks to community-level indicators as a basis for comparing developmental and socio-economic outcomes in Borrooloola relative to similar remote Indigenous communities across the nation.

The key methodology behind understanding attribution of ECEC outcomes is a desktop review of the characteristics and outcomes associated with best practice early years education models and early years programs in communities like Borrooloola, particularly Indigenous early years education programs.

These characteristics or features are then mapped to those adopted by Indi Kindi, to understand whether Indi Kindi is delivering best practice with respect to both early education standards at a national and global level, and principles for delivery in Indigenous contexts. This alignment is used to identify the outcomes that Indi Kindi is expected to deliver based on those realised by similar models and programs.

This analysis is supplemented by primary evidence, descriptive analysis of outcomes-related data from the Australian Bureau of Statistics and Australian Early Development Census (AEDC) and attendance and enrolment patterns of children attending Indi Kindi.

The result is a set of findings, assembled against a social return on investment framework, which capture the different dimensions of the impact of Indi Kindi to the greatest extent possible given the available evidence. In some cases, it is possible to assign values to these impacts; in many instances it is not. As such, the conclusions of this research rest not on the quantified impacts, but on the combined picture that the quantified and non-quantified impacts present.





"I like see them, my grandchildren, go along school every day and learn about white man things, you know. I like see my grandchildren go to university to learn more, so they can help their own people. I telling my grandchildren, go every day along school, so you can learn to read and write."

**- Borrooloola senior Law woman**



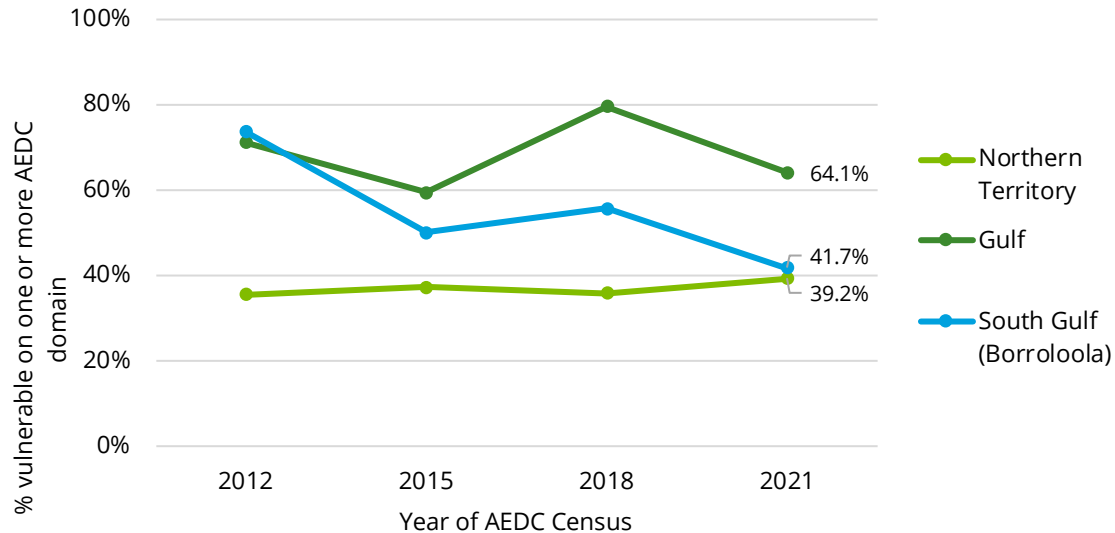
# Executive Summary: Impacts for children

## Key finding 1: Since Indi Kindi started, the share of vulnerable children in Borrooloola fell from 74% in 2012 to 42% in 2021

When Indi Kindi started delivering in Borrooloola, 74% of children in that region were assessed as vulnerable in one or more domain. In 2021, that number had fallen to 42% (see the blue line in Chart iii below). These outcomes are better than the outcomes in the larger geographic area (the dark green line), demonstrating that Borrooloola has stronger outcomes than neighboring communities. Borrooloola's progress brings it nearly in line with the Northern Territory average (the light green line), which has changed little over the 2012-2021 period. Similar trajectories can be seen for the school-based (language) domain, among others.

Indi Kindi is a key differentiating factor between Borrooloola and these other areas.

Chart iii: Proportion of children vulnerable on one or more domains over time in Borrooloola, compared to other areas

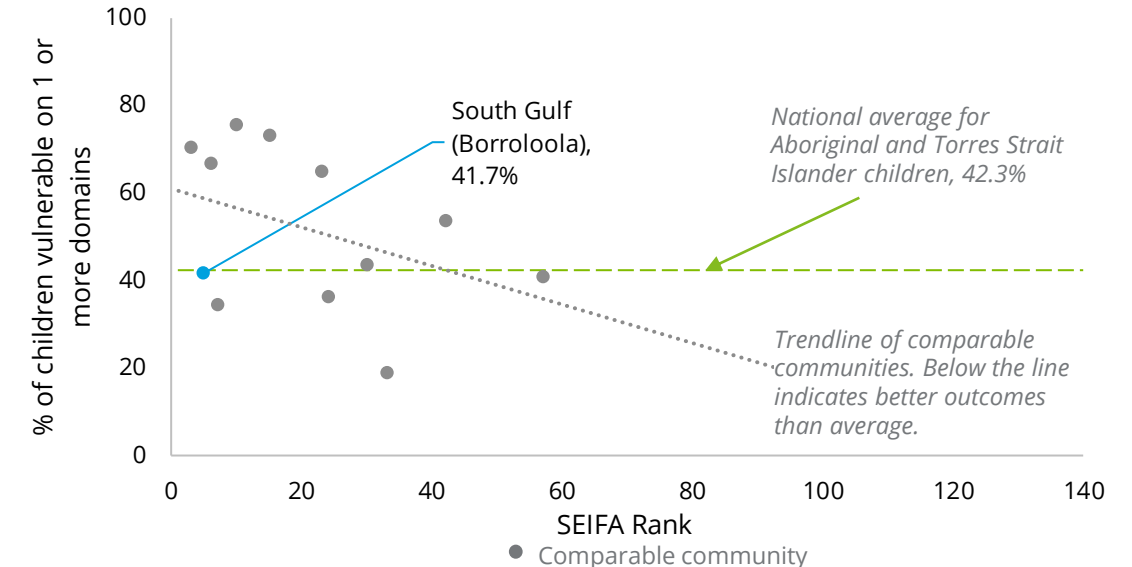


Source: Deloitte Access Economics (2024) using AEDC data. Note there is no AEDC data for Gulf or South Gulf in 2009

Chart iv indicates that despite belonging to a geographical area which ranks within the five most disadvantaged in Australia, the South Gulf region (which includes Borrooloola) outperforms comparable areas in the proportion of children assessed as vulnerable on 1 or more AEDC domains. The trendline for these comparable areas is shown by the dotted grey line below, with South Gulf below this in blue.

The improvement of children vulnerable on one or more domain also brings Borrooloola slightly under the national average for Aboriginal and Torres Strait Islander children (as seen in the dashed green line in Chart iv).

Chart iv: Proportion of children vulnerable on one or more domains in comparably disadvantaged communities



Source: Deloitte Access Economics (2024) using AEDC and ABS data

# Executive Summary: Impacts for children

## Key finding 2: Borroloola has strong preschool attendance compared to other communities, supported by a deliberate transition approach employed by Indi Kindi

The charts to the right show that the area around Borroloola is outperforming comparably disadvantaged areas for preschool attendance.\* The Gulf region not only outperforms the average for comparably disadvantaged communities, but has the highest preschool participation rate despite being one of the most disadvantaged.

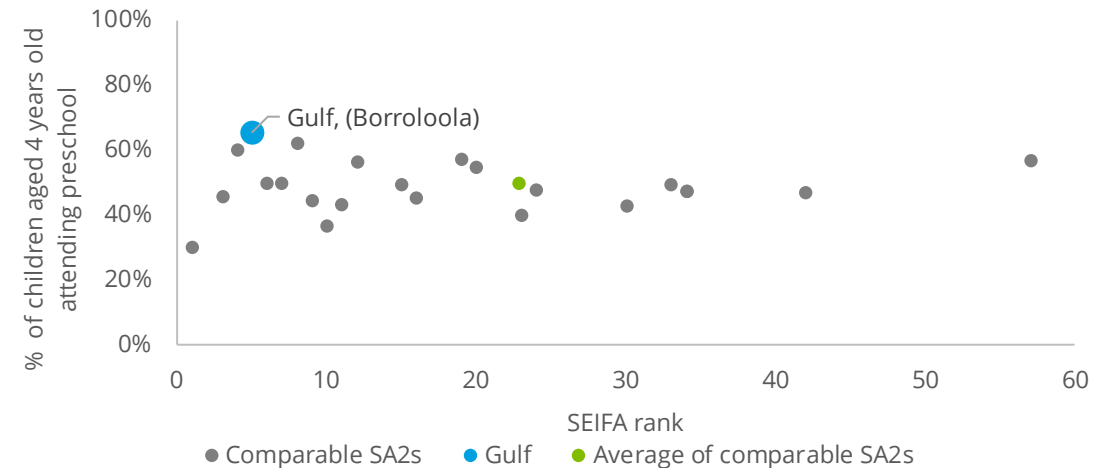
Indi Kindi aims to support children to attend preschool, transition and primary school. Educators work with families to understand that the first year of school is compulsory, and 'graduation' ceremonies support both families and children to understand how children are now ready for preschool, Transition, or school, by reflecting on all the things they have learned during their time at Indi Kindi.

Progression through to preschool and school is common for Indi Kindi children. Based on a mapping exercise with the educators, it can be reasonably claimed that a very high proportion of children who attend Indi Kindi, if not all, go on to be enrolled in preschool, Transition, or school.

As preschool is only three days a week, there may be children who attend both Indi Kindi and preschool. Educators spoke of how this can encourage younger children to be curious and excited about preschool, especially during joint activities with other early years' services on the school grounds. In Borroloola, there has recently been a pilot of 3-year-old preschool, which may offer further opportunities for Indi Kindi to support preschool engagement, and continue to provide quality ECEC to 3 to 5 year olds on the days they do not attend preschool.

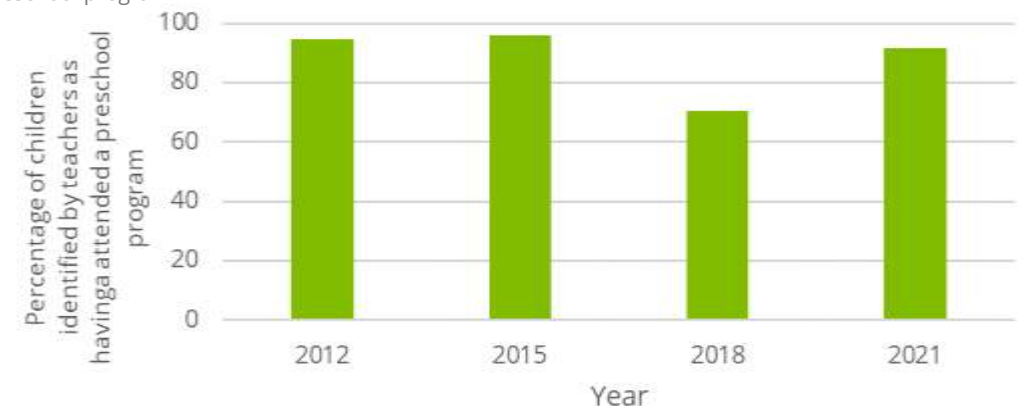
*\*Note: The preschool attendance rates shown for the Gulf region include Borroloola preschool and a neighbouring region's preschool, showing a lower proportion of four year old children attending preschool than the proportion of five year old children identified through the AEDC as attending a preschool program in the South Gulf region.*

Chart v: Preschool attendance mapped against SEIFA rank for comparable SA2 regions



Source: Deloitte Access Economics (2024) using ABS data by SA2 Region\*

Chart vi: Percentage of children in South Gulf (Borroloola) identified by teachers as having attended a preschool program



Source: Deloitte Access Economics (2024), using AEDC data from South Gulf

\*Note: The ABS Census is not as accurate for recording preschool attendance as the ABS Preschool Education dataset; however, it provides a more consistent basis for measuring attendance as a share of the population.

# Executive Summary: Impacts for children

## Key finding 3: Indi Kindi is associated with direct developmental and educational benefits and a soft entry point into preschool and school

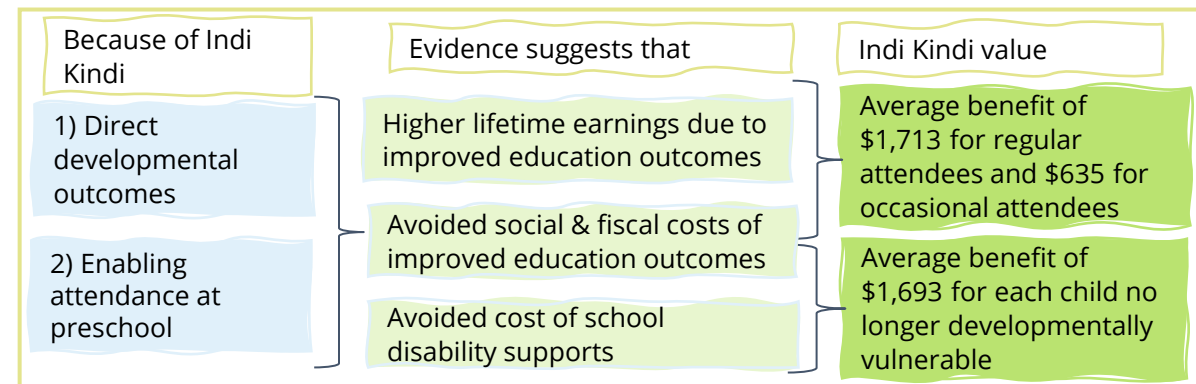
Indi Kindi is enabling developmental foundations that are critical for a strong start to life through direct developmental outcomes – including literacy, numeracy, language development and cognitive and executive function.



- **High quality play-based learning** – Indi Kindi offers a custom designed ‘Walking Learning®’ curriculum with the hallmarks of contemporary understandings of quality ECEC, intertwined with Aboriginal teachings. Learning takes place outdoors, on Country. Parents indicate that Indi Kindi has helped their child ‘a lot’ with communicating (69%), trying to do things for themselves (77%), and being interested in learning (88%) (2019 survey results).
- **Quality caregiver-child interactions** – Indi Kindi supports strong developmental outcomes for children who attend with a family member by building parenting capabilities and supporting quality caregiver-child interactions. Positive carer-child relationships are modelled by the educator team, including dialogic reading and ‘serve and return’ interactions, which build brain architecture, and unconditional positive regard for the child.
- **The home learning environment** – Indi Kindi helps to enrich the home learning environment for children attending by distributing an age-appropriate book to each child at every session they attend. It means that benefits of Indi Kindi go beyond the sessions themselves. Shared reading can be practiced by a family member who has learned from educators’ examples of shared reading at sessions.
- **Enabling attendance at preschool and transition** – Indi Kindi promotes family awareness of the benefits of ECEC, providing an accessible and culturally safe introduction to formal learning, and through transition elements, such as ‘graduation’, which normalise the expectation of attending preschool.



- **Improved executive function, cognitive skills, and improved socio-emotional development** - Age-appropriate play-based activities can be seen to form part of a spectrum of learning, encouraging curiosity, communication and attentional skills. Learning outdoors is associated with a range of additional likely health and learning benefits.
- **Early and consistent engagement with preschool** - Based on the mapping exercise conducted with educators and other data sources, it can be reasonably claimed that at least a high proportion of children who attend Indi Kindi, if not all, go on to be enrolled in preschool, Transition, or school.
- **Improved long term educational, employment and personal outcomes**, including school engagement and literacy outcomes. This will be supported through the home learning environment and parental engagement.







“The kids like it at Indi Kindi, cause they don't do them things [play based educational activities] at home or they probably don't even have them toys at home, you know, to play with or books to read...They love reading, so we can bring some books and they just really want to read them books”

**- Indi Kindi Educator**

# Executive Summary: Impacts for children

## Key finding 4: Healthy practices are embedded in the everyday delivery of Indi Kindi, driving health literacy in the early years, and lowering the prevalence of chronic and other health conditions

Indi Kindi is enabling developmental foundations that are critical for a strong start to life through direct developmental outcomes – including literacy, numeracy, language development and cognitive and executive function.

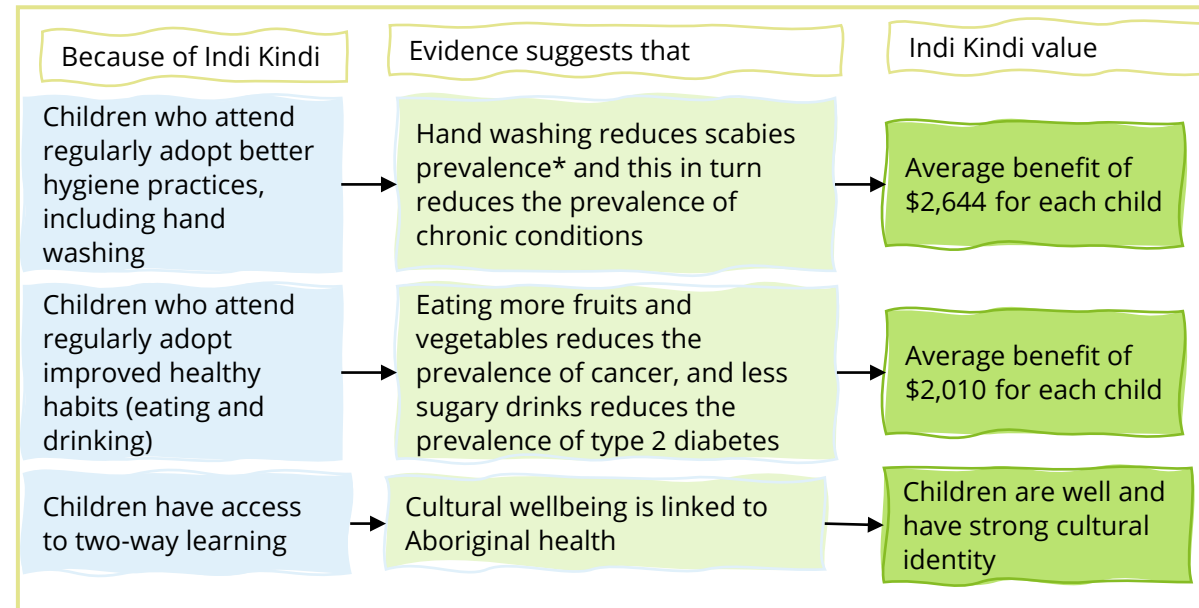


- Indi Kindi incorporates a focus on health and development outcomes by embedding healthy behaviours in its day-to-day programming and incorporating health check-ups with the local clinic and visiting health professionals. Children are taught how to wash their hands, and the importance of doing so.
- Indi Kindi provides fresh, balanced meals approved by a nutritionist, and cooked by the Indi Kindi educator team, who receive training in safe food handling and education in healthy food choices. The high cost of groceries in Borroloola means that access to healthy food every day, including fruits and vegetables with every session, is likely to be a differential benefit of Indi Kindi compared to not attending.
- Educators also build trust with families and carers to access other systems, and provide practical help with knowledge of local services, pathways, and referrals.



- Nourished children show improved cognitive function, enhanced focus, and better overall health, setting them up for long-term success. Prioritising nutrition in ECEC can have a profound positive impact on children's

- development and well-being as early childhood plays a crucial role in shaping health attitudes and behaviours as adults – likely reducing the prevalence of chronic conditions in adulthood.
- By providing a culturally safe and supportive environment that nurtures the cultural identities of Aboriginal children, the Indi Kindi program also boosts children's cultural well-being. It promotes a sense of cultural pride, resilience, and connectedness among Aboriginal families and their children, which can be seen as a holistic determinant of health.





“Compared to other jobs they are really understanding and flexible. I guess it doesn’t feel like a job. I don’t know how to explain, you come here and it feels surreal that you work with families and bubs. Our work as well, we are such a strong team, we are comfortable, we have a good laugh. We know what the plan is, and we talk about plans of what we want to do, which not many people can say that.”

**-Indi Kindi educator**



# Executive Summary: Impacts for educators

## Key finding 5: Indi Kindi provides fulfilling and meaningful employment opportunities for Aboriginal women

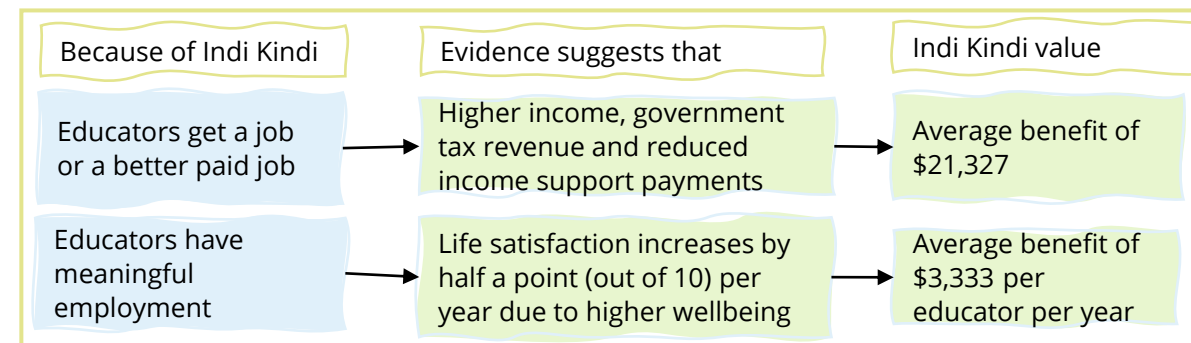
Indi Kindi is unique in Borroloola in that 100 per cent of the educators delivering the program are local Aboriginal women. While delivering strong developmental outcomes for children is Indi Kindi's core business, the Indi Kindi educator team are key to unlocking these outcomes.



- The complexity of consistent delivery in remote Indigenous communities is well understood by ECEC services, policymakers, philanthropic organisations, and the schooling system. Indi Kindi has employed a sizeable workforce in order to support delivery as much as possible, by ensuring that there is a large enough team to be able to deliver should any one member of the team be unable to work.
- Their role includes not only educating children but organising and planning sessions, cooking meals, driving the bus, building relationships with families, providing outreach to new members to community, and liaising with other services in Borroloola. The quality of the educator team is what drives most of the outcomes for children, and this is linked to their tenure and experience, with over half of the current educators being in role for 8 years.
- In addition to the direct employment and educational outcomes for educators, there are further outcomes that come from not only having a job, but a job that is fulfilling and meaningful, that provides opportunities to connect with culture and to be recognised as a role model and leader. Indi Kindi employs strength-based approaches that focus on recognising and building upon the unique strengths, skills, and experiences of Aboriginal educators. It also promotes qualification pathways for educators and offers professional learning opportunities which adhere to nationally consistent qualification requirements.



- Managing one's cultural safety, dealing with identity strain and cultural load are just some of the extra burdens that Aboriginal people face when working in teams that are majority non-Aboriginal. Within the Indi Kindi team, they are understood, and they are supported by Moriarty Foundation with their cultural obligations. This helps to manage stress, balance personal and professional responsibilities and foster emotional well-being.
- The two-way learning model means that the educators also spend time on Country, and participate in the cultural excursions. They are able to learn from Elders, speak two languages, and engage in their cultural responsibilities. These are all factors associated with higher life satisfaction for Indigenous peoples, and have been correlated with Ranger employment programs.







"We're with the little ones you know helping them, encouraging them, helping their mums. They love sending these kids to us every day because they probably need a break at home too. "

**-Indi Kindi educator**

# Executive Summary: Impacts for families

## Key finding 6: Indi Kindi supports families to have flexibility and agency in how they choose to engage with the program

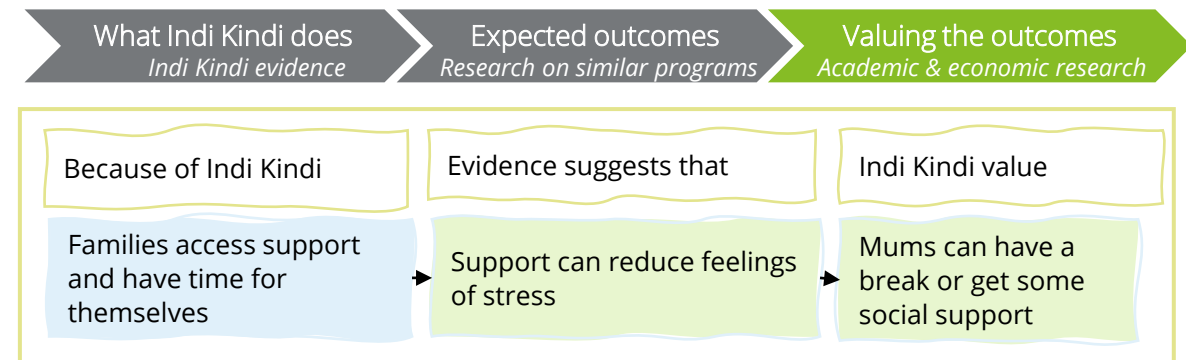
<b>What Indi Kindi does</b> <i>Indi Kindi evidence</i>	<b>Expected outcomes</b> <i>Research on similar programs</i>	<b>Valuing the outcomes</b> <i>Academic &amp; economic research</i>
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- Indi Kindi builds trust with mums and families, meaning that sometimes families choose to send their children to Indi Kindi so that they can do other things, assured that their children are being well looked after and are culturally safe.
- Alternatively, mums can get some support for themselves if they prefer, joining for cultural excursions or day to day delivery if they would like to. This provides opportunities to get social support from other mums and the team. It also helps to build parenting capabilities, as discussed in other sections, helping to improve child development outcomes
- However, often after one or two sessions mums are often are comfortable enough to trust their children to the Indi Kindi team, and spend time attending to other caring or cultural responsibilities.
- Indi Kindi is free and has an easy enrolment process, meaning there are low barriers to entry for mums and families, as opposed to government funded child care. In Borroloola there are now other child care options for families, but they may either require families to attend with children (such as Families as First Teachers), or do not allow or encourage families to attend with their children (such as traditional long day cares). Indi Kindi allows both the greatest flexibility for families to engage and build trust, and to benefit themselves from cultural excursions, including fishing and collecting bush medicine.
- Families of children attending Indi Kindi were asked by Indi Kindi educators how much Indi Kindi helped their child with various development outcomes in 2018 and 2019. Responses were very positive, including for health outcomes, reflecting a high degree of confidence in the program by families that can enable further attendance, and support trust in other formal early years programs. 73% of

respondents agreed that Indi Kindi helped their children with every domain they were asked about. Families said that Indi Kindi helped ‘a lot’ with helping children to share and play with other kids (91% in 2018 and 77% in 2019), learning about the importance of washing hands and faces (97% in 2019), being physically active (89% in 2018, 94% in 2019) and being interested in learning (92% in 2018 and 88% in 2019).

<b>What Indi Kindi does</b> <i>Indi Kindi evidence</i>	<b>Expected outcomes</b> <i>Research on similar programs</i>	<b>Valuing the outcomes</b> <i>Academic &amp; economic research</i>
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- While child care is often linked to economic participation outcomes for family members and mums, this was not referred to by Indi Kindi stakeholders. Due to low employment levels in Borroloola generally, Indi Kindi was not often seen as a method of enabling workforce participation by stakeholders (except for as educators themselves).
- Educators suggested that for those who do work, they are more likely to ask other family members to help care for children, such as grandmothers, and Indi Kindi helps to relieve them from child care duties for a while.



# Executive Summary: Impacts for community

## Key finding 7: By placing children at the centre, Indi Kindi is able to have wide ranging impacts on Borroloola, including the intergenerational transmission of culture

While Moriarty Foundation head office is organised through a traditionally Western governance structure (hierarchical, representative) given its need to directly interface with largely Western systems (funding, financing etc.) the Community Advisory Group and educator team follow a more traditionally Aboriginal governance model that centres children, Country, Elders and knowledge holding that are best described as relational networks.

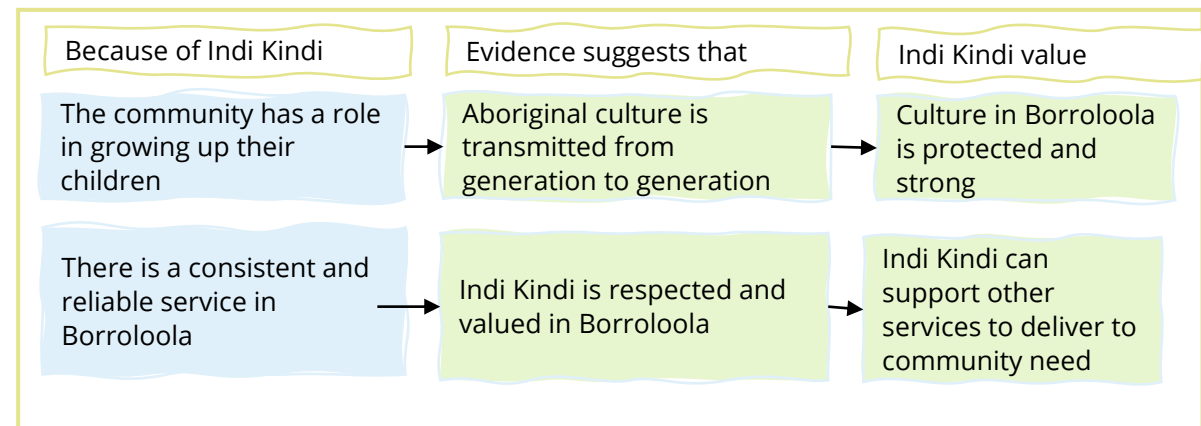
books around the town mean that the community recognises the Indi Kindi service. Indi Kindi can therefore act as a conduit to other services, by leveraging their expertise and status within the community.



- Indi Kindi supports transmission of culture through two-way learning, not only teaching children from a very young age, but also supporting the educators to learn from and with Elders in the community. Educators value the aspects of the program which allow them to build these skills and experiences, and there are also benefits for other community members who are able to join Indi Kindi on excursions and participate in cultural activities such as fishing or gathering bush medicine.
- Borroloola's strong connection to culture can only be maintained by passing down knowledge and law from generation to generation. This is further strengthened by the governance structure of the Community Advisory Group. The Community Advisory Group is formed of local community members, including Elders, and helps to guide the program and ensure it adheres to local governance protocols.
- Indi Kindi is one of the longest running and most consistent programs in Borroloola. The distinctive pink uniform, bus and logo and the proliferation of



- Effective programs are directed and controlled by Aboriginal communities themselves, catering to their unique needs and aspirations.
- Programs which involve community members allow for the intergenerational transmission of culture, including languages.







“And they trust us like with their kids. Some of the kids – well, all of the kids - what come is family. We all related in town, that's why the parents trust us and Indi Kindi for taking the kids out each day”

**- Indi Kindi Educator**



# Executive Summary: Access and participation

## Key finding 8: Most children in Borrooloola benefit from attending Indi Kindi, and attend flexibly according to the needs and choices of their families

Census data indicates 59 Aboriginal children aged 0-5 lived in Borrooloola in 2021 – less than the number of children recorded attending Indi Kindi in Borrooloola.\* This reflects what is known about Indi Kindi’s flexibility – it allows children visiting from other communities to attend and receive an early years learning program despite not living ‘permanently’ in the area. Different families engage with Indi Kindi in different ways, and this is reflected in their patterns of attendance.

### Over 10 years of delivery

- Most children in Borrooloola access Indi Kindi, with various attendance profiles.
- It can reasonably be claimed that most infants and children under pre-school age regularly attending Indi Kindi would not attend an alternative program in Borrooloola if not for Indi Kindi.
- Between 2016 and 2022, Indi Kindi delivered sessions to an average of 140 different children per year – higher than census figures for Borrooloola.\*\*
- Attendance data and public records indicate that over 80% of children at Borrooloola school have attended Indi Kindi in some capacity (see Chart ii).
- Workshops with the educators mapping 2 camps in Borrooloola indicated that all children in 2023 were either attending Indi Kindi or school.

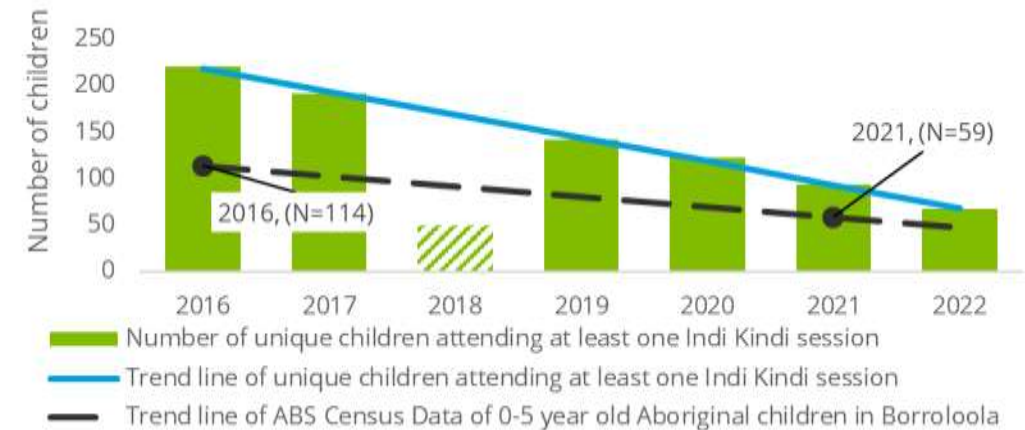
### 2022 attendance data

- 31 children attended Indi Kindi regularly or occasionally, including children that may have been visiting from other communities. Of these, 4 children attended with weekly patterns of attendance and patterns of attendance throughout the year. These children are expected to get the full benefits of Indi Kindi.
- 36 children attended once or twice, including children that may have been visiting from other communities.

\* ABS data should only be understood as 'indicative' for population estimates of Borrooloola's children

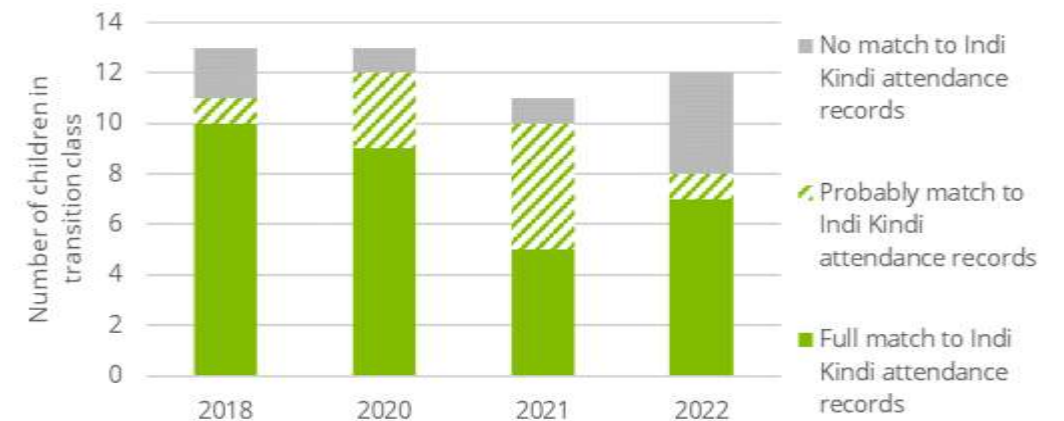
\*\* Figures do not include 2018, as data only exists for two months of the year.

Chart i: Number of unique children over time\*



Source: Deloitte Access Economics, using information from ABS

Chart ii: Number of children in Borrooloola Transition class who attended Indi Kindi\*\*



Source: Deloitte Access Economics, using information from Indi Kindi attendance records, and Northern Territory News

# Executive Summary: Program features

## Key finding 9: Indi Kindi has delivered consistently and flexibly in Borroloola amid inconsistent funding and changing need

### Indi Kindi was born of a community need

The story of Indi Kindi begins with the story of Yanyuwa man, John Moriarty. Born at Borroloola in 1938, John was taken from his mother at the age of four and placed in a number of boys' homes in Sydney and Adelaide, under the then government's assimilationist policy. Children who were removed like John became known as the Stolen Generations. At 15 years of age, John was reunited with his mother in Alice Springs and reconnected with his birthplace of Borroloola and his family.

Indi Kindi came at the request of the Borroloola senior Law women (cultural leaders and Elders as well as kin) to John and Ros Moriarty. The Law Women shared their concerns that children of the community weren't going to school and weren't having the kind of life they wanted for their children coming through the community. They wanted them to be better educated, to go to university, to come back and help them. To help meet this request, John and Ros worked with the Law women and broader community to develop two programs: the Indi Kindi early years learning program for preschool aged children and the John Moriarty Football program for school aged children.

### Indi Kindi today continues to respond to community needs

The priorities of Moriarty Foundation in delivering Indi Kindi over the last decade have been to:

- Support the best outcomes for Aboriginal children through an innovative early years learning program, with a focus on literacy, health and wellbeing
- Work with parents and families to improve the home learning environment
- Recruit, retain and support the training of educators across the domains of education, health, safety, and nutrition, including on the job training to nationally recognised standards for early years programming

- Sustain cultural and community connections through the local Elders (Law Women) and Community Advisory Group
- Facilitate engagement with the local health services
- Maintain the infrastructure required for program delivery (including the bus transport for children)
- Support the transition of children to preschool and school well-being
- Attract and retain funding to enable the delivery of the program (to cover wages, staff training, food, medical supplies, educational and play resources).

### Indi Kindi program features

Key features of Indi Kindi which respond to need and align to best practice include:

- **Educational program and practice** - Indi Kindi has developed a custom curriculum and pedagogy that blends traditional cultural methods with established Western constructs
- **Staffing and workforce** - All educators delivery the program are Aboriginal women from Borroloola with strong community ties, qualified or studying for nationally recognised qualifications
- **Governance and leadership** - Aboriginal and Western governance and leadership models are well-aligned. A Community Advisory Group which includes local Elders ensures cultural leadership
- **Health, hygiene, and nutrition** - Children attending Indi Kindi receive free, highly nutritional meals and practice healthy habits
- **Accessibility and eligibility** - Enrolling children is easy and free for families and transport is provided to attend
- **Collaborative partnerships with families and communities** - Indi Kindi works closely with family members and the community in the design and delivery of the program

# Executive Summary: Comparison to other programs and models

## Key finding 10: Indi Kindi embodies best practice features across a range of domains, tailored to the context of Borroloola

HOW

### Place-based approaches

- ✓ Flexible response and delivery model
- ✓ Builds local capacity
- ✓ Works with local organisations and agencies

- ✓ Driven by community, with input into design and delivery
- ✓ Sustained capacity building and investment
- ✗ Formal partnership agreements with government to deliver services

### Closing the Gap priority reform elements

- ✓ Meets definition of Aboriginal Community Controlled Organisation
- ✓ Dedicated and identified Aboriginal and Torres Strait Islander workforce.
- ✗ Community-controlled organisations have a dedicated, reliable and consistent funding model designed to suit the types of services required by communities.

WHAT

### Early years education and health models

Program features	Western models	Aboriginal models
Educational program and practice	<ul style="list-style-type: none"> <li>✓ Defined curriculum/framework</li> </ul>	<ul style="list-style-type: none"> <li>✓ Aboriginal-centric curriculum</li> <li>✓ Learning on Country</li> </ul>
Holistic health and development	<ul style="list-style-type: none"> <li>✓ Explicit focus on health</li> </ul>	<ul style="list-style-type: none"> <li>✓ Health promotion and nutrition</li> <li>✓ Cultural wellbeing lens</li> </ul>
Staffing	<ul style="list-style-type: none"> <li>✓ Qualified educators</li> <li>+ On site ECT</li> <li>✓ Access to ECT/Early Years Specialist</li> <li>+ High educator/child ratio</li> </ul>	
Partnerships with families and communities	<ul style="list-style-type: none"> <li>+ Family attendance</li> <li>✓ Improved home learning environment</li> </ul>	<ul style="list-style-type: none"> <li>✓ Community governance</li> <li>✓ Provision of social support</li> <li>✓ Active family and community involvement</li> </ul>
Accessibility	<ul style="list-style-type: none"> <li>+ Free</li> <li>+ Transport provided</li> </ul>	<ul style="list-style-type: none"> <li>+ Easy enrolment process</li> </ul>

### Employment programs

- ✓ Meaningful and fulfilling work
- + Culturally aligned work
- ✓ Services protect the dignity and respect rights of individuals.
- ✓ Services provide a pathway towards decent jobs that provide the flexibility and security that individuals need.



# Executive Summary: Costs

## Key finding 11: Delivering a program as multi-dimensional as Indi Kindi in a context as unique as Borroloola necessarily involves above-average levels of investment

Any analysis of the cost of delivering the Indi Kind program must consider its unique features, its delivery context, and the breadth of outcomes it is generating.

To this end, the SROI framework serves to provide a comprehensive basis for appraising the value that is being generated relative to the investment that is being made. However, the conclusions that can be drawn from the application of the SROI framework are limited by the fact that while the costs can be measured with a relatively high degree of confidence, the benefits are considerably less amenable to reliable quantification.

Noting that costs should not be considered in isolation, and that it is only in conjunction with the associated benefits that they can be fully understood, a number of observations can be made regarding the costs associated with the Indi Kindi program:

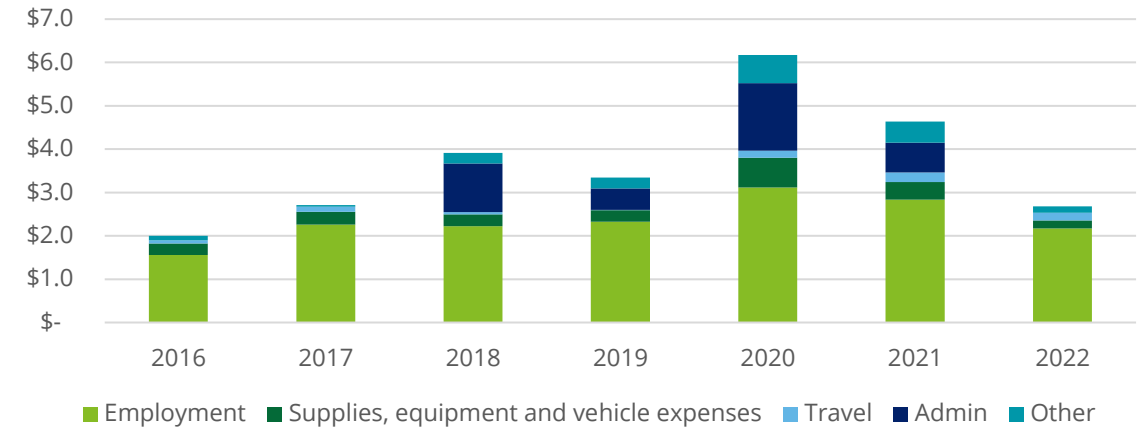
- The total annual cost of running the program (\$270,000 in 2022) is principally comprised of employment costs, which accounted for 80% of 2022 total program expenditure.
- When the total program cost for 2022 is considered relative to measures of population and participation, it can be observed that:
  - The cost per enrolled child was ~\$4,000
  - The cost per child under 5 in Borroloola was ~\$4,500\*
  - The cost per child that attended on multiple occasions was ~\$8,000
  - A 50% increase in the children attending would see the cost per child that attends occasionally fall to ~\$6000

While the ability to benchmark these figures is limited by the scarcity of direct comparators, the available points of reference suggest that, even before the full breadth of benefits generated by the program are considered, these figures compare favourably.\*\*

\* Note: the cost per enrolled child is lower than the cost per child in Borroloola due to more children attending Indi Kindi in 2022 than the ABS Census records living in Borroloola in 2021.

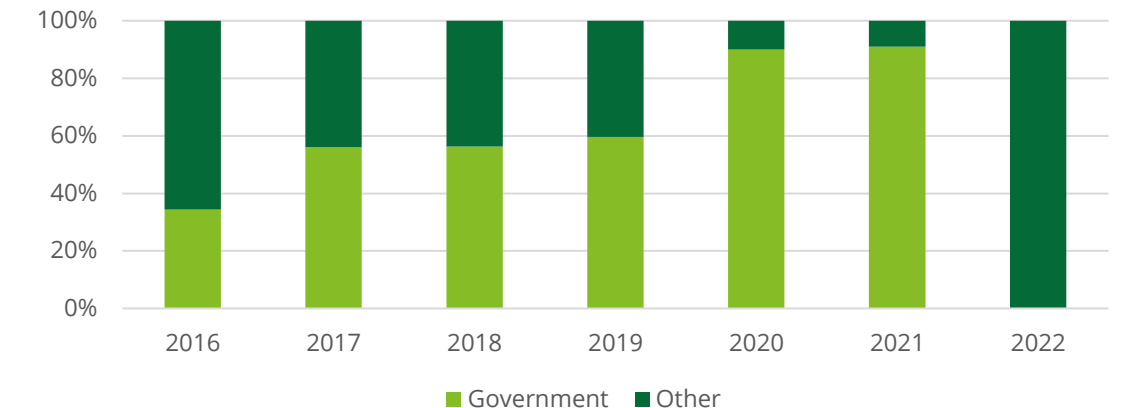
\*\* Available points of reference include grants for a supported playgroup in Borroloola, an intensive early childhood education and care model trial, and Children and Parenting support program funding from Department of Social Services  
© 2024 Deloitte Touche Tohmatsu

Chart vii: Costs of running Indi Kindi in Borroloola over time ('00,000)



Source: Deloitte Access Economics (2024) using data from Moriarty Foundation

Chart viii: Government funding of Indi Kindi over time (%)



Source: Deloitte Access Economics (2024) using data from Moriarty Foundation

# Executive Summary: Identified benefits

## Key finding 12: The quantifiable benefits are a starting point for understanding the true impact that Indi Kindi is delivering

The purpose of the SROI framework is to provide a basis for systematically organising the impacts of Indi Kindi that this research has identified and explored – and, with appropriate data, for appraising the net impacts of the program. It is intended to be all-encompassing across identified cultural, social, and economic benefits (Figure ii).

The practical application of a SROI approach requires the quantification of the identified benefits, with consideration of factors such as how many people they accrue to, their magnitude, and the extent to which they can be attributed to Indi Kindi. As the other findings presented in this summary report have demonstrated, the impacts of Indi Kindi vary in the degree to which they are amenable to reliable quantification in the manner required by an SROI (in dollar terms).

Many of the most significant benefits can not be confidently quantified at this stage, or are only partially quantifiable, such as benefits to families and communities or health benefits to educators. This is due to lack of research on programs like Indi Kindi, for Aboriginal children – itself reflecting the innovation and leading approach of Indi Kindi.

Figure ii gives an overview of which benefits have been quantified in this report. The following slide also highlights the conservative nature of the quantification that was undertaken for the benefits to children.

In contrast, the costs of delivery are largely quantifiable (see page 24). Given this gap in what could be quantified, an SROI ratio (to compare benefits and costs) is not included in this report. However, the framework and recommendations for improved data collection included in this report provide the foundation for the future calculation of a ratio to demonstrate the net impact of Indi Kindi.

### Legend:

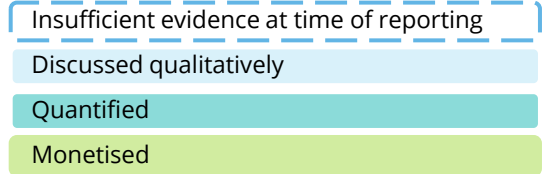
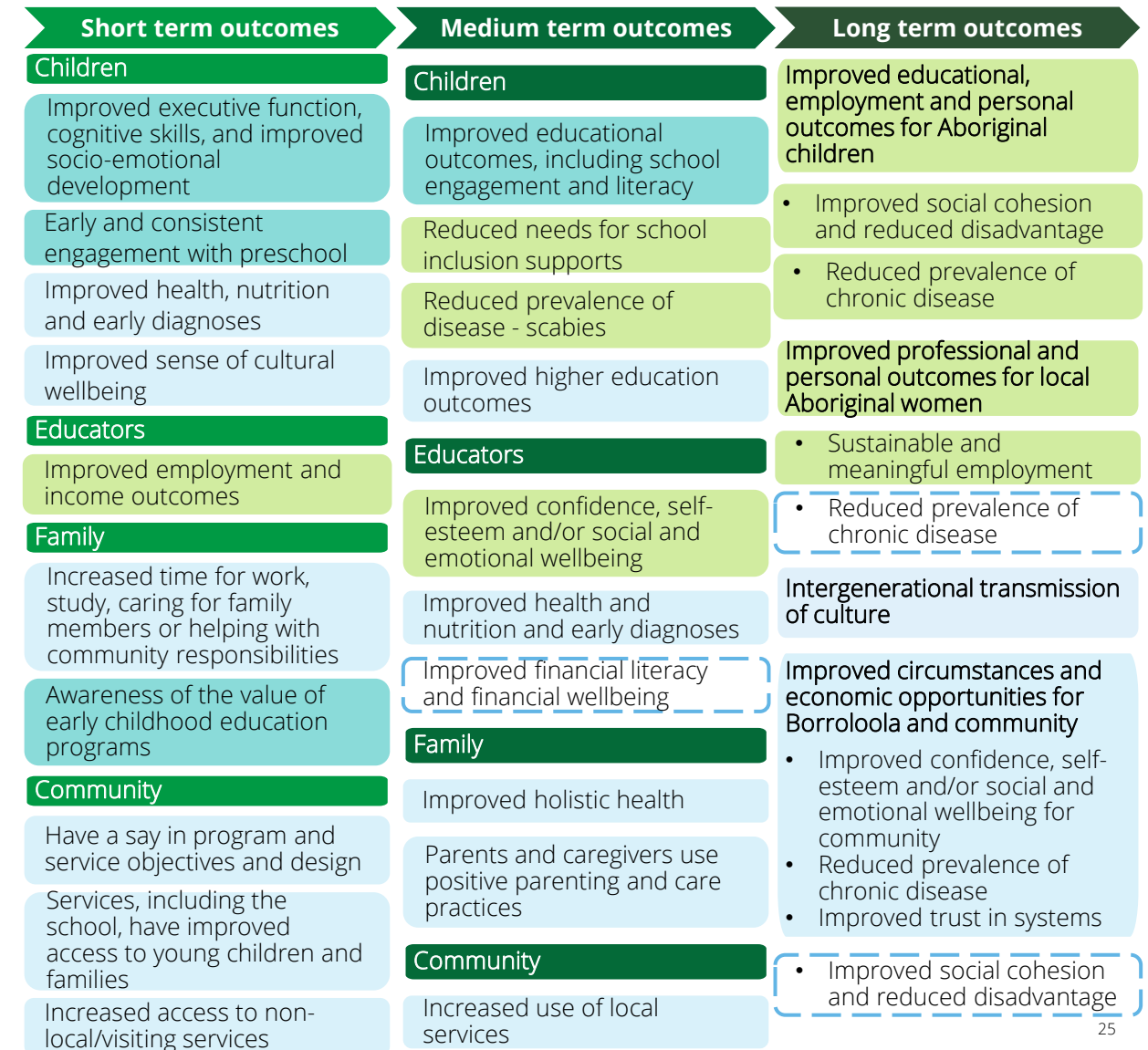


Figure ii: Outcomes over time



Unquantified
Quantified

# Executive Summary: Impact

## Framing the impact and value of Indi Kindi for children

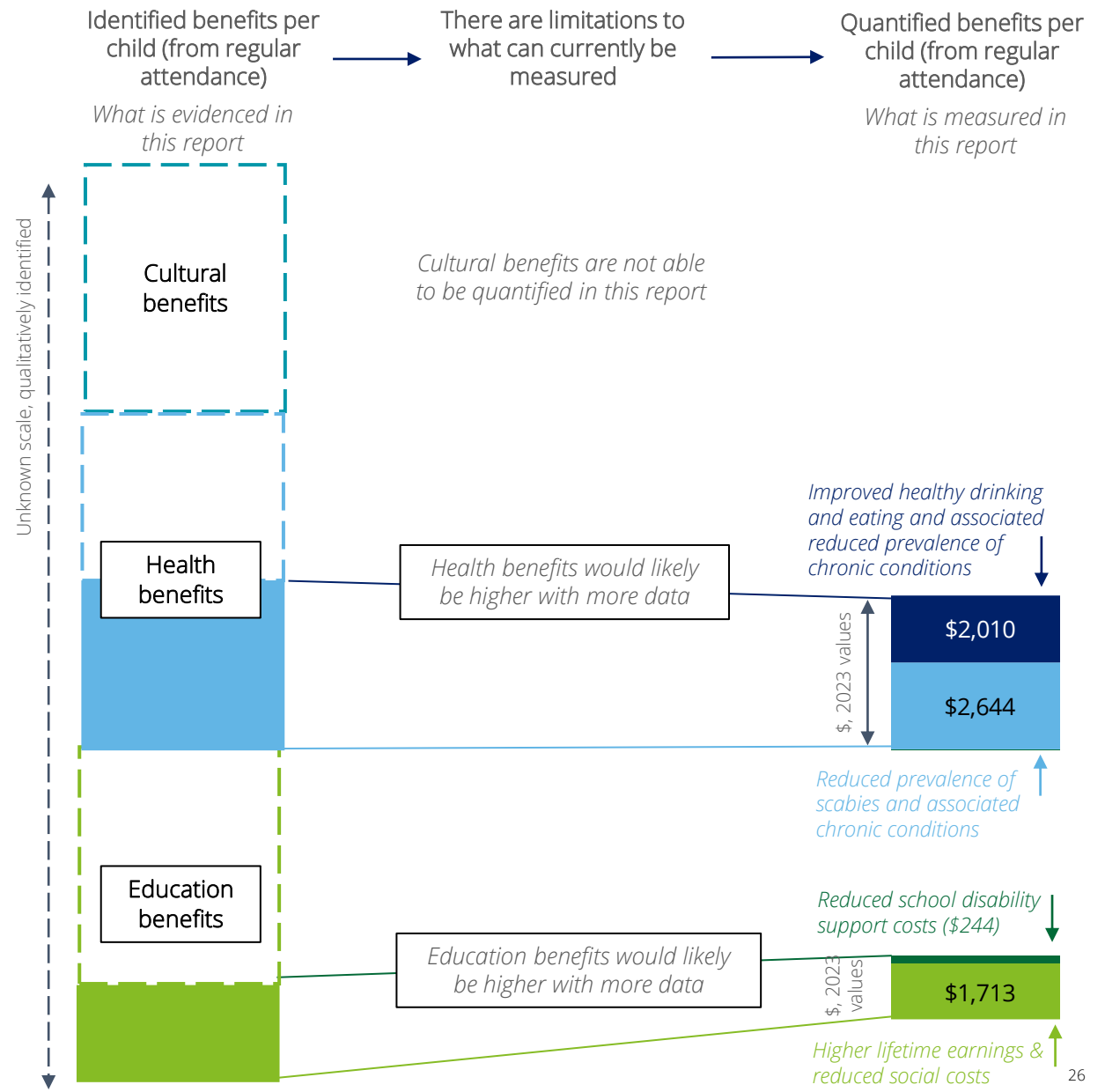
The evidence gathered on Indi Kindi for this report, indicates that children benefit across culture, health and education.

**Culture** – Cultural wellbeing for children is discussed qualitatively in this report, as a significant and substantial benefit predicted to have an impact beyond individual children themselves. Cultural wellbeing is not measured here, as this is a difficult exercise in any context but particularly with children.

**Health** – The health benefits explored in this report are based on what is known about the Indi Kindi program and its impact on healthy habits. Conservative assumptions about the attribution of Indi Kindi mean that these can be seen as ‘minimum’ values. Data over time might also show results for other health conditions specific to Indi Kindi, for instance ear health benefits.

**Education** – While literature typically points to effective early years educational programs being most impactful for children who are most disadvantaged, Indigenous-specific research indicates that this does not necessarily hold for Indigenous children. However, these studies also point to the ability of culturally sensitive and responsive ECEC programs to help bridge the gap between educational outcomes for Indigenous and non-Indigenous children. The quantified benefits in this report are modelled on existing research on Aboriginal children in Western models. As such, they are likely to be conservative. Data directly from Indi Kindi would allow for a greater understanding of attribution. It is likely that Indi Kindi is able to achieve greater outcomes, supported by emerging research on Aboriginal models.

**Note:** Strengthened data collection processes will allow the benefits of Indi Kindi identified here to be better qualified and quantified over time. For more information, see page 28.





# Executive Summary

## Consideration for the future: There is an opportunity to build the outcomes evidence base of an innovative program exemplifying a best practice approach to Closing the Gap

Strengthening the basis upon which the social return on investment of Indi Kindi to the Borroloola community can be demonstrated requires an enhanced approach to evaluation and monitoring and, critically, to collecting the data that these endeavours require. This will not only strengthen the basis of the social return on investment, but enable Moriarty Foundation, Indi Kindi team, and Community Advisory Group to reflect on the various components of the program logic and refine as needed to ensure that the needs of Borroloola children and families are being met.

The enhanced approach to evaluation and monitoring will include:

- Strengthening the enrolment data recording process
- Changing the format of attendance records to allow for easier analysis of attendance patterns across years
- Considering how Moriarty Foundation can gather and record outcomes data itself, including longitudinal data
- Considering how to collect and use further data, including in collaboration with other services and in partnership with government, to assess outcomes

Improvements to data collection will sit alongside the broader strategy to build on Indi Kindi's strengths and continue to enhance its design, delivery and impact.

### Short term

1. Consistently track attendance data and type, in a format and/or data collection tool consistent with JMF data
  - This will allow for better information on program exposure (SROI attribution); development of strategies to increase attendance for greater benefits; and to track longer-term outcomes for children participating in JMF
2. Consistently track session details, including types of session
3. Consistently record educator data including qualifications and previous employment history
4. Update JMF surveys to include information relevant to Indi Kindi
5. Update and reintroduce family and educator surveys in line with the SROI benefits framework

### Medium term

1. Record reflective discussions about children's learning strengths and areas for attention, using an existing framework
  - These can be used for case studies and developing tailored educational plans
2. Use ASQ-TRAK through the early years network in Borroloola to identify developmental delays
3. Work with the school to build a working relationship, implement an Indi Kindi survey, and gather child school-age outcome data
4. Record long term outcomes for Indi Kindi graduates through a database, supported by surveys as needed

### Long term

1. Partner with research team or commission a custom built assessment tool which meets requirements to assess children's literacy and language and/or executive function

# Executive Summary

## Consideration for the future: There are three clear avenues of extension to explore that would each enable Indi Kindi to scale its impact and deliver more benefits to community

For every successful model of a place-based program or initiative that is identified in Australia comes the inevitable question, “is it scalable?” Before addressing the question on whether Indi Kindi can scale, it is important to first consider why it should scale.

The Australian Government Productivity Commission's Draft Report *A path to universal early childhood education and care* (2023) finds “that “Aboriginal and Torres Strait Islander children are under-represented in ECEC services because mainstream providers are not always available and affordable, or they may not offer culturally safe environments.”

Further, Australian Government Productivity Commission review of progress on the National Agreement on Closing the Gap (2024) identifies “governments are not adequately delivering on their commitments to mobilise all avenues available to them to achieve the objective ‘to overcome the entrenched inequality faced by too many Aboriginal and Torres Strait Islander people so that their life outcomes are equal to those of all Australians’.

The most recent 2021 data release showed that Closing the Gap Target 4 – “increase the proportion of Aboriginal and Torres Strait Islander children assessed as developmentally on track in all five domains of the Australian Early Development Census (AEDC)” was worsening.

The question of scale then comes down to the fact that without more programs like Indi Kindi, there can be no universal access for Aboriginal and Torres Strait Islander children; governments have not been able to meet their commitments to address entrenched disadvantage; and developmental measures amongst Aboriginal and Torres Strait children will continue to decline. Indi Kindi cannot alone address the breadth and complexity of these challenges, but this is a clear role for the program in taking some of the solutions forward.

Thus, there is equally a great imperative and great opportunity for Indi Kindi to scale its efforts and impact.

The report explores three options for scaling the Indi Kindi program benefits. While these options have been identified through the course of this program of engagement, they are by no means presented as exhaustive. Indi Kindi has shown its strength time and time over through its agility and responsiveness to community needs: the question of scale will be no different.

- 1. Scaling the Indi Kindi program into other communities** - Developing bespoke programs in other communities
- 2. Scaling elements of the Indi Kindi program into other existing ECEC services** - Facilitating delivery of Walking Learning® modules into established ECEC services
- 3. Scaling the impact of the existing Indi Kindi programs within their communities** - Introducing new complementary services and supports to families and children in relation to maternal and infant care

There are risks and challenges associated with any form of scalability. Replicating the critical ingredients of success is achievable, but it is by no means straightforward. Any efforts to expand the program will have to be carefully considered and approached. This includes consideration of the rate of change.

Building the program in Borroloola has been the result of efforts of over a decade, including ensuring that local capacity to deliver the program could be sustainable and effective. The expansion to Tennant Creek has proven that it is possible to scale at a more rapid pace, depending on the local capacity, resources and funding, and other enabling factors such as an existing JMF program. Scaling should also be considered against the impacts on the existing program, including support from Moriarty Foundation head office staff.

It is recommended that the Moriarty Foundation continue to explore all three options and this report recognises that each have the potential to increase the total benefits being driven by the program.







# Navigating this report

## Summary of section content

The body of this report is organised into the following sections:

### **Introduction**

The introduction describes the Indi Kindi program, the community context in which it has originated and is delivered and the scope and intent of this report and its underpinning analysis. Its purpose is to frame and contextualise what follows.

### **Methodology**

This section describes the conceptual and theoretical underpinning of the analysis presented in this report and how multiple methods have been brought together to tell the Indi Kind story as powerfully as possible, given the available data. Its purpose is to establish the analytical framework underpinning the findings of this report and, in doing so, establish the structure of the reporting that follows.

### **Access and Participation**

This section overviews the patterns of program delivery and attendance, as best they can be established from the available data, and explores what's known about post-program outcomes. Its purpose is to provide an understanding of the foundation of access and participation from which impact and benefits are generated.

### **Program Features**

This section details the defining features of the Indi Kindi program and compares them with what the leading published research suggests is best practice. Its purpose in doing so is to establish a basis for translating findings from the published research regarding impacts and benefits to the Indi Kindi context.

### **Comparison to other Programs and Models**

This section systematically appraises the similarities and differences between Indi Kindi and other commonly seen models of ECEC provision. It then draws on the evidence in relation to the impacts of these models to reach conclusions regarding the likely impacts of Indi Kindi. It further positions these within other best practice models for place-based programs, programs which support Closing the Gap targets, and employment programs. As well as providing this initial appraisal, the purpose of this section is to establish the framework through which the outcomes of Indi Kindi are analysed in the sub-sections that follow.

### **Outcomes**

Drawing on the framework and principles set out earlier in the report, this section presents the findings with respect to the outcomes of Indi Kindi across the domains of educational outcomes; social and health outcomes; outcomes for educators; and outcomes for families. Its purpose is to provide the evidence of impact that ultimately provides the basis of the social return on investment assessment.

### **Ongoing Measurement**

This section describes a series of enhancements that the Moriarty Foundation may wish to consider to their evaluation and monitoring approach in the short, medium and long term. Its purpose is to provide a set of options that can help drive continuous improvement and responsiveness to need while demonstrating impact and value to external stakeholders.

### **Scalability**

This section explores the potential avenues through which the impact of Indi Kindi could be expanded, both through existing locations and expansion to new communities. Its purpose is to present Moriarty Foundation with a number of scalability options through which further investment and impact can be assessed.

### **Concluding Observations and Recognition**

This final section provides concluding remarks in regard to strengthening the impact of the Indi Kindi program and its place in the Australian policy landscape. The report concludes by recognising the many individuals whose time and expertise contributed to the development of this report.



A woman with dark hair tied back, wearing a bright pink long-sleeved shirt, is seen from the back and side. The shirt has a white logo on the back that reads "MORIARTY FOUNDATION .ORG.AU". She is looking towards a group of children in a community setting. In the foreground, a young child with dark hair is looking down. In the background, another person in a pink shirt is visible. The setting appears to be outdoors with a sandy or dirt ground.

## Introduction

**This section describes the Indi Kindi program, the community context in which it has originated and is delivered and the scope and intent of this report and its underpinning analysis.**

**Its purpose is to frame and contextualise what follows.**

# Introduction

## Indi Kindi offers culturally-informed learning, delivered by qualified early childhood educators

### Overview

Indi Kindi is an integrated early years initiative for children (up to five years old) which supports the educational, health and wellbeing for children in four remote communities in the NT: Borroloola, Robinson River, Tennant Creek and Mungkatka. At the heart of Indi Kindi is providing quality, safe and appropriate education to children and, through this, supporting families and community to prioritise children's development.

Moriarty Foundation recruits local women from the community to study to become early childhood educators, supporting their development on the job and enabling the women to attain accredited early childhood learning qualifications through higher education such as TAFE. The program is designed to deliver an integrated learning curriculum that combines traditionally Western pedagogy with traditionally Aboriginal approaches to child development (see Figure 1, overleaf).

The Indi Kindi program is not delivered at a single site but rather takes place at different locations in and around community, primarily outdoors. The choice of locations in any even week are determined through practical and cultural considerations in accordance with the seasons.

The daily program is designed to respond with agility to both the children who attend as well as the specifics of the environment. While there is variability between days, each day provides the children with opportunities for self-directed sensory and imaginative play, a structured group learning experience, book reading, singing, and exposure to both spoken English as well as the children's first languages (i.e., the local Aboriginal languages). In addition, at every session, fresh fruit and a hot, nutritious meal is provided and hand-washing and hygiene practices are undertaken.

The program is also designed to facilitate visits to the health clinic to engage with visiting specialists, for example, when the oral health nurse is in community, the Indi Kindi educators will take the all children together (as their families may not have access to transport to enable these visits).

Positive impacts of Indi Kindi had long been recognised by those working with, in, and for communities. These reported impacts range from improved outcomes at the individual child level – such as stronger educational development and improved health and wellbeing – to more employment opportunities for local women, and healthier, connected and more resilient communities.

### Scope of the project

Deloitte Access Economics was engaged by Moriarty Foundation to frame, identify and plan to assess the educational, social and economic impacts of the Indi Kindi program (Indi Kindi) for Aboriginal children, families and communities.

This report seeks to identify and frame the health, educational and social impacts of the Indi Kindi program on the children, families and community of Borroloola in the Northern Territory. It provides an initial assessment of the likely impacts of the program and makes recommendations regarding data needed for further assessment. Its purpose is to provide an evidence base of the program activities and outcomes, on which future funding opportunities within corporate organisations, governments and philanthropic agents can be explored.

The report synthesises the results from a range of primary and secondary data sources, including consultations and observations of the program in Borroloola, and records provided by Moriarty Foundation and analyses these through the application of a social return on investment (SROI) framework.

The review undertaken by Deloitte Access Economics has focussed on Borroloola, due to an established program delivery of over 10 years. The review included a two-week immersion with the Indi Kindi educators overseen by Moriarty Foundation program managers.

### Limitations of this report

Deloitte Access Economics considers that the monetised benefits of Indi Kindi presented in this report are conservative in representing the program's full impact. This is because:

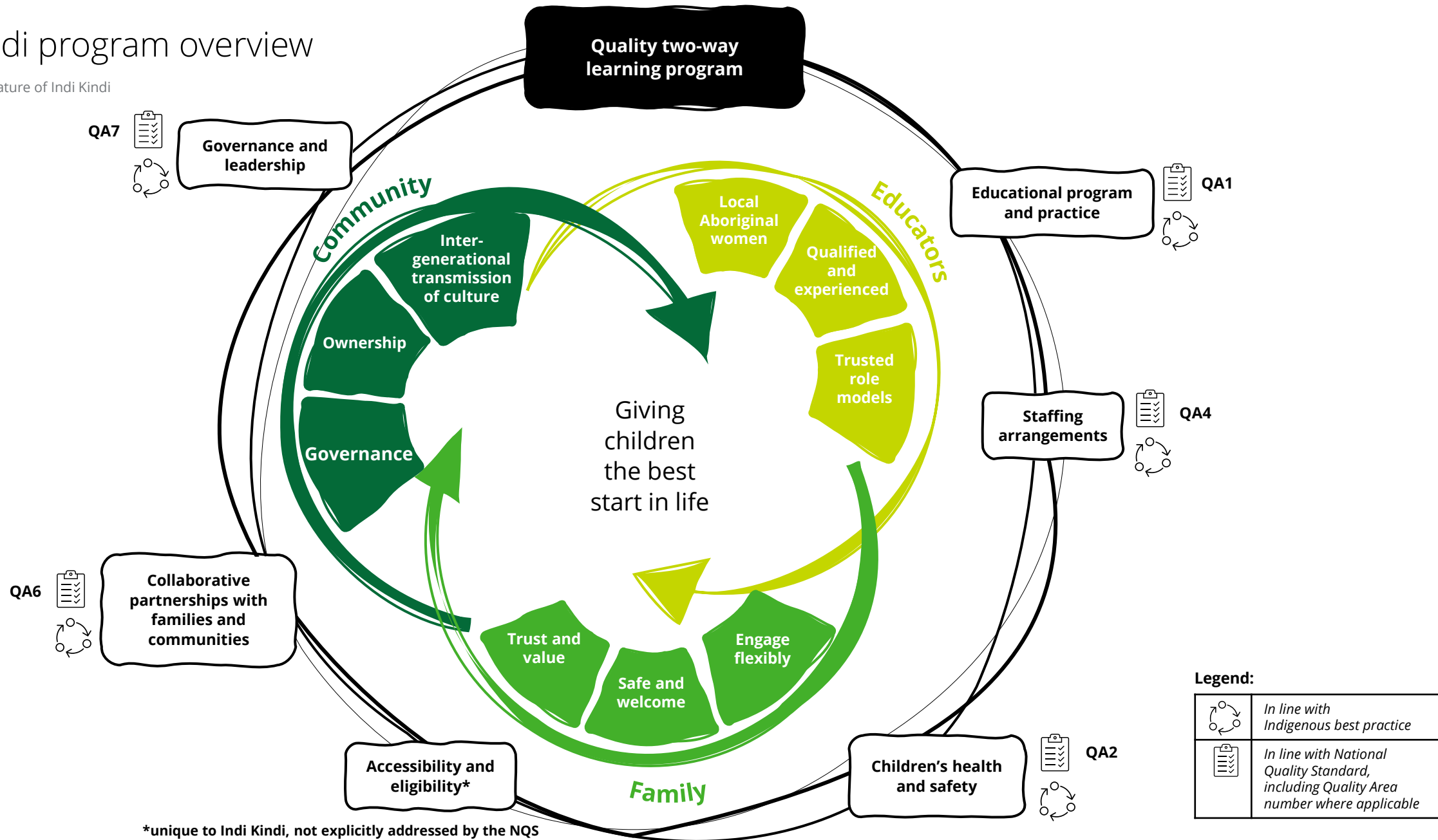
- Not all of the identified benefits have been able to be quantified/monetised.
- Existing quantitative academic research largely focuses on outcomes of Western based early years models – which are hypothesised to have less impact than Indi Kindi.

Therefore, the probable impact of Indi Kindi is likely to be much greater than what can be demonstrated here.



# Indi Kindi program overview

Figure 1: Core feature of Indi Kindi



\*unique to Indi Kindi, not explicitly addressed by the NQS

# Context and history of Borroloola

## A community who maintains a strong connection to culture

### **The continuing strength of the Aboriginal peoples of Borroloola**

Borroloola is now home to the Yanyuwa, Marra, Garrwa, Gudanji and Binbingka people. Prior to colonisation, these peoples lived across a vast landscape along the coast, rivers and desert plains. Today, most of the population lives within four town camps—Garawa One, Garawa Two, Yanyuwa, and Mara—within and adjacent to its boundaries.

The story of this community is one of forced dispossession by the State and privileged others; disregard by the economic and political systems and desperate attempts to compensate without meaningful change. Despite this, the Aboriginal communities of Borroloola have continued to thrive as a community of culture and connection.

Their lives are impacted, their circumstances straitened and their community under-supported, but they persist. Their pride and their presence reminds us of what was lost to them, what remains for them and what we have lost ourselves as a model of life that continues to be led by rich cultural and community complexity, where:

- Aboriginal languages are widely spoken, in addition to Kriol and English
- Communities engage in hunting and fishing for cultural and subsistence needs
- Caring for Country ways of land management are still a daily practice, such as cultural burning
- Protocols around ceremony and Sorry Business are widely observed
- Aboriginal governance models are practiced and respected

The pride and persistence that has kept this community and culture strong is weakening though, as Elders pass and external interference, whether well intentioned, benign or deliberately harmful, shapes a new version of the community. Closing the Gap and other programs and intervention metaphors have very little effect on actual inequality but have profound effect on growing the distance between community and its cultural anchorings.

The Indi Kindi program emerges in this context. A program of cultural and community anchoring in the vehicle of early years education. A program designed to connect Elders and traditional (Western) education methods and relationships in the kinship structure, with the expectations of government policy frameworks that value education outcomes as a goal in themselves.



# Context and history of Borroloola

## The origins of Indi Kindi

### Indi Kindi was born of a community need

The story of Indi Kindi begins with the story of Yanyuwa man, John Moriarty. Born at Borroloola in 1938, John was taken from his mother at the age of four and placed in a number of boys' homes in Sydney and Adelaide, under the then government's assimilationist policy. Children who were removed like John became known as the Stolen Generations. At 15 years of age, John was reunited with his mother in Alice Springs and reconnected with his birthplace of Borroloola and his family.

Indi Kindi came at the request of the Borroloola senior Law women (cultural leaders and Elders as well as kin) to John and Ros Moriarty. The Law Women shared their concerns that children of the community weren't going to school, and weren't having the kind of life they wanted for their children coming through the community. They wanted them to be better educated, to go to university, to come back and help them. To help meet this request, John and Ros worked with the Law women and broader community to develop two programs: the Indi Kindi early years learning program for preschool aged children and the John Moriarty Football program for school aged children, with the view that both programs would work together to provide a continuous touchpoint of care and connection for the children through to adulthood.

"I like see them, my grandchildren, go along school every day and learn about white man things, you know. I like see my grandchildren go to university to learn more, so they can help their own people. I telling my grandchildren, go every day along school, so you can learn to read and write."

- **Borroloola senior Law woman**

"We knew right from the start JMF had to be more than just a children's football program. Football needed to be the vehicle that could unlock their potential, encourage them to go to school, help them live healthier lives and build resilience."

- **John Moriarty**

### Indi Kindi today continues to respond to community needs

The priorities of Moriarty Foundation in delivering Indi Kindi over the last decade have been to:

- Recruit, retain and support the training of educators across the domains of education, health, safety, and nutrition
- Sustain cultural and community connections through the local Elders (Law Women) and Community Advisory Group
- Facilitate engagement with the local health services
- Maintain the infrastructure required for program delivery (including the bus transport for children)
- Support the transition of children to preschool and school
- Attract and retain funding to enable the delivery of the program (to cover wages, staff training, food, medical supplies, educational and play resources).



# Context and history of Borroloola

## A community facing many challenges

### The challenges of service delivery in a remote setting

Borroloola is, by any measure, a town that is both very remote and that, by nature of both its remoteness and the lasting impacts of colonisation, faces many disadvantages. The closest major town, Katherine, is an 8hr drive away. The closest city (and closest major hospital) Darwin is over 11hrs drive. Few in community have their own source of transport; buses depart twice a week.

The remoteness not only impacts how easy it is to access essential services, but it impacts the ability of essential services to recruit and retain staff where they are reliant on bringing in skilled professionals from outside of community. At the time of the Deloitte Access Economics visit, there were multiple open roles across local council and the health clinic that had been vacant for months. Access to culturally-safe mental health and social and emotional wellbeing support is a particular challenge for the people of the community.

The proximity and accessibility of basic services such as health care is situated further within the context of extreme disadvantage. Through the Census data the ABS constructs a ranking of areas in Australia according to their relative socio-economic advantage and disadvantage, the Socio-Economic Indexes for Areas (SEIFA). Advantage is determined by the measure as 'people's access to material and social resources, and their ability to participate in society.' Of the nation's nearly 2,400 SA2 communities, Borroloola it is the fifth most disadvantaged.

Over half of the population is reported not to be in the labour force, and of those in the labour force, a fifth were reported to be unemployed or away from work in the 2021 Census.<sup>1</sup> For the Aboriginal population of Borroloola, that figure is higher, at nearly 70 per cent. The weekly income for a family is less than half of the national and Northern Territory averages. Overcrowded housing, with known associations to health risks, has been a challenge for the community for some time, with some temporary housing built after Cyclone Kathy in 1984 still in use until recently (as of 2022, 31 of 38 homes committed to under *Our Community. Our Future. Our Homes* had been completed).<sup>2</sup> For the Aboriginal community, nearly half of the houses are estimated to require another bedroom, according to the 2021 Census.

Borroloola is a town where health, education and life outcomes fall considerably short of any established benchmarks. **For the context of enabling children in their early years to thrive, this has two significant consequences: it is all the more difficult, and it is all the more critical. For these reasons, it stands to be all the more costly and all the more beneficial.**



## Case study: Intergenerational impact

Indi Kindi, by putting children at the centre, has ripple effects across the whole Borroloola community. Here, three generations of family have strong ties to Indi Kindi.

“ At Indi Kindi, I help kids at an early stage and teach them how to get ready for school. I am working with other ladies and family members. When I wake up in the morning, I know that I am going to get some kids and that I am going to go out and take them on a bus ride, to underneath a tree to learn and to play with toys. All of us educators give the kids morning tea, water, lunch and also set up activities which are are going to do. It is my honour to work with the kids, alongside other educators.” – Deandra (Indi Kindi educator)

“ Indi Kindi is a good program for little ones because they hang out with other little ones. At Indi Kindi, mothers hang out with other mothers. My two grandchildren went to Indi Kindi. They go out, get bush medicine with the elderly ladies and learn from the educators. They also go fishing and hunting.” – Annie (Deandra’s mum)



Deandra started going to Indi Kindi as a mum when her son Jason was a baby. As a mum, Deandra loved going to the program and soon joined as an educator herself. As an Indi Kindi educator, Deandra drives the bus most days, picking up children each day from their houses, with an encyclopaedic knowledge of who is visiting town, who is away, who is visiting Robinson River, who is sick today, and who has started preschool. Deandra has been studying for her Certificate III in child care at the Batchelor Institute in Darwin – 12 hours drive away. She recently decided to defer completion of her studies until her youngest son is of school age.

Little Lloyd, Deandra’s son, has been attending Indi Kindi with his mum since before he was born, while she worked and studied. Like Jason, he’s grown up with Indi Kindi, learning two ways on Country, and with his family and friends. This year Lloyd has started preschool, and is excited to see all of his friends from Indi Kindi again and keep on learning, playing, and reading the books he knows from Indi Kindi.

Annie, Deandra’s mum, is a member of the Community Advisory Group for Indi Kindi and John Moriarty Football. She runs a jewellery business from her home.





## Methodology

This section describes the conceptual and theoretical underpinning of the analysis presented in this report and how multiple methods have been brought together to tell the Indi Kind story as powerfully as possible, given the available data.

Its purpose is to establish the analytical framework underpinning the findings of this report and, in doing so, establish the structure of the reporting that follows.





# Underlying methodological framework

This review comprises multiple elements of Western and Indigenous evaluative and assessment methods to create a bespoke approach to gauge the value of Indi Kindi

This review uses a combination of evaluative and impact assessment methods to tell the story of Indi Kindi, using:

- Traditional Western evaluation – using a theory of change, program logic, implementation and outcome focussed lines of inquiry. The project builds on previous work undertaken by UNICEF to develop a program logic, further developed by Moriarty Foundation. The program logic follows the links between the inputs to the program to the intended outcomes. An updated version of the UNICEF program logic, developed as part of this project, is shown on page 42. The UNICEF Theory of Change is presented in Appendix B.
- Traditional Indigenous evaluation – systems thinking approaches that look for the relationships between measurement elements and whole outcomes.
- Social Return on Investment (SROI) – using a benefits framework to assess the value of expected or actual outcomes of Indi Kindi against its costs.

The research incorporated a process-focused approach, which sought to validate and test the program logic and descriptions of the theory of change. Due to the program delivery context, timeframe of the review, and data limitations (explored further in this section), other research design models such as an experimental process or comparisons of outcomes before or after exposure to the intervention were unable to be utilised.

This review therefore seeks to understand why and how Indi Kindi works, for whom and in which circumstances, and to ultimately answer questions around how to respond to community need both in Borroloola and beyond.

Despite the contextual factors, condensed timelines and data limitations of existing research, publicly available data and specific outcomes data, the review has ultimately been able to adopt the key principles of developing a social return on investment framework from which a solid picture of the impacts and benefits of the Indi Kindi program has emerged.

## Primary data used for this review:

- Two-week immersive visit to Borroloola, with 6 observations of the Indi Kindi Program
- Interviews with Indi Kindi educators
- Workshops with Indi Kindi educators
- Consultations with program staff and other stakeholders

## Program and administrative data used for this review:

- Staff Survey (2021-2022)
- Parents survey (2018-2020)
- Moriarty Foundation Training Register
- Selected Community Advisory Group meeting minutes from 2018 to 2021
- Daily attendance reports from 2016 to February 2018 and 2022
- Weekly attendance reports from 2019-2021
- Indi Kindi reflections data for some dates from 2016 to February 2018, and selected dates in September 2018
- Profit and loss statements from 2016 – 2022

## Other documents used for this review:

- Program logic and accompanying measurement indicator plan, developed by the Moriarty Foundation and UNICEF
- 'Indi Kindi Program: Rapid Review', Australian Council for Educational Research
- 'Barhava Report: Indi Kindi Impact Report'
- Various submissions and funding applications from Moriarty Foundation
- Community Advisory Group presentation Dec 2021
- Enrolment Form Template (2023)

## Other secondary resources used for this review:

- Data from the Australian Bureau of Statistics, including 2021 Census data and SEIFA data
- Australian Early Development Census (AEDC) data
- Published research from Australian and overseas journals

# Underlying methodological framework

## The story of Indi Kindi can be told through a Social Return on Investment framework

Social outcomes studies provide informed estimates of the social contribution generated by an intervention. These analyses are conducted according to a Social Return on Investment (SROI) framework, which provides a structure for comparing monetised outcomes to the cost of an intervention – generating an SROI Ratio.

Figure 2 below indicates the three key steps of an SROI study, indicating that any assessment of the social contribution of an intervention involves the identification of social outcomes and an analysis of outcomes and costs. However, the establishment of an SROI ratio depends on the availability of robust outcomes data for all identified outcomes.

Figure 2: Three steps of an SROI study



### Identification of social outcomes





The outcomes of Indi Kindi are based on the program logic on page 42, based on the Theory of Change developed by UNICEF and Moriarty Foundation (Appendix B). The primary outcomes considered in this report are the likely educational outcomes for children when receiving the Indi Kindi program as designed. These outcomes sit at the heart of Indi Kindi. Further outcomes considered include the health and other developmental outcomes for children, outcomes for families and community, and outcomes for the educators.

However, it is worth noting that these outcomes are interrelated, and dependent on each other. For example, families trust the educators as local Aboriginal women, which means they are more likely to send their children to Indi Kindi. Attendance is key to unlocking any outcomes for children, and so the outcomes for educators and the outcomes for children cannot be untangled from each other.

**The benefits that the program has the potential to capture align to four groups of stakeholders:** children, families, educators, and the community. But these benefits are all part of the 'social' return on investment, not only to the community of Borroloola, but to other communities and the sector, if they are able to incorporate the key features of success piloted by Indi Kindi.

### Analysis of outcomes and costs

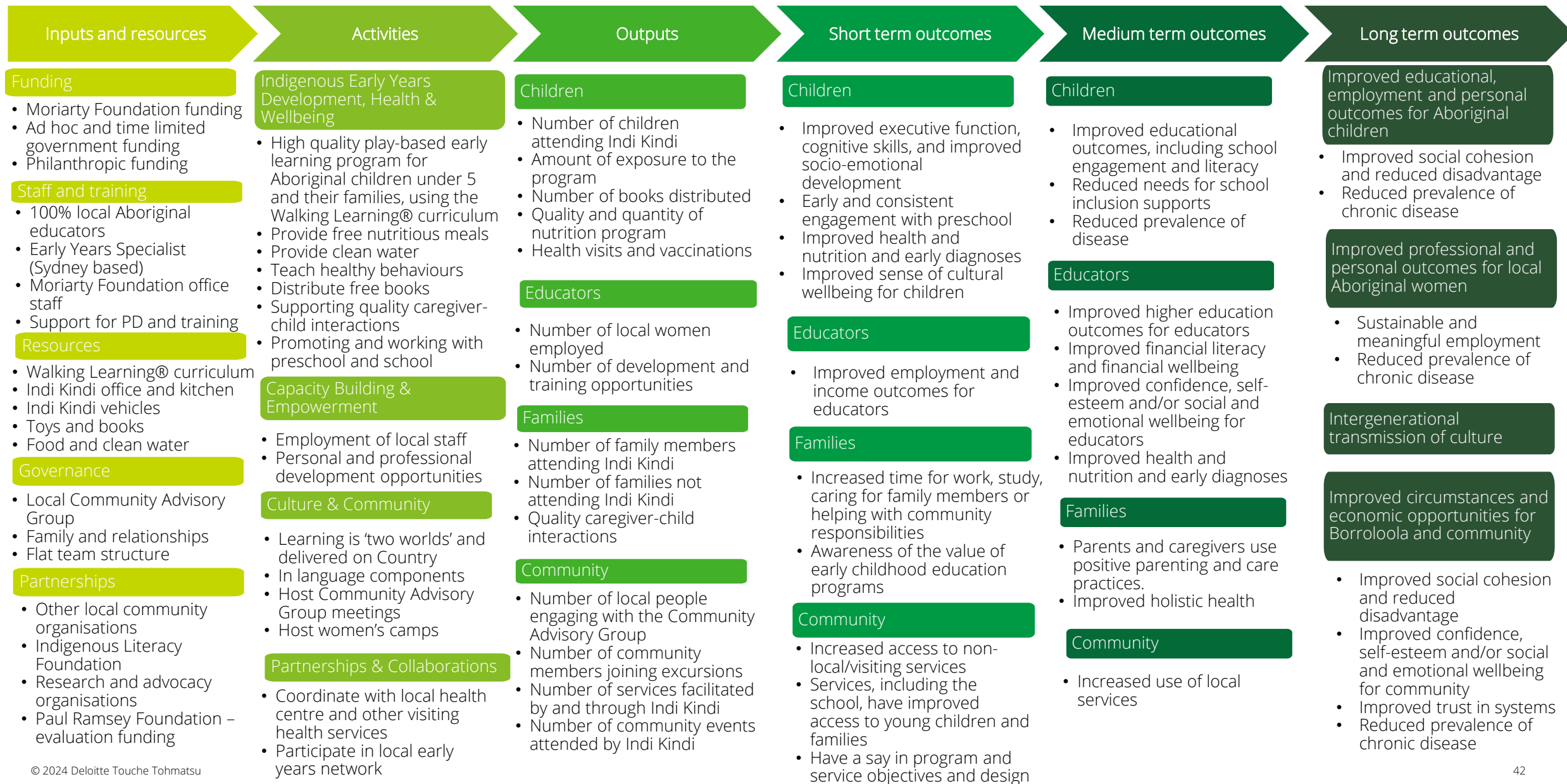
For each outcome, the following elements are important to consider:

-  Size of cohort – for example, the number of children who attend Indi Kindi frequently and as such are expected to realise improvements in cognitive development
-  Attribution – for example, the extent to which an improvement in cognitive development for children who attended Indi Kindi within a specified time period can be attributed to Indi Kindi
-  Counterfactual – for example, the extent to which an improvement in cognitive development would have occurred in the absence of Indi Kindi
-  Monetary value – for example, the estimated value in dollar terms of an improvement in cognitive development

Robust program data is a key input into understanding each of these elements. The following section describes the limitations of long-term outcomes based data collection for Indi Kindi, followed by a description of how attribution and counterfactual are approached in this report.



# Program Logic



# Data limitations and their impacts

## Not unique to Indi Kindi, capturing the value of remote Aboriginal programs and interventions is a consistent and ongoing challenge

High quality and consistent measurement and outcomes data collection has long been a challenge of both the early years learning sector and in the broader context of remote community delivery. This is widely acknowledged by federal and state and territory governments across multiple policy settings and not least evidenced in the annual reporting on the National Agreement on Closing the Gap. The Indi Kindi program exists in this context and with the additional challenge of operating in a highly resourced constrained environment of being operated by a non-profit organisation.

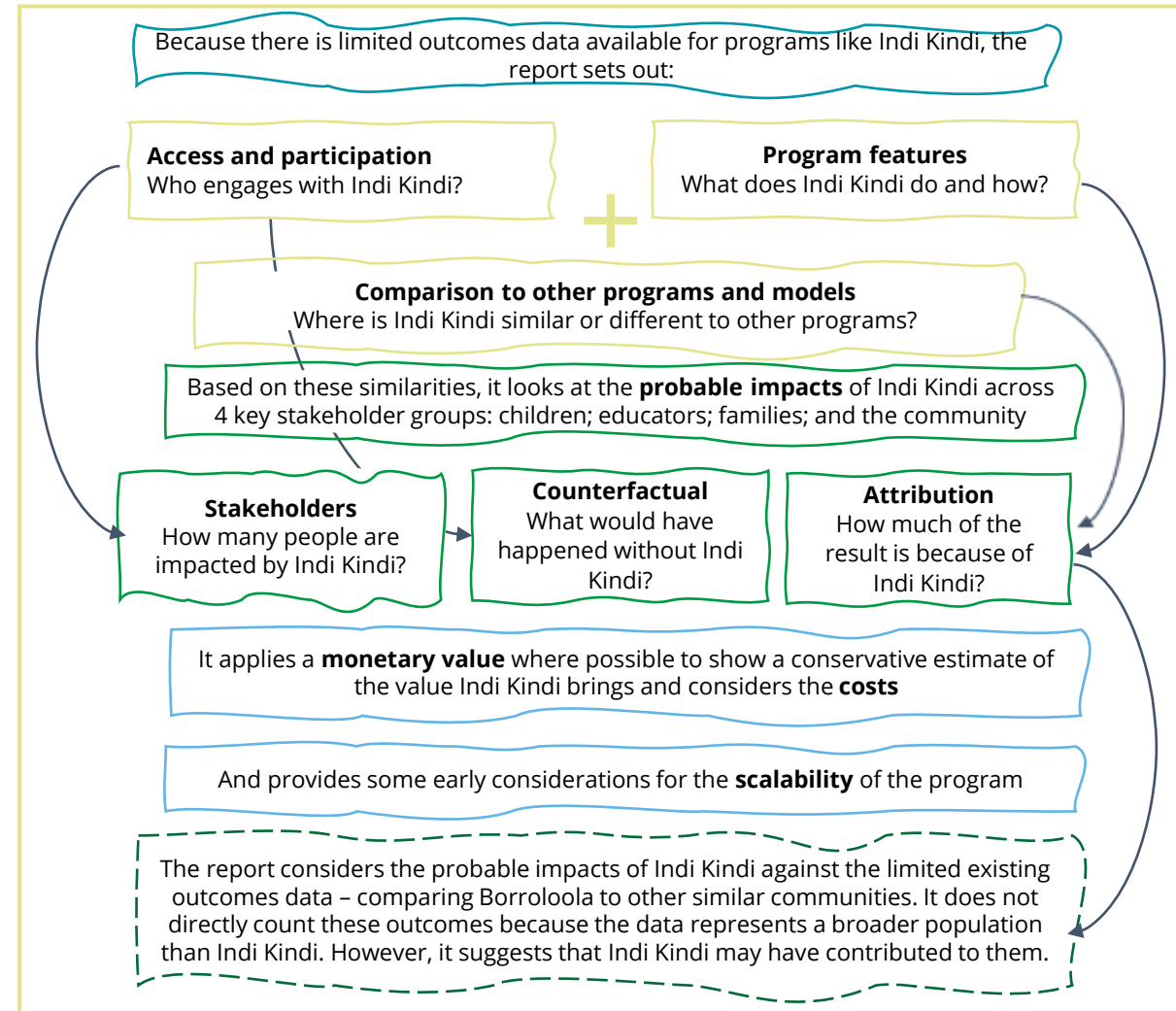
While some degree of attendance and program delivery data has been collected by the educators through the lifespan of the program, this has not always been collected or stored consistently. Deloitte Access Economics in conjunction with Moriarty Foundation will work to ensure that future data collection meets the needs of a variety of stakeholders, the most important of which are the children, families, and community of the program.

Other data collected through adjunct and complementary community services, such as the preschool and school and the health clinic, which may have given some perspectives on the outcomes of the Indi Kindi program, was not able to be shared with Deloitte Access Economics for the purposes of this research due to privacy restrictions.

A primary evidence source for population-specific data is the Australian Census, most recently conducted in 2021. While this report does include information from the Census, it does so with a view of its limitations. It is well established that collecting Census data in remote Indigenous communities typically fails to capture the full population of these communities (the ABS predicts an average and consistent undercount of 17% across the country for Aboriginal and Torres Strait Islander people) and the reliability of the information shared can be weak due to privacy concerns. In particular, for the 2021 Census:

- Data collection was implicated by Covid restrictions, limiting the ability for local field staff to assist with data collection in regional and remote communities.
- The reference period for preschool data collection in the NT spanned from 20 June – 5 August which encapsulates school holidays and many sporting and community events run in August. However, attendance rates are likely also a reflection of the transient lifestyle of remote and very remote populations.

Figure 3: Key components of report



# Key methodological consideration 1: Attribution

Attribution of child outcomes to Indi Kindi is constrained by data availability, with this report leaning on a comprehensive literature review as a result



Attribution of outcomes to an intervention is typically determined using program data, including participant attendance data at different activities and surveys of participants, to conduct robust comparative or longitudinal analysis.

- Comparative analysis – using matching methods to compare outcomes between intervention participants and non-participants that have similar characteristics, for example children with similar demographic and other characteristics in similar areas to Borroloola. This requires datasets with outcomes and characteristics data for both groups.
- Longitudinal analysis – using time series data to compare outcomes over time, particularly the long-term impact of Indi Kindi on children across outcomes in health, development, education and employment.

In the absence of robust data to allow for this analysis, evidence and data was consolidated from multiple sources to provide a picture of outcome attribution – that is, the degree to which observed outcomes can be traced to the impact of Indi Kindi. This was considered in the context of what Indi Kindi as a program might be capable of delivering in its journey, rather than an historical or point-in-time estimate.

The key methodology behind understanding attribution was a desktop review of the characteristics and outcomes associated with both:

- best practice early years education models
- early years programs in communities like Borroloola, particularly Indigenous early years education programs.

These characteristics or features were then mapped to those adopted by Indi Kindi, to understand whether Indi Kindi is delivering best practice with respect to both early education standards at a national and global level, and principles for delivery in Indigenous contexts. This alignment was used to identify the outcomes that Indi Kindi is expected to deliver based on those realised by similar models and programs.

Importantly, this review of best practice characteristics and outcomes was supplemented, where possible, by:

- Drawing on primary evidence and observations collected during the evaluation team’s visit to Borroloola, including newspaper reports of students in the first year of school at Borroloola to compare to data on Indi Kindi attendance records, in order to establish a better understanding of the links between preschool and Indi Kindi.
- Descriptive analysis of outcomes-related data from the Australian Bureau of Statistics and AEDC for the Borroloola area, and comparison to other similar areas.
- Analysis of the attendance and enrolment patterns of children attending Indi Kindi.

## Literature review to understand attribution

### Purpose

To identify the key features of best practice early years education models and programs, and the attribution of outcomes to these models and programs.

### Inclusion criteria for research

- Similar program/delivery context to Indi Kindi – particularly two-way early childhood programs for children aged 0-6 years, in Australia and similar countries
- Robust research methods – published in the last 10 years, using robust study designs for outcomes analysis.
- Quality sources – academic, peer-reviewed journals as well as specific program webpages

### Literature review assessment

	Early years education models	Early years education models and Indigenous children	Indigenous early years programs
<b>Comprehensiveness</b>	High (large body of research, often linked to outcomes)	Low (although still available, often linked to outcomes)	Medium (reasonably comprehensive on key features, but not often linked to outcomes)
<b>Quality</b>	High (use of robust study designs)	Medium (use of robust study designs, smaller sample sizes)	Medium (typically qualitative with regard to outcomes)
<b>Applicability</b>	Medium	High	High



## Key methodological consideration 2: The counterfactual

The counterfactual to Indi Kindi is established through exploring the alternative pathways for program participants

Identifying the counterfactual of an intervention – what would have happened in its absence – relies on exploring alternative pathways for program participants.

The impact of the program must ultimately be appraised against the expected experiences of the infants and children of Borroloola, if not for Indi Kindi. If not attending Indi Kindi, infants and children could be:

- Staying at home with parents or other caregivers
- Being in the care of another family or kinship member outside of the home
- Attending the Families as First Teachers (FaFT) program
- Attending preschool
- Attending the Wunala creche\*

No enrolment data was able to be obtained from the preschool or other programs. Employees of the school and preschool disclosed that FaFT and the preschool have enrolments, but did not disclose the volume or frequency of attendees. An oral data mapping exercise conducted with two of the most experienced Indi Kindi educators was able to identify all the children within two neighbourhoods, determining the majority of children either attend Indi Kindi, or used to attend Indi Kindi and now attend preschool or school.

Additionally, the barriers to attending FaFT, preschool and creche were explored relative to cultural safety and protocols, attendance commitments (frequency and caregiver burden), cost, location and accessibility, as well as frequency of delivery.

**From these two exercises Deloitte Access Economics was able to ascertain with a degree of confidence that most infants and children under pre-school age that attend Indi Kindi regularly would not attend an alternative program in Borroloola if not for Indi Kindi.**

Additionally, Deloitte Access Economics was able to ascertain with a degree of confidence that if not for Indi Kindi, most home environments would be sufficiently less well supported by way of literary resources and the parenting and caregiving advice and role modelling that is distributed through the Indi Kindi educators.

For educators, it is likely that without Indi Kindi, educators would either not be in paid employment or in lower-paid jobs that do not upskill them for future work or provide meaningful employment which respects cultural responsibilities.



\* At the time of reporting, Wunala creche was not operational due to staffing.









## Access and participation

**This section overviews the patterns of program delivery and attendance, as best they can be established from the available data, and explores what's known about post-program outcomes.**

**Its purpose is to provide an understanding of the foundation of access and participation from which impact and benefits are generated.**



# Access and participation

## Families engage in the program in different ways

Different families engage with Indi Kindi in different ways, and this is reflected in their patterns of attendance. This reflects Indi Kindi's flexible response to family and community need. At Indi Kindi, families are welcome to come every day, or they are just as welcome to come only once (say, if they are from another community, and just visiting Borrooloola temporarily). Between 2016 and 2022, Indi Kindi delivered sessions to on average of 140 different children per year.\*

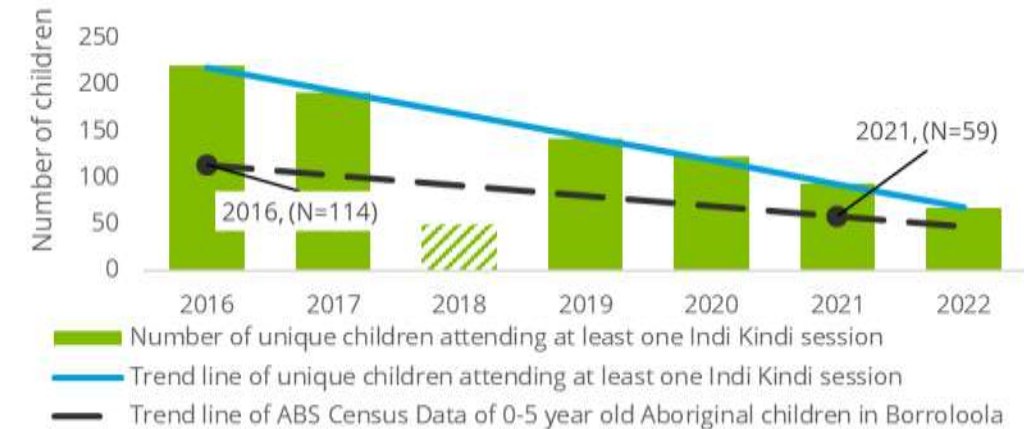
Over time, the number of children attending per year has fallen. There are a number of possible reasons for this, including that the number of Aboriginal children aged 0-5 in Borrooloola has also fallen, according to the ABS (see chart 1). However, ABS data should only be understood as 'indicative' for population estimates of Borrooloola's children, as it is likely to have significant inaccuracies. This can be seen in some of the inconsistencies between various ABS data points in the 2021 and 2016 Borrooloola census datasets.

Other potential reasons for a decrease in number of unique children attending Indi Kindi per year include the introduction of additional ECEC services in the area (in particular, the pilot of 3-year-old preschool) meaning that Indi Kindi is catering to a more targeted age cohort as of 2023. Another reason for the decrease may be less travel between communities due to COVID-19. It is also possible that changes to Indi Kindi data collection methods may overrepresent the decrease in unique children attending. This could be due to more consistently recording last names of children, which increases the count of unique children attending.

However, the number of unique children attending Indi Kindi each year is still greater than the ABS census figures of 0-5 year old Aboriginal children in Borrooloola, indicating that Indi Kindi serves not only a substantial proportion of this cohort in Borrooloola, but also visiting families. Chart 2 shows a representation of the number of children in the Borrooloola School Transition Class in 2018, 2020, 2021 and 2022, matched to Indi Kindi attendance records. Both Transition and preschool are not compulsory to attend, but are recommended by the Northern Territory Government.

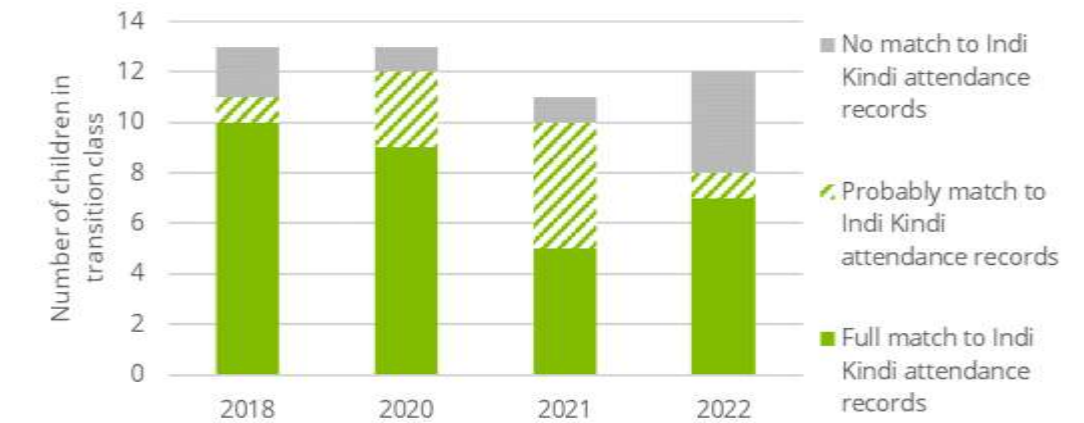
A substantial number of 'Transition' class children can be seen to have attended Indi Kindi, indicating that although the number of unique children attending Indi Kindi may have decreased, Indi Kindi continues to reach a large proportion of local Aboriginal children. In combination with the following page, which includes data on the destinations of children who have graduated from Indi Kindi, it can be reasonably claimed that at least a high proportion of children who attend Indi Kindi, if not all, go on to be enrolled in preschool, Transition, or school.

Chart 1: Number of unique children over time\*



Source: Deloitte Access Economics, using information from ABS

Chart 2: Number of children in Borrooloola Transition class who attended Indi Kindi\*\*



Source: Deloitte Access Economics, using information from Indi Kindi attendance records, and Northern Territory News

\* Figures do not include 2018, as data only exists for two months of the year. In these two months, 49 unique children attended Indi Kindi over 9 operational weeks.

\*\*These figures are taken from newspaper reports of Borrooloola school attendance and matching to Indi Kindi attendance records. These were not available for 2019. 48

# Access and participation

## The total number of sessions delivered is impacted by many complex factors

The decrease in unique children attending Indi Kindi may also be partially attributed to a decline in delivery weeks and sessions per year.

Indi Kindi aims to deliver 4 to 5 sessions in Borroloola each week during term time, with 1 session a week delivered in Robinson River when it is accessible in the dry season (~May to October). Analysis of Indi Kindi data suggests that, in practice, Indi Kindi delivers on average 3 sessions a week in Borroloola (see Chart 3). External events such as COVID-19, weather events (such as a cyclone in 2019), and community disruptions such as Sorry Business or community tensions (see below), can affect delivery of Indi Kindi.

Indi Kindi session delivery was significantly impacted during the COVID-19 pandemic. The program is still rebuilding following the lockdown related disruptions from 2020-2022.

Indi Kindi works with other early years services in the area to offer combined sessions for occasional events. The spike on 7 December 2022 as depicted in chart 4 is due to a combined session with the playgroup, the Families as First Teachers group and the creche. It was held at the swimming pool as a special Christmas event.

The complexity of consistent delivery in remote Indigenous communities is well understood by ECEC services. Indi Kindi has employed a sizeable workforce in order to support delivery as much as possible, by ensuring that there is a large enough team to be able to deliver should any one member of the team be unable to work. However, community level factors are beyond the control of the program, and a reality of the context in which Indi Kindi delivers.

"With the recent unrest in community, the program has temporarily been suspended. Indi Kindi visited families and took a care package including food and books to remain connected. We would like to resume delivery and will be guided by the community.

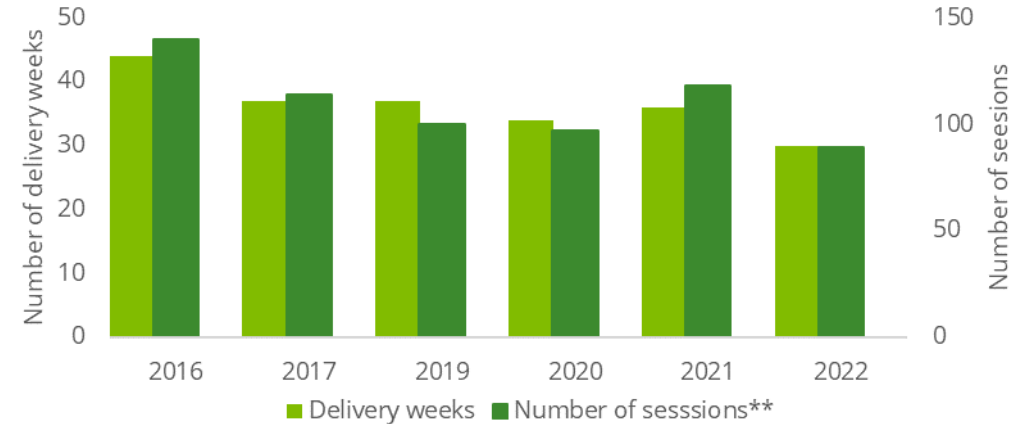
*Discussion: It was agreed Indi Kindi will resume delivery from the next day and John Moriarty Football from next Monday."*

**- Community Advisory Group Minutes, 2019**

"Delivery in Robinson River has been affected by the delay in parts reaching Borroloola to complete maintenance on the Troopy. We are looking for a community organisation that may be able to provide a vehicle to use in the interim to allow us to resume delivery ASAP in Robinson River."

**- Community Advisory Group minutes, 2019**

Chart 3: Delivery by week and total sessions per year\*



Source: Deloitte Access Economics using program information from Moriarty Foundation

Chart 4: Number of children attending per session delivered in 2022



Source: Deloitte Access Economics using program information from Moriarty Foundation

# Access and participation

There is significant variation in attendance patterns among children engaging with Indi Kindi, with a small cohort of children attending Indi Kindi consistently

In 2022, four children attended at least half (at least 45) sessions and at least half of the weeks when sessions were running. Two children attended between 30 and 44 times, i.e. between at least a third and a half of sessions delivered. These are considered to be 'regularly attending' children, who have a consistent pattern of attendance, considering both weekly patterns of attendance and patterns of attendance throughout the year.

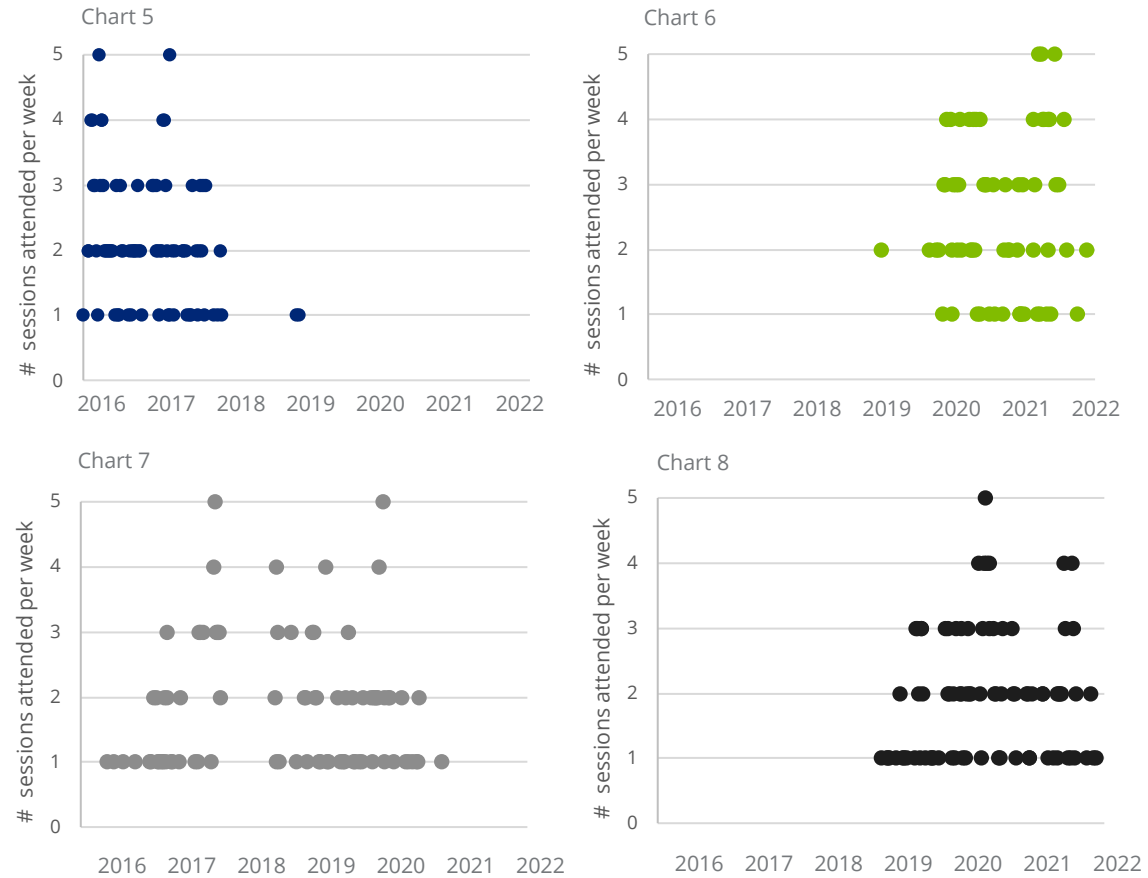
The cohort of children who attend Indi Kindi consistently are expected to accrue the full benefit of the Indi Kindi program. Example attendance profiles for highly attending individual children (attended more than 100 sessions) are shown to the right. It can be seen that some children are attending frequently and consistently across a number of years.

In 2022 there were also a cohort of 27 children considered to attend Indi Kindi occasionally, between two and 29 times over the year. Of the 'occasionally' attending cohort, 18 attended between two and six times over 1 to 3 weeks (not necessarily concurrent weeks). It is not possible to tell whether these children are 'permanently' based in Borroloola, or whether they may be visiting with family.

Of the remaining 9 children in the 'occasional' cohort, attendance tends to be sporadic over the year, rather than clustered at a certain point in the year. These children may attend in concurrent weeks, and may attend multiple times per week, but this is not consistent. The modal number of sessions attended per week by these children is 1, meaning that most of these children can be thought of as attending once a week.

36 children (or 52 per cent of children who attended), attended 1 Indi Kindi session. Some of these children who attend only once might be children who attend for joint sessions with other ECEC services in the area, for instance the creche, or preschool. These attendances, while not delivering full ECEC benefits for children, are likely to deliver small social and cultural benefits.

Charts 5-8: Examples of attendance profiles of highly engaged children (deidentified)\*



Source: Deloitte Access Economics using program information from Moriarty Foundation





A young child with dark hair, wearing a yellow shirt, is focused on holding and examining a white, crumpled object. The background is a blurred outdoor setting with greenery. Another child's head and shoulder are visible on the right side of the frame.

## Program features

**This section details the defining features of the Indi Kindi program and compares them with what the leading published research suggests is best practice.**

**Its purpose in doing so is to establish a basis for translating findings from the published research regarding impacts and benefits to the Indi Kindi context.**

# Indi Kindi program features: Educational program and practice

Indi Kindi has developed a custom curriculum and pedagogy that blends traditional cultural methods with established Western constructs

## Educational program and practice

The Indi Kindi program resonates with the concept of 'Two-way' or 'Both-ways' learning in Aboriginal cultures in Australia (see Appendix E for further detail). In the context of Indi Kindi, this concept is demonstrated through the emphasis on blended educational program and practice and community and family engagement.

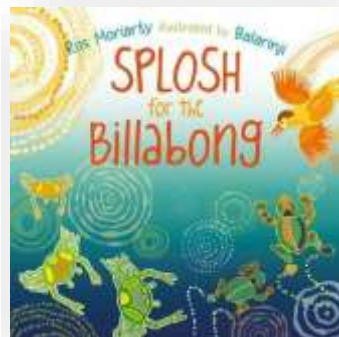
One of Indi Kindi's most unique components is that it is delivered outdoors, unlike most ECEC services. Indi Kindi uses its custom-developed curriculum, 'Walking Learning@', to maximise the benefits of this learning on Country. Walking Learning@ has been developed from the Aboriginal world view and aligns to the Australian Early Years Learning Framework. Children participate in nature walks, identify native plants and animals, and learn about their importance in Aboriginal culture and history, while participating in developmentally appropriate activities which can be observed in ECEC settings across the world. Learning is child-centred and builds on their interests and strengths, and educators are flexible and responsive to individual children's needs and learning styles.

In addition, Indi Kindi provides multisensory play, group reading, and singing each session, including in English and in Aboriginal languages spoken in Borroloola. Each child receives a book at the end of every session, to further enable literacy skill development at home. The Indi Kindi team use principles from other best practice programs such as the Abcedarian approach adapted for use in the Northern Territory and used by the Families as First Teachers (FaFT) program.

Indi Kindi also facilitates cultural excursions, and community sites within Borroloola – connecting children to where they come from. Children attending Indi Kindi participate in cultural celebrations and ceremonies relevant to the community's traditions. This includes participation in cultural events such as the Malandari Festival or other significant ceremonies. Children learn from and with each other, regardless of their cultural/language background across the different neighbourhoods and clans.

Elders and other community members actively engage with the program. They share their knowledge, teach traditional crafts, demonstrate hunting, gathering and fishing techniques. Children are encouraged to engage with nature and develop a deep connection to the land.

Image 1: Cover page of Splosh for the Billabong, an illustrated story in English and Yanyuwa



## Example of two-way learning: World Turtle Day Activities (lesson plan)

18 suggested activities, grouped thematically by developmental domains. Selected activities include:

- With Elders, talk about experiences of visiting the islands to learn about conservation of the turtles, talk about own experiences of hunting turtle locally for food, cooking and eating the turtle meat and eggs.
- Cut out different sized turtle pictures, identify small, medium and large and then place in size order
- Read 'Splosh for the Billabong'. Read story in English and Yanyuwa [one of the local Aboriginal languages].
- Pre-cut turtle body templates and ask children to paint green. Go for a walk and collect large rocks to decorate and paint for the turtle's shell.

## How does the Indi Kindi program feature of educational program and practice align with best practice culturally-responsive education, including Aboriginal culture, language and pedagogy?

High quality programs are culturally compatible and incorporate educational components that support children's learning and development and value the cultural and linguistic heritage of Aboriginal communities. Incorporating Aboriginal voice in early childhood programs leads to increased enrolment, retention and satisfaction, supporting community wellness. Parent/caregiver involvement in education also positively impacts students' academic achievement and well-being, contributing to the holistic growth of Aboriginal communities.<sup>1,2</sup>

### Alignment to Indi Kindi

Indi Kindi demonstrates a high degree of alignment with the best practice of 'Inclusion of culture and Aboriginal language.' Indi Kindi's 'Walking Learning@' model demonstrates a culturally-responsive approach to early learning. Delivered outdoors, the model allows for movement, and creative expression, catering to the cognitive strengths of young Aboriginal learners. Through meaningful participation in the development and delivery of early childhood programs, parents, elders, and community members play a pivotal role in shaping the curriculum, activities, and resources provided by Indi Kindi. The program ensures a culturally relevant teaching methodology that enables children to become learners who are deeply connected to their family, community, culture, and Country.



# Indi Kindi program features: Staffing and workforce

## All local educators are Aboriginal women from Borroloola with strong community ties

### Staffing and workforce

Indi Kindi is unique in Borroloola in that 100 per cent of the educators delivering the program are local Aboriginal women. Indi Kindi supports its educators to obtain qualifications, enabling their professional development in order to deliver high quality early years education to Indi Kindi children.

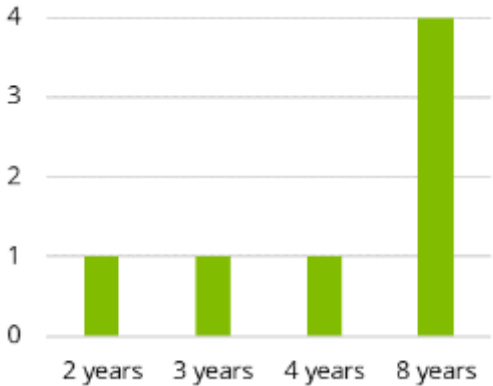
### Developments over time

- In previous years the program has employed a non-local, non-Aboriginal team leader in Borroloola to support with program delivery and mentoring the Indi Kindi team. As of July 2022, the team has moved to a fully local Aboriginal delivery team, reflecting the capacity that has been built up over sustained delivery for 11 years (See Chart 10 for proportion of staffing ratios for 2022).
- As of 2023, Moriarty Foundation has employed a Sydney-based Early Years Specialist to further support the Indi Kindi team on the ground including with a professional development and mentoring role.

### Enabling factors

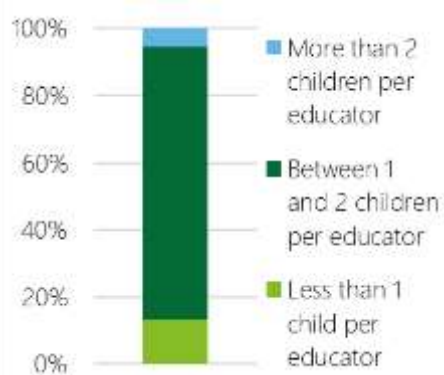
- Indi Kindi employs a large team of educators, meaning that when educators need time off for Sorry Business, training, sick leave, or other commitments, session delivery can largely continue. There are 7 educators in Borroloola at the time of reporting.
- The team work well together and are able to self organise based on which educators are able to attend, coordinating the bus pick ups, meal preparation, and other session delivery details.
- Indi Kindi educators are well respected and trusted in the Borroloola community, enabling both attendance at Indi Kindi and recruitment of new educators.
- Indi Kindi educators are able to attend work with their children, meaning they can participate in the workforce without needing to consider child care costs.
- Indi Kindi educators are supported to study post commencement of their employment, meaning they can start learning 'on the job' while they work towards their qualifications. Moriarty Foundation helps to identify the appropriate training and qualifications that will support individuals in their roles, and then provides them with the equivalent of paid study leave to undertake the training, in addition to funding the travel and accommodation that is required to complete it (as most training delivery takes place outside of Borroloola).

Chart 9: Length of tenure of current Indi Kindi Educators



Source: Deloitte Access Economics using program information from Moriarty Foundation

Chart 10: Proportion of staffing ratios for 2022



Source: Deloitte Access Economics using program information from Moriarty Foundation

**How does the Indi Kindi program feature of staffing and workforce align with best practice on quality of service?**

Programs maintain high standards of service through factors such as child-staff ratios, training, regulations, and family and community involvement. For example, Indigenous teachers or non-Indigenous teachers with cultural training have been found to be more effective in teaching Indigenous students.<sup>1</sup>

**Alignment to Indi Kindi**

By building local staff capacity through mentoring, skills development, and formal qualifications, Indi Kindi enables local Aboriginal educators, who, as role models, positively influence families and provide valuable guidance on early learning and child development.

# Indi Kindi program features: Governance and leadership

## Aboriginal and Western governance and leadership models are well-aligned. A Community Advisory Group which includes local Elders ensures cultural leadership

### Governance and leadership

Indi Kindi operates through three primary layers of governance – Moriarty Foundation head office (including the Board and program manager), the Community Advisory Group and the educator team. While Moriarty Foundation head office is organised through a traditionally Western governance structure (hierarchical, representative) given its need to directly interface with largely Western systems (funding, financing etc.) the Community Advisory Group and educator team follow a more traditionally Aboriginal governance model that centres children, Country, Elders and knowledge holding that are best described as relational networks and visualised in the familiar circular pattern of lore/camp.

It is not any one of these governance structures alone that enables the Indi Kindi program to succeed, but it is all of them working together, in proper relationship with one another that enables the program to continue.

### Enabling factors

- The local educator team follows an Aboriginal-governance model of knowledge-holding, rather than hierarchal leadership. This means that instead of having pre-assigned roles within the program delivery, different individuals will step into different responsibilities according to their knowledge and the daily program needs. This allows for the continuity of program delivery.
- The presence of a Community Advisory Group comprising local Elders, leaders, and Traditional Owners ensures that the mission and purpose of Indi Kindi is continually revisited and that the design and resources are culturally appropriate and aligned with Aboriginal values and knowledge.
- The Sydney-based Program Manager not only provides professional development and learning support but is able to take on many administrative responsibilities, freeing up the local educator team to focus on program delivery and centre the needs of the children.

### Example of Aboriginal governance (knowledge-holding) in practice

The morning pick-ups require multiple forms of knowledge-holding. There is knowledge of driving the Indi Kindi bus, and then there is knowledge of not only which houses to collect which children from, but of which family members to call on to help facilitate the pick of the child and the context of events in the town and the household which in turn impacts whether a child may or may not be available to attend on any given day. Critically, there is more than one person within the Indi Kindi team who holds all these knowledges. If one person is not available to do pick-ups one morning, another is able to step into this responsibility. This can be the difference between the program running and not running.

Image 2: Circular pattern of lore/camp

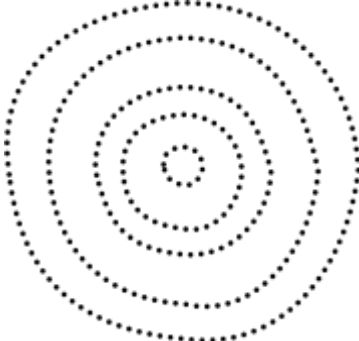


Image created by Deen Sanders

“Compared to other jobs they are really understanding and flexible. I guess it doesn't feel like a job. I don't know how to explain, you come here and it feels surreal that you work with families and bubs. Our work as well, we are such a strong team, we are comfortable, we have a good laugh. We know what the plan is, and we talk about plans of what we want to do, which not many people can say that.” - **Indi Kindi educator**

### How does the Indi Kindi program feature of governance and leadership align with best practice of community direction and control?

Effective programs are directed and controlled by Aboriginal communities themselves, catering to their unique needs and aspirations. Enabling Aboriginal communities to manage their own culturally focused curricula leads to increased enrolment, retention, and student satisfaction, contributing to community wellness. For example, the Niitsitapi Learning Centre in Canada was designed and developed with significant community involvement and input, ensuring the program meets the unique needs and aspirations of the Indigenous community.<sup>1,2</sup> Additionally, by focusing on young children, social ties and community bonding are enhanced.<sup>3</sup>

#### Alignment to Indi Kindi

An essential aspect of Indi Kindi's approach is its leadership by a Community Advisory Group consisting of local leaders, Elders, Traditional Owners, families, and team members. This participatory framework empowers Aboriginal communities to direct and control the program, catering to their unique needs and aspirations. The program's delivery by local women, representing various language groups in the community, enhances the program's effectiveness and makes them valuable role models, providing essential guidance on early learning and child development to families.

# Indi Kindi program features: Health, hygiene, and nutrition

## Children attending Indi Kindi receive free, highly nutritional meals and practice healthy habits

### Health, hygiene, and nutrition

Indi Kindi has a strong focus on health and development as conceptualised in Western culture. Every session includes teaching children to practice healthy habits such as washing their hands, drinking fresh water, and being safe in the sun. Children and families attending receive a free, high nutritional value meal, prepared by the educators. Children's fine and gross motor skills are developed through the play-based activities.

However, just as the curriculum incorporates two-way learning, the health focus at Indi Kindi also spans both Aboriginal and Western concepts. Trips and excursions include learning about and finding bush medicine, and cooking traditional food, such as Kangaroo tail and damper. Moreover, the focus on culture and connection to Country is integral to the holistic good health of Aboriginal children.

### Enabling factors

- Indi Kindi works with the community, Elders, the local health clinic and visiting health professionals to ensure that children's holistic health is cared for.
- Indi Kindi also works with Moriarty Foundation's soccer program, John Moriarty Football (JMF) to run Indi Footi sessions, which focus on fine and gross motor skills alongside regulating behaviour and breathing.

### Challenges

- Health professionals are often visiting professionals, and there can be significant turnover (at the time of visiting in 2023, for example, there was no children's nurse due to recruitment challenges).
- Food costs are high in Borroloola, with a truck from Darwin visiting once a week.

### Indi Footi

Indi Footi is a football (soccer) program for 2 to 6 year olds delivered by John Moriarty Football (JMF) coaches through Indi Kindi. Indi Footi promotes healthy growth and development and is aligned to Indi Kindi's daily messaging of "Eat well, Drink well, Clean well, Play well."

The curriculum has four components: Dribbling, passing, shooting and game play. It not only encourages physical health and development but introduces children to the JMF program which they can continue to attend after graduating Indi Kindi, where they can learn more soccer, get a healthy meal, and be supported through school.

"Indi Kindi's partnership with Top End Oral Health Services (TEOHS) builds on previous years of working together to support oral health outreach programs for children under 5 in Borroloola... The TEOHS team will deliver the first training package, 'Healthy Smiles' to increase oral health knowledge and skills for Indi Kindi Educators. In May, the TEOHS will be in Borroloola and Robinson River for 6 weeks. The first 3 weeks will have a child focus and the last 3 weeks will have an adult focus for oral health. Indi Kindi will support the child visits." - **Community Advisory Group Minutes, 2021**

"Today we decided to take the kids for a trip looking for bush medicine. Staffs put the bush medicine in the zip bag for each kids to take home. When we did drop off home we give the kids a bag of bush medicine a fruit and a book the take home." - **Indi Kindi Reflections Data 2022**

### How does the Indi Kindi program feature of holistic health and development align with best practice of health promotion, nutrition and social support?

Effective programs focus on promoting the physical and mental health of children through health initiatives and support. For example, The Child and Family Centre in Maningrida, Northern Territory (Australia) provides access to the Healthy Under 5 Kids Program, offering preventive health care, immunization, developmental support, and referrals through a team of nurses. It also addresses the nutritional needs of children through cooking classes and child development checks.<sup>1,2</sup> Best practice programs also emphasise the interconnectedness of all aspects of child development, including physical, mental, emotional, and spiritual well-being. Such programs also provide social support systems and resources to families, recognizing the challenges they may face, and creating a supportive and nurturing environment for both children and caregivers.

### Alignment to Indi Kindi

With a core focus on the health and wellbeing of Aboriginal children, families, and local communities, Indi Kindi collaborates with local health networks to promote physical activity, healthy eating habits, social and emotional wellbeing, and disease prevention. Recognizing the crucial role of social support in early childhood development, Indi Kindi partners with families to offer resources and assistance such as child-pick up and checking-in on new mothers. By providing social support systems, the program enables caregivers and parents to better support the emotional, physical, and cognitive development of their children. This, in turn, contributes to creating a strong foundation for the children's growth and well-being.



# Indi Kindi program features: Accessibility and eligibility

## Enrolling children is easy and free for families and transport is provided to attend

### Accessibility and eligibility

Indi Kindi is delivered across half day sessions, with between two to three hours of education and care delivery, plus travel time for children and families on the Indi Kindi bus which picks them up at their door. The program aims to deliver sessions every week day, at different locations around Borrooloola. The enrolment process is easy, with no need to book a place, meaning that even visiting families are able to participate in Indi Kindi and receive the benefits of the program.

### How Indi Kindi enables participation

- Indi Kindi is free for everyone, with no attendance fees, cancellation or late fees, fees to cover excursions, nappies, or food. The program provides hats and shoes for children to wear at the sessions, so families don't need to buy anything in advance of the sessions.
- The enrolment process is easy and streamlined for families, who can work with educators to fill out a one page form (see Image 3) for real time enrolment. This means that there is no need for additional documentation such as birth certificates, which can present barriers to enrolling in other programs.
- The Indi Kindi bus is a for purpose vehicle leased by Moriarty Foundation which picks up children and families from their house and drops them back off. There is no need to formally book, as local educators know who to pick up, and can call and follow up with other family members to ensure strong attendance. The bus and Indi Kindi drivers are able to navigate challenging road conditions which other services in town are unable to, meaning Indi Kindi can be a reliable presence and service.
- Families trust the educators, as local Aboriginal women. Educators are often related to the children and families attending Indi Kindi, and the strong trust in them as role models and child care experts is critical to ensuring the success of the program.

Image 3: Indi Kindi Enrolment form

Source: Moriarty Foundation

### How does the Indi Kindi program feature of accessibility and eligibility align to best practice?

Best practice in accessibility and eligibility features free services with low barriers to enrolment and engagement. It is well known that costs can be a barrier for families to engage with services, but there are also other barriers, including transport and physical accessibility, trust of the service and staff, and complicated enrolment procedures, waiting lists, or eligibility criteria.

#### Alignment to Indi Kindi

Indi Kindi provides sustained support to encourage universal access to the program from all families in Borrooloola. Practical supports include fee-free sessions and transport to and from the program, and are accompanied by other enabling factors such as building long term trust from families, and employing local staff who know and are known by the community.

# Indi Kindi program features: Collaborative partnerships with families and communities

## Indi Kindi works closely with family members and the community in the design and delivery of the program

### Collaborative partnerships with families and communities

Indi Kindi works with families and communities in its day-to-day program delivery and more broadly in the design and strategic delivery of Indi Kindi. In some ways, Indi Kindi goes beyond collaborative partnerships with families – Indi Kindi *is* family.

Family members are welcome to attend Indi Kindi with children, whenever they would like to. They are also seen as key collaborators in children's learning and educators know and work closely with families. In addition, the Community Advisory Group is a key mechanism for partnering with the community and seeking feedback and direction for the program.

### How Indi Kindi enables collaborative partnerships

- Families are welcome to join Indi Kindi whenever they would like to
- Family feedback is sought on children's outcomes and on future topics for Indi Kindi to focus on through surveys and informal processes
- The Community Advisory Group has input into program decisions (see page 55: Governance and leadership) and can provide authority on cultural matters
- Indi Kindi forms collaborative partnerships with other local services, including through the Early Years Network which is comprised of other early years services in Borroloola.

"Families and staff to choose up to 10 titles to translate into home languages - see the catalogue attached. [Program manager] recommends including The Very Hungry Caterpillar, Heads, Shoulders, Knees and Toes, Where's Spot, Dear Zoo as there are teaching resources available linked to these titles. Community members that would like to be involved in this translation project will be paid.

*Discussion: It was agreed to translate books into Garrawa and Yanyuwa languages as the Marra language speakers were not based in Borroloola. A suggestion was to ask the elders to say the words and the younger ones write down the translation. Also suggested that [team leader] meet with the Elders to understand if they would need assistance from a linguist during the translation, or check the finished translation or if no assistance would be required. Staff and mums to choose the titles in the coming sessions.*

- Community Advisory Group minutes 2018

Image 4: Cover page of Narnyindar buryuyur Windarjkarnyi/Hungry Caterpillar in Yanyuwa, created in collaboration with families and the Community Advisory Group



Source: Moriarty Foundation

### How does the Indi Kindi program feature of collaborative partnerships with families and communities align to best practice?

Best practice includes recognising families as the first teachers and educators of their children, and that families have the right to choose how their children are educated.


#### Alignment to Indi Kindi

Indi Kindi shows best practice in building and maintaining collaborative partnerships with families and communities, by inviting families to attend sessions if they choose, maintaining a community advisory group governance structure, and prioritising trusting relationships with families. This is an outcome itself, but also enables further outcomes by encouraging child attendance and engagement with a program which is tailored and culturally safe.









## Comparison to other programs and models

**This section systematically appraises the similarities and differences between Indi Kindi and other commonly seen models of ECEC provision.**

**It then draws on the evidence in relation to the impacts of these models to reach conclusions regarding the likely impacts of Indi Kindi.**

**It further positions these within other best practice models for place-based programs, programs which support Closing the Gap targets, and employment programs**

**As well as providing this initial appraisal, the purpose of this section is to establish the framework through which the outcomes of Indi Kindi are analysed in the sub-sections that follow.**

# Comparison of Indi Kindi to ECEC models

Indi Kindi is a flexible program, and depending on how families and children interact with the service, the benefits are likely similar to a variety of ECEC models.

The following section summarises the key ways in which Indi Kindi can be compared to ECEC delivery models with strong bodies of research. This allows for comparison of known outcomes for those models to likely benefits of Indi Kindi. Further detail is provided in Appendix F.

Table 1: Comparison table of Indi Kindi to ECEC delivery models

Features	Feature indicators	Indi Kindi	Supported playgroups	Centre based day care	Family day care	Preschool	Vacation care and OSHC
	Young starting age (<4yrs old)	✓	✓	✓	✓	✗	✗
	High duration (>2yrs)	✓	✓	✓	✓	✗	
	Part-time hours	✓	✓	✗	✗	✓	✓
<b>Educational program and practice</b>	Defined curriculum/ framework	✓	✗	✓	✓	✓	✗
	Outdoor learning	✓	✗	✗	✗	✗	✗
<b>Holistic health and development</b>	Explicit focus on health	✓	✓	✗	✗	✗	✗
	Qualified educators	✓	✗	✓	✓	✓	✗
<b>Staffing</b>	On site ECT	✗	✗	✓	✗	✓	✗
	High facilitator to child ratio	✓	✓	✗	✓	✗	✗
<b>Collaborative partnerships with families and communities</b>	Family attendance	✓	✓	✗	✗	✗	✗
	Free	✓	✓	✗	✗	✓	✗
<b>Accessibility</b>	Transport usually provided	✓	✗	✗	✗	✗*	✗
	Easy enrolment process	✓	✗	✗	✗	✓	✗

Note: this assessment builds off the literature review undertaken for this report, from a variety of sources. See the Methodology chapter (From p.43 to p.45) for more detail.

*\*Borroloola preschool provides transport*

# Outcomes associated with different features of ECEC models

The literature on outcomes associated with ECEC model features illustrates the key characteristics of successful programs, under a traditional Western view of the early years

Table 2: Comparison table of Indi Kindi to indicators of outcomes for children

			Outcomes for children			
Features	Feature indicators	Indi Kindi	Cognitive skills & development	Academic outcomes	Socio-emotional development	Health outcomes
	Young starting age (<4yrs old) <sup>1</sup>	✓	Supported	Supported	Mixed	-
	High duration (>2yrs) <sup>1</sup>	✓	Supported	Supported	Not supported	-
	Part-time hours <sup>1</sup>	✓	Supported	Supported	Insufficient evidence	-
<b>Educational program and practice</b>	Defined curriculum/ framework	✓			Supported*	
	Outdoor learning	✓	Insufficient evidence	Insufficient evidence	Supported	Supported
<b>Holistic health and development</b>	Explicit focus on health	✓	Supported**	-	-	Supported
<b>Staffing</b>	Qualified educators	✓	Supported	Supported	Supported	-
	On site ECT	✗	Supported	Supported	Supported	-
	High facilitator to child ratio	✓	Supported	Supported	Supported	-
<b>Collaborative partnerships with families and communities</b>	Family attendance	✓	Supported	Insufficient evidence	Supported	-
	Improved home learning environment	✓	Supported	Supported	Supported	-
<b>Accessibility</b>	Free	✓				
	Transport usually provided	✓				
	Easy enrolment process	✓				
<b>Enablers of outcomes</b>						

Note: this assessment builds off the literature review undertaken for this report, from a variety of sources. See the Methodology chapter for more detail.

\*The EYLF is based on best practice including research and consultation to support outcomes for children.

\*\*Strong nutrition enables cognitive function.



# Alignment of Indi Kindi to best practice models and principles, and the application to outcomes

## The literature on best practice early years models and programs informs the identification and quantification of the outcomes expected to be realised by Indi Kindi

This section and the last revealed the ways in which Indi Kindi aligns with both best practice Western early years education models and best practice Indigenous early years education programs.

This exercise has demonstrated that Indi Kindi is in many ways a unique model. It aligns with many Western ECEC frameworks, including in Australia the National Quality Framework, and adopts many of the best practice features of various ECEC models, such as a high facilitator to child ratio and qualified educators.

Yet Indi Kindi works because of the way that these standards are appropriately tailored and adjusted for the local context, as the table on the right summarises. For example, similar to most traditional ECEC models, Indi Kindi has a defined curriculum and framework, however the Walking Learning® curriculum incorporates the Aboriginal world view such that the children are actively engaged. In this way, the program is best set up for success through drawing on the impactful features of both Western and Indigenous frameworks.

This alignment has facilitated an understanding of Indi Kindi's outcomes in the following ways:

- **Alignment with best practice early years education models** – Page 61 shows that Indi Kindi aligns closely to supported playgroups (with key similarities being a high facilitator to child ratio, free entry and facilitating family attendance) and centre based day care (with common features such as a defined curriculum and qualified staff). The benefits of playgroups can therefore be attributed to Indi Kindi to the extent they are facilitated by common features like the high facilitator to child ratio.
- Also of relevance is the presence of preschool in Borroloola and the role that Indi Kindi plays in encouraging children to attend preschool or Transition. Ultimately, when understanding the educational outcomes of Indi Kindi, as discussed further in the following section, the literature pointed to the developmental impact of playgroups and the similar but larger developmental impact of preschool, which can be attributed to Indi Kindi based on the probable pathways of attending children.
- **Alignment with Indigenous early years education programs** – the research on outcomes associated with programs that incorporate an Aboriginal worldview, presented through the 'Indi Kindi program features' chapter, broadens the understanding of what Indi Kindi may be able to deliver. A key example is health benefits, which are not systematically associated with or attributed to early years programs, but are more commonly realised through Indigenous programs that incorporate health promotion and nutrition into core delivery.

One notable finding from the literature review was the difficulty identifying programs that are similar to Indi Kindi, in their integration of Western and Aboriginal principles and features, such that their outcomes might be reasonably attributed to Indi Kindi. Further, where these could be identified, it was rare to identify evaluations that robustly and clearly articulated the expected outcomes. One exception is the evaluation of Children's Ground in the Northern Territory (see Appendix H), which adopts similar program features to Indi Kindi and has found results across health, wellbeing and empowerment outcomes. However, while the study provides useful survey data related to outcomes, comparative analysis or similar is not utilised to specify the 'treatment effect' of the program relative to what would have happened in its absence.

Table 3: Indi Kindi program features in relation to Western and culturally integrated ECEC indicators

Program feature	Feature indicators – Western ECEC frameworks	Feature indicators – updated with Indigenous lens
<b>Educational program and practice</b>	Defined curriculum/ framework	Aboriginal-centric curriculum/ framework (language and pedagogy)
	Outdoor learning	Learning on Country
<b>Holistic health and development</b>	Explicit focus on health	Health promotion and nutrition as a core part of delivery
		Cultural wellbeing lens
<b>Staffing</b>	Qualified educators	Qualified educators with provided training support
	On site ECT	On site ECT
	High facilitator to child ratio	High facilitator to child ratio
<b>Collaborative partnerships with families and communities</b>	Family attendance	Community governance
	Improved home learning environment	Provision of social support
		Active family and community involvement
<b>Accessibility</b>	Free	Free
	Transport usually provided	Transport usually provided
	Easy enrolment process	Easy enrolment process

# Comparison to other programs and models

## Indi Kindi embodies best practice features across a range of domains, tailored to the context of Borroloola

### How Indi Kindi delivers

As much of the best practice literature about how to deliver services is designed by or for governments, some of the features are not applicable to Indi Kindi. However, it is important to consider *how* Indi Kindi delivers in addition to *what* Indi Kindi delivers, as a critical mechanism for ensuring both the sustainability and effectiveness of the program.

**Place-based approaches** - Indi Kindi can be seen as a place-based approach to reducing disadvantage. While there is no consensus definition to place-based approaches, literature suggests that place-based approaches provide flexible responses and delivery models to achieve outcomes, work to build local capacity over time, and work with other local organisations and agencies to achieve results. Place-based models are characterised by engaging the community as active participants – so that the program can respond best to local need. Programs will tend to invest into local capability building, to ensure that programs can be sustainable. Ideally, place-based approaches are supported by governments through partnerships and funding, where appropriate.

**Closing the Gap priority reform elements** – The National Agreement on Closing the Gap aims to ‘overcome the entrenched inequality faced by too many Aboriginal and Torres Strait Islander people so that their life outcomes are equal to all Australians.’ In addition to a set of targets, the agreement includes a set of four priority reforms which focus on how governments work with Aboriginal and Torres Strait Islander peoples and communities. While the priority reforms aim to guide governments, they also reflect consultation with Aboriginal and Torres Strait Islander peoples and communities about best principles for engaging with them. This includes that services and programs should be delivered by community controlled organisations, defined as an organisation incorporated under relevant legislation with at least 51% Aboriginal and/or Torres Strait Islander ownership and/or directorship, operated for the benefit of Aboriginal and Torres Strait Islander communities.<sup>1</sup>

### What Indi Kindi delivers

In addition to delivering an early years program aligned to best practice, as indicated on the previous pages, Indi Kindi can also be seen as a model to increase and improve employment. This is because it not only employs local educators, but helps them to get ‘job ready’ through training and other practical supports. This includes things like supporting educators to get their identification and building skills transferrable to other roles like IT skills.

### Key features applicable to Indi Kindi

#### Place-based approaches

- ✓ Flexible response and delivery model
- ✓ Builds local capacity
- ✓ Works with local organisations and agencies

#### Closing the Gap priority reform elements

- ✓ Meets definition of Aboriginal Community Controlled Organisation
- ✓ Dedicated and identified Aboriginal and Torres Strait Islander workforce.
- ✗ Community-controlled organisations have a dedicated, reliable and consistent funding model designed to suit the types of services required by communities.

#### Both place-based approaches and Closing the Gap priority reform elements

- ✓ Driven by community, with input into design and delivery
- ✓ Sustained capacity building and investment
- ✗ Formal partnership agreements with government to deliver services

#### Employment programs

- ✓ Meaningful and fulfilling work
- + Culturally aligned work
- ✓ Services protect the dignity and respect rights of individuals.
- ✓ Services provide a pathway towards decent jobs that provide the flexibility and security that individuals need.

**Legend**

- ✓ Indi Kindi feature reflecting best practice
- + Additional Indi Kindi feature
- ✗ Not met in/for Indi Kindi

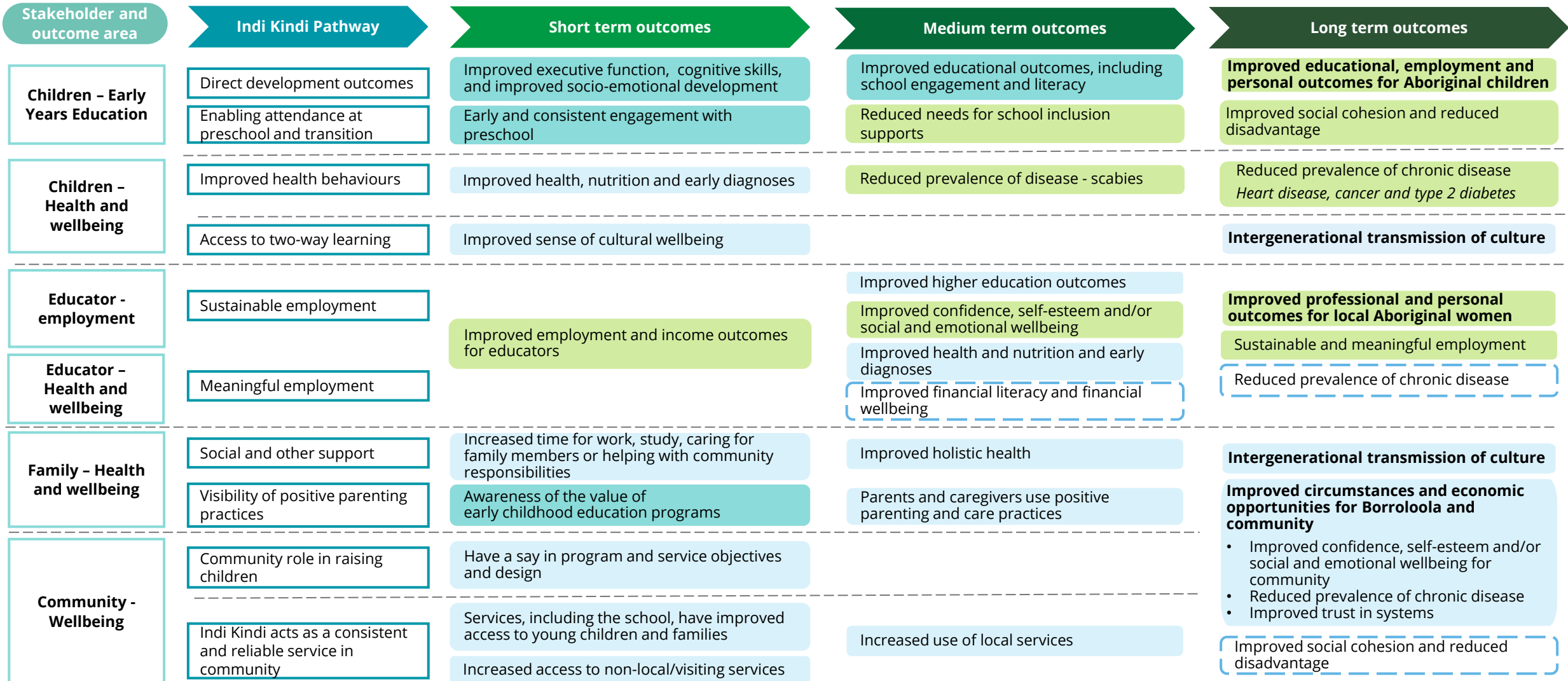
# Outcomes framework

Available primary and secondary data determined the extent to which outcomes could be discussed qualitatively, quantified or monetised

Indi Kindi outcomes framework, based on the program logic

## Legend:

- Insufficient evidence at time of reporting
- Discussed qualitatively
- Quantified
- Monetised





# Discussion of outcomes in this report

## The value of Indi Kindi can be mapped through effects on participants and attributed evidence

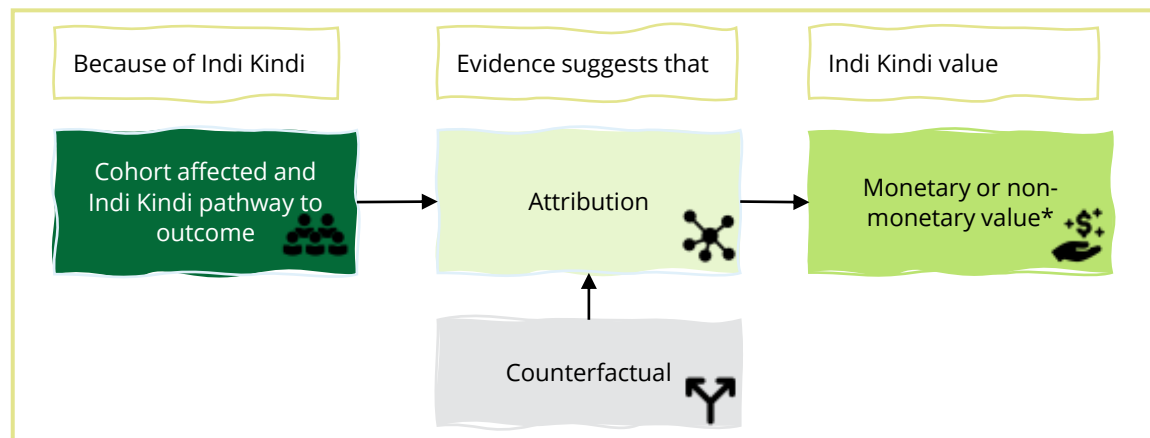
For each of the outcomes on the previous page indicated as having sufficient evidence, the following sections include:

- definition of outcome
- evidence of attribution:
  - primary evidence (if available) on the link between the outcome and Indi Kindi
  - secondary evidence on the link between the outcome and programs/models determined to be reasonable comparators for Indi Kindi based on the analysis in the previous sections
- quantification and monetisation where feasible.

This discussion is associated with the following diagram for each outcome, summarising the various components required to understand the value of the outcome (as defined in the Methodology chapter).



Figure 4: Valuing the outcome



Outcomes with qualitative and/or quantitative evidence to support discussion in following sections:

- Children – improved developmental and educational outcomes, with flow-on impacts on school disability supports, lifetime earnings and social & fiscal costs
- Children – improved health and cultural wellbeing
- Educators – improved employment and post-schooling educational outcomes
- Educators – improved confidence, self-esteem, and social and emotional wellbeing
- Families – improved time, mental health and attitudinal outcomes
- Community – improved trust in systems and services

*\*Where outcomes were unable to be monetised, the icon is not displayed in the figure.*

Source: Deloitte Access Economics (2024)







A close-up photograph of a woman and a young child. The woman, on the left, has dark skin and her hair is pulled back. She is wearing a bright pink shirt with a colorful patterned collar. She is looking towards the right with a slight smile. The child, on the right, is also looking towards the right and is holding a small, clear plastic jar with a yellow lid. The background is a soft-focus outdoor setting with green foliage.

## Outcomes

**Drawing on the framework and principles set out on pages 53 and 54, this section presents the findings with respect to the outcomes of Indi Kindi across the domains of educational outcomes; social and health outcomes; outcomes for educators; and outcomes for families.**

**Its purpose is to provide the evidence of impact that ultimately provides the basis of the social return on investment assessment.**



# Educational outcomes

Educational outcomes are enabled by Indi Kindi in two key ways: direct developmental outcomes, and by enabling attendance at preschool and transition

Educational outcomes for children are at the heart of Indi Kindi. The Law Women's desire for stronger educational opportunities for their grandchildren inspired the original Indi Kindi program, focused on literacy and language. In Indi Kindi's early form, it was the only truly accessible early years program available in Borroloola, and was relied upon to grow kids up strong before school. The early years landscape in Borroloola has since changed, reflecting a growing recognition in the Territory, and internationally, of the importance in young children's development in setting them up well for life – and catching up with what Indi Kindi has been teaching for some time. The introduction of preschool, and the recent three-year-old preschool pilot means that the community need has shifted. Indi Kindi is responding accordingly, enabling outcomes in two broad pathways:

- 1. Direct developmental outcomes** – including literacy, numeracy, language development and cognitive and executive function. These developmental foundations are critical for a strong start to life.
- 2. Enabling attendance at preschool and transition** – through promoting family awareness of the benefits of ECEC, providing an accessible and culturally safe introduction to formal learning, and through transition elements, such as 'graduation', which normalise the expectation of attending preschool.

## Framing the outcomes

These outcomes broadly align with the two Closing the Gap outcomes focused on this age group (see right).

Both streams of outcomes are linked to the concept of 'school readiness', which has traditionally been seen as an individual child's ability to reach certain outcomes by the time they start school. However, the Northern Territory Government has adopted a definition of school readiness growing in popularity, that school readiness needs to be more holistic and reflect systems around the child.

## Closing the Gap targets and outcomes

### 1. Aboriginal and Torres Strait Islander children thrive in their early years

This is translated into a target that the proportion of Aboriginal and Torres Strait Islander children assessed as developmentally on track in all five domains of the Australian Early Development Census (AEDC) grows to 55 per cent.

### 2. Aboriginal and Torres Strait Islander children are engaged in high quality, culturally appropriate early childhood education in their early years

This includes a preschool enrolment target of 95 per cent by 2025, which has been met. The agreement suggests that once this target is met, the next step is to develop future targets for enrolment and attendance rates for two years before full time schooling (i.e. 3 year old preschool). This outcome is supported by the contextual measure of the number of Aboriginal and Torres Strait Islander early childhood education and care service providers

Readiness for school is formed of:

- Children's readiness for school
- Schools' readiness for children
- The capacity of families to provide developmental opportunities
- The capacity of communities to provide developmental opportunities

*Northern Territory Early Childhood Transitioning Overview*

# Educational outcomes

## 1) Direct developmental outcomes are established through three drivers, and measured in this report through the AEDC domains

At age five, children's abilities and development are largely determined by their family, community and early childhood program experiences. Quality care, at home and outside of it, is crucial to building solid developmental foundations, including healthy brain and behavioural development. 90 per cent of the brain develops by age 5, and early interventions during this time can reduce risk associated with developmental delay, disability and intergenerational disadvantage.

There are three broad and related relevant drivers of developmental outcomes which Indi Kindi contributes to (not including enabling access to preschool, which is covered separately).

- **High quality play based learning**- Age-appropriate play-based activities can be seen to form part of a spectrum of learning, encouraging curiosity, communication and attentional skills. There are several measures of developmental growth and child outcomes, including the AEDC.
- **Quality caregiver-child interactions** – A responsive relationship with a parent, carer or other adult can provide support that protects children from developmental disruptions and helps build resilience.<sup>2</sup>
- **The home learning environment** – While the home learning environment is sometimes measured crudely by the number of books or children's books, shared and dialogic reading is a strong contributing factor to a child's literacy skills.<sup>3</sup>

### AEDC Domains

The Australian Early Development Census (AEDC) is a national progress measure to monitor Australian children's development. AEDC data has been collected every three years since 2009 and is conducted as a census of children in their first year of formal full-time schooling. It provides an evidence base to support policies and actions designed to support children and families.

The AEDC domains are now an established measure for Australian children's development. The domains are: Language and cognitive skills (school-based); Physical health and wellbeing; Social competence; Emotional maturity; Communication skills and general knowledge.

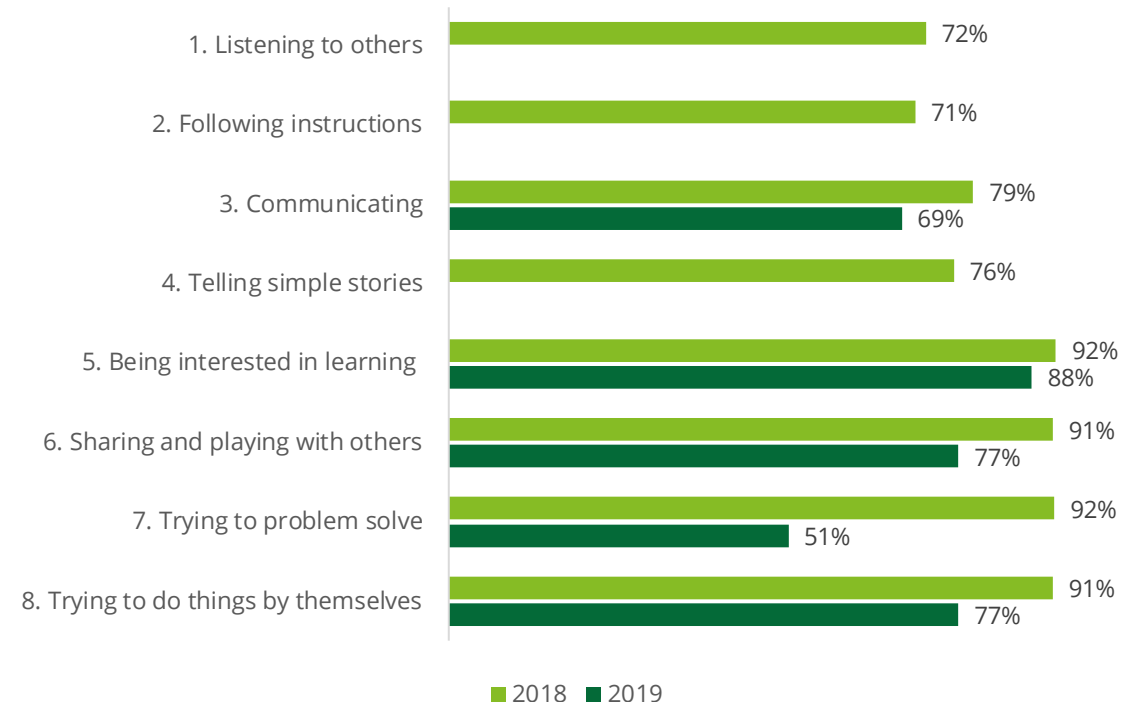
While the AEDC domains do not capture the entire breadth of children's development, and in particular lack the holistic and cultural aspects of Indi Kindi's approach, their reliability as a measure and the extensive research underpinning them provides a useful guide for proxying benefits for children's development against other established programs and delivery models.

See Appendix C for more information on AEDC data relating to Borroloola.

### Family perceptions of Indi Kindi's impact on educational outcomes

Families of children attending Indi Kindi were asked by Indi Kindi educators how much Indi Kindi helped their child with various outcomes in 2018 and 2019. Responses were very positive, and reflect that families feel that Indi Kindi is helping their child. This is discussed later on in the report as an enabler of other outcomes, as families can see the progression of their child due to an early learning program.

Chart 11: Parents responding that Indi Kindi helps their children 'a lot' with the activity



Source: Deloitte Access Economics (2024), using data from Indi Kindi family surveys, 2018 and 2019

# Educational outcomes

## 1) Direct developmental outcomes: Indi Kindi offers high quality play based learning

### High quality play based learning

As discussed, while there are no directly comparable programs to Indi Kindi, programs which have similar hallmarks of quality and overlapping features, offer an indication to the quantifiable benefits of Indi Kindi as a high quality early years program.

### Evidence for outcomes - supported playgroups

- An Australian study determined that children with an Aboriginal background who did not attend playgroup had a 1.82 times greater likelihood of being developmentally vulnerable compared to those who did attend playgroup.<sup>1</sup> Additionally, children in remote areas who did not attend playgroup were 2.06 times more likely to be developmentally vulnerable when compared to children who attended playgroup and children living in the most socioeconomically disadvantaged areas who did not attend playgroup were 1.84 times more likely to be developmentally vulnerable compared to those who did attend playgroup.
- A systematic literature review into the impacts of support playgroups concludes each of the 7 studies examined attribute attendance at playgroups to improved child cognition and behaviour skills as well as increased child social, emotional and behavioural skills.<sup>2</sup>

### Evidence for outcomes - early childhood education and care (more broadly)

- A study undertaken into the value of early childhood education concluded an average effect size of 0.17 standard deviations in terms of education outcomes for children.<sup>3</sup> This figure is the same as the finding from meta-analysis published by the World Bank Policy Research Working Paper Series which states when compared to no exposure to formal early childhood education and care, the studies in high-income countries found an average 0.17 standard deviation increase in cognitive skills at school entry for children who attended some form of ECEC model.<sup>4</sup>
- Research into the early influences on developmental outcomes among children in the Northern Territory discloses that after adjusting for other variables, Aboriginal children who had not attended a form of day care or preschool program were 1.43 times more likely to be developmentally vulnerable (OR: 1.43, 95% CI: 1.01–2.04).<sup>5</sup>

- A systematic review into 12 papers and 11 early childhood education programs operating with the intention to support positive outcomes for Indigenous children concluded a number of positive outcomes caveated by limited outcomes based evidence.<sup>6</sup> These outcomes included:
  - improvement in receptive language scores, receptive and expressive language use and language improvement more broadly
  - a broader and more holistic approach to school readiness

“Discussion on how their children are progressing in their learning by attending IK, families reported that their older children have now graduated from IK and are attending school. They commented that the experience of attending IK has contributed to their child’s ability to learn and understand especially in maths.”

- Project advisory group minutes 2017



# Educational outcomes

## 1) Direct developmental outcomes: Indi Kindi facilitates and models quality caregiver-child interactions

### Quality caregiver-child interactions

Indi Kindi supports strong developmental outcomes for children who attend with a family member by building parenting capabilities and supporting quality caregiver-child interactions. Positive carer-child relationships are modelled by the educator team, including dialogic reading, 'serve and return' interactions, which build brain architecture, and unconditional positive regard for the child. Other supporting elements for child development are explicitly and directly taught by the educator team, in a non judgemental environment, such as explaining why second hand cigarette smoke can be harmful to children, the benefits of positive verbal and non-physical forms of discipline on child development and limiting use of swearing in order to demonstrate higher order vocabulary and unconditional positive regard for children.

### Evidence for outcomes

- Early childhood is both a sensitive and critical time for brain development, according to a conceptual framework developed by Fox, Levitt and Nelson, based on neurological research.<sup>1</sup> Other empirical and theoretical research suggests that the key to unlocking this development at these critical early stages is consistent and responsive relationships between children and adults.
- Early studies using brain imaging technologies have been able to demonstrate links between concepts such as 'serve and return' and brain activities and development.
- A US study into the relationship between sensitive parenting and brain development, based on normal variations in caregiving quality, found that parental sensitivity in early childhood was related to larger brain volume and grey matter volume at 8 years old.<sup>2</sup>
- A study into how young children play and communicate found that although the children in their first year were sensitive to caregivers joining their play, with brain activity associated with communication observed.<sup>3</sup>

Although much research focuses on a Western 'dyad' relationship, with a 'primary' caregiver and child, this differs from Aboriginal family structures. In the Indi Kindi setting, one or many of the educators can take a similar role to a 'primary caregiver' as conceptualised in Western cultures (and research). This outcome is therefore taken to be applicable to children who attend with a family

member, but this is likely a conservative estimate. Some of the children who attend Indi Kindi without a family member could potentially benefit the most, with quality 1:1 interaction with a caring adult enabled through low educator child ratios.

Data from the Indi Kindi 2022 attendance records suggests that children were accompanied by family members for 17 per cent of sessions. However this is likely an underrepresentation, including as children attending with a parent-educator are not distinguished in 2022 data.

"Indi Kindi facilitated sessions where mums and bubs can connect through important skin to skin contact with baby massage, hair washing and braiding. These sessions were popular and encouraged mums to connect with each other as well as their children."

- Community advisory group minutes 2018

"[the best thing about working at Indi Kindi is] coming to work every day seeing all them children...when they know you they're singing your name and wanna run up and hug you."

- Indi Kindi Educator

"Babies' brains require stable, caring, interactive relationships with adults — any way or any place they can be provided will benefit healthy brain development."

- The Science of Early Childhood Development, Center on the Developing Child

# Educational outcomes

## 1) Direct developmental outcomes: Indi Kindi supports a stronger home learning environment

### The home learning environment

Indi Kindi helps to enrich the home learning environment for children attending by distributing an age-appropriate book to each child at every session they attend. It means that benefits of Indi Kindi may go beyond the sessions themselves. Shared reading might be able to be practiced by a family member who has learned from educators' examples of shared reading at sessions. Where parents or other caregivers may not be strong readers, other children in the house may read with younger children, as described by educators.

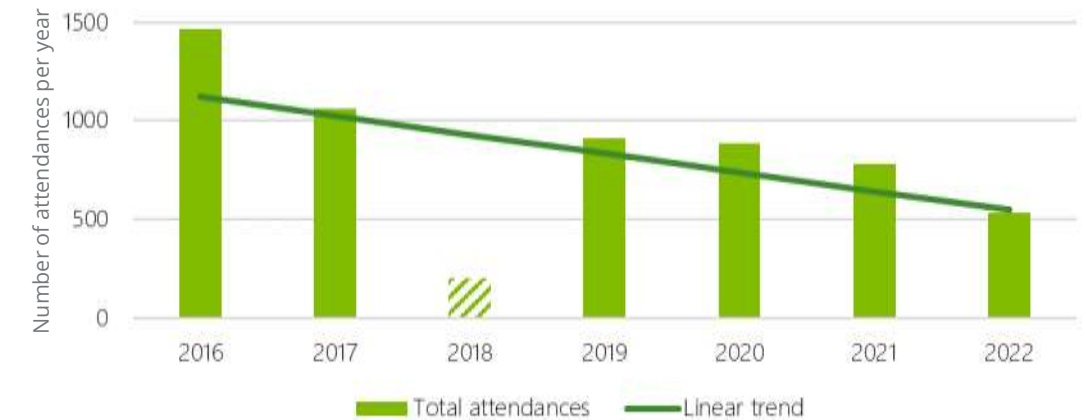
### Evidence for outcomes

- A longitudinal study found a 17-19% greater likelihood of parental engagement in home learning activities at age 4 for children who attended playgroup at ages 2-3 compared to children who did not attend playgroup.<sup>1</sup>
- A cluster-randomised study in Brazil compared outcomes for children who attended child care, with those who attended child care that also included a parenting program focused on parent-child reading aloud, and identified significant impacts on receptive vocabulary and working memory.<sup>2</sup>
- According to a study into effective early education experiences, children exposed to and experiencing a high quality home learning environment (characterised by more frequent positive parent-child interactions) harbour greater behavioural competencies which grow at a faster rate over time and execute linguistic and numerical tasks to a higher standard compared to children with lower quality home learning environments. Furthermore the number of books in general and the number of children's books (in addition to more frequent parent reading practices) are proven to demonstrate a favourable home literacy learning environment lending itself to better child verbal competencies.<sup>3</sup>

"The kids like it at Indi Kindi, cause they don't do them things [play based educational activities] at home or they probably don't even have them toys at home, you know, to play with or books to read...They love reading, so we can bring some books and they just really want to read them books"

- Indi Kindi Educator

Chart 12: Total attendances at Indi Kindi sessions, representing number of books distributed over time\*, \*\*



Source: Deloitte Access Economics using program information from Moriarty Foundation

\* Figures from 2018 only represent two months of the year.

\*\* Calculated by determining the number of attendances at Indi Kindi, with every child attending a session receiving a book

# Educational outcomes

## 1) Direct developmental outcomes, as measured by the AEDC, are improving for Borrooloola children over time

### Developmental outcomes

As discussed in earlier sections of this report, there has been no direct measurement of child development outcomes through Indi Kindi to date. This will be gathered in future where possible, beginning with qualitative reflections (see 'measurement').

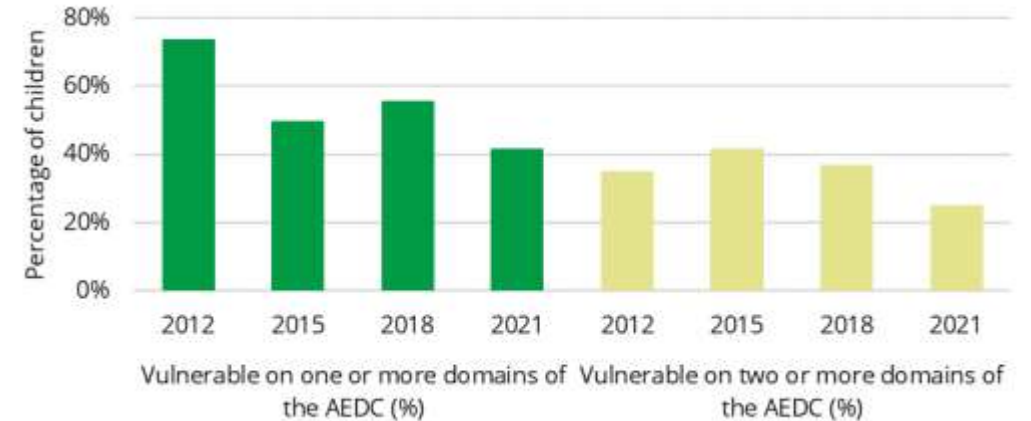
The AEDC (see page 70) is held every three years, with the 2021 AEDC data collection being the fifth collection. AEDC data is reported on across multiple geographical areas (see Appendix C for more information). The census involves teachers of children in their first year of full-time school completing a research tool, the Australian version of the Early Development Instrument.

- Chart 13 shows that percentage of children assessed as 'vulnerable' on one or more AEDC domains has decreased over time. The percentage of children assessed as vulnerable on one or more domains' decreased from 73.7 per cent in 2012 (n=14) to 41.7 per cent in 2021 (n=10). This difference is significant.
- Relative to 2012 levels, all 3 of the following AEDC census years (2015, 2018 and 2021) have seen a significant decrease in the proportion of children vulnerable on one or more domain.
- In 2021 42.3 per cent of Aboriginal and Torres Strait Islander children in Australia were assessed as developmentally vulnerable on one or more domain, and 26.5 per cent were assessed as developmentally vulnerable on two or more domains.
- Chart 14 shows that the percentage of children assessed as developmentally vulnerable in South Gulf (Borrooloola) is less than the Gulf community on average and is in line with the Northern Territory average. Where the Northern Territory average has remained relatively stable and the Gulf average has remained high, the South Gulf has seen sustained, and statistically significant, reduction over time.
- Relative to 2012 levels, 1 of the following AEDC census years (2021) have seen a significant decrease in the proportion of children vulnerable on two or more domains.

Note: The Gulf community comprises four local communities: North Gulf, South Gulf, Calvert and Limmen (see Appendix C). Calvert and Limmen do not have preschools or early learning centres and have too few local community level data to be published by the AEDC.

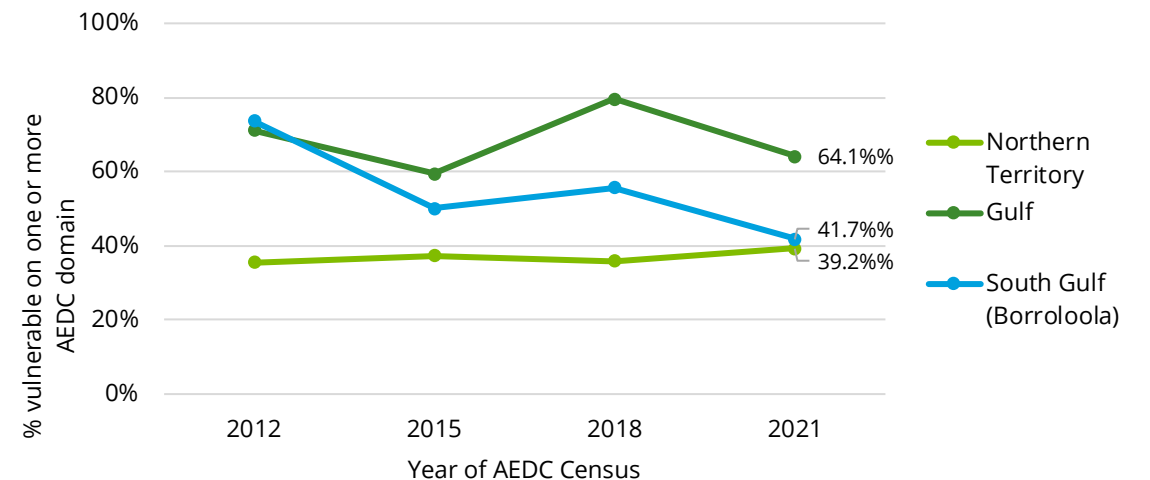
Note: Both North Gulf and South Gulf have relatively small sample sizes. Neither community dataset is indicated by the AEDC to reflect less than 80 per cent of the ABS five-year-old population.

Chart 13: Children vulnerable on multiple domains in South Gulf (Borrooloola) over time



Source: Deloitte Access Economics (2024) using AEDC data

Chart 14: Children vulnerable on multiple domains in the Gulf local communities, 2018, 2021



Source: Deloitte Access Economics (2024) using AEDC data



# Educational outcomes

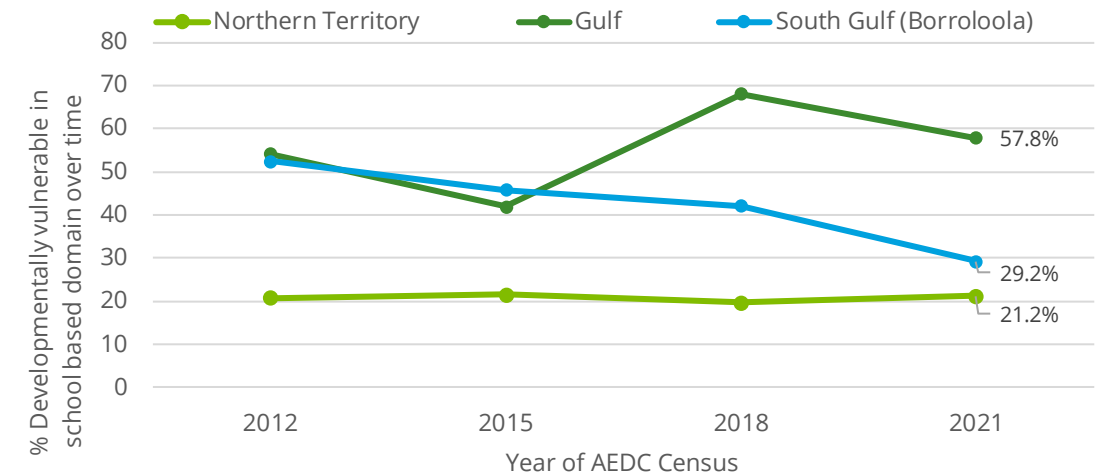
## 1) Direct developmental outcomes, as measured by the AEDC, are greater in the Borroloola region than nearby Gulf regions

- Chart 15 shows that over time there has been a decrease in the number of children assessed as 'vulnerable' in the language and cognitive skills AEDC domain from 2012 to 2021, from 52.4 per cent (n=11) to 29.2 per cent (n=7). This difference is significant. In comparison, the Northern Territory average has remained largely stable at around 20%. In South Gulf (Borroloola), there has also been a significant increase in the number of children assessed as 'on track', from 33.3 per cent (n=7), to 45.8 per cent (n=11). There has been no significant change in the number of children classified as 'at risk'.
- Chart 16 shows that in comparison to the broader Gulf community to which South Gulf (Borroloola) belongs, fewer children in Borroloola are vulnerable on the language and cognitive (school-based) domain. Compared to the most approximate area (with available data), North Gulf, Borroloola appears to be performing better in the region in terms of both developmental vulnerability as a whole, and language and cognitive skills in particular.

AEDC data in this context shows not only outcomes attributable to Indi Kindi, but outcomes for all children in Borroloola. However, given the large proportion of children attending Borroloola school who have also attended Indi Kindi, the hallmarks of quality delivery that Indi Kindi provides, and the influence of Indi Kindi on preschool attendance levels (see next page), it is reasonable to conclude that some of these outcomes can be attributed to Indi Kindi.

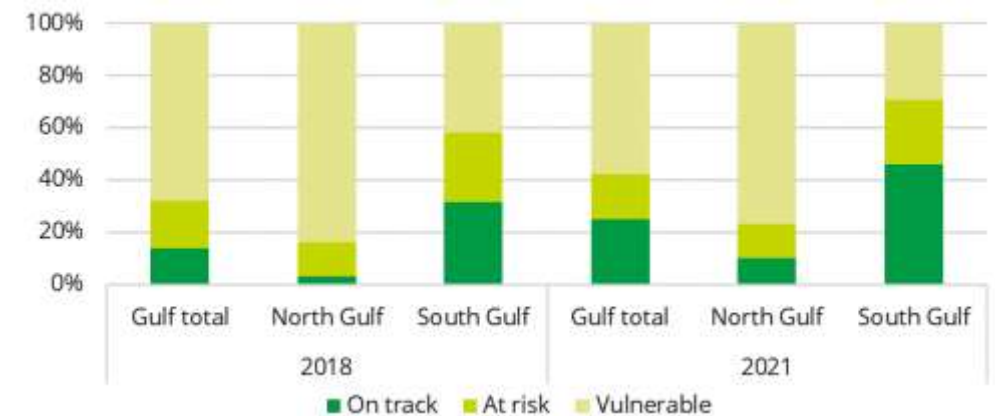
The North Gulf local community has two child care centres as recorded by the AEDC: Ngukurr School Council Child Care and Ngukurr Preschool. Ngukurr has a Child and Family Integrated Service since 2014, which includes several programs including Families as First Teachers, a playgroup and various cultural programs. While direct comparison should be treated with caution, due to the specific place based challenges of remote ECEC delivery, it is possible that Indi Kindi's long standing influence in the Borroloola context can be seen as leading to stronger developmental outcomes than other programs.

Chart 15: Proportion of children vulnerable in language and cognitive (school – based) domain in South Gulf (Borroloola) over time



Source: Deloitte Access Economics (2024) using AEDC data. Note there is no AEDC data for Gulf or South Gulf in 2009

Chart 16: Proportion of children vulnerable in language and cognitive (school – based) domain in local Gulf communities, 2018, 2021



Source: Deloitte Access Economics using AEDC data

Note: South Gulf is considered equal to Borroloola.

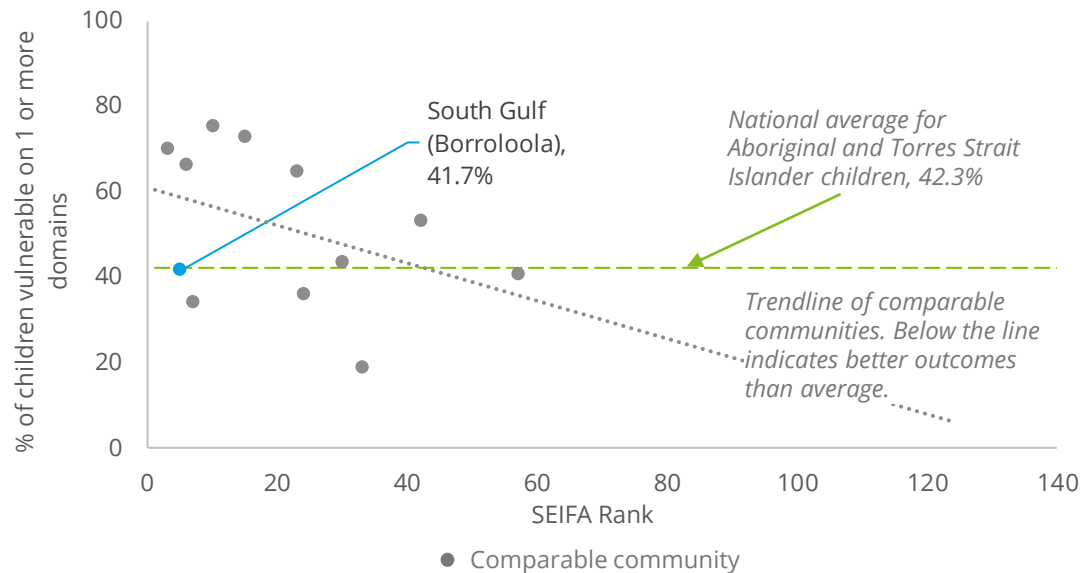
# Educational outcomes

## 1) Direct developmental outcomes, as measured by the AEDC, are also greater in Borroloola than comparable disadvantaged regions

The charts below compare AEDC scores in geographical areas comparable to the South Gulf.\* They show that Borroloola is outperforming comparably disadvantaged areas in AEDC vulnerability.

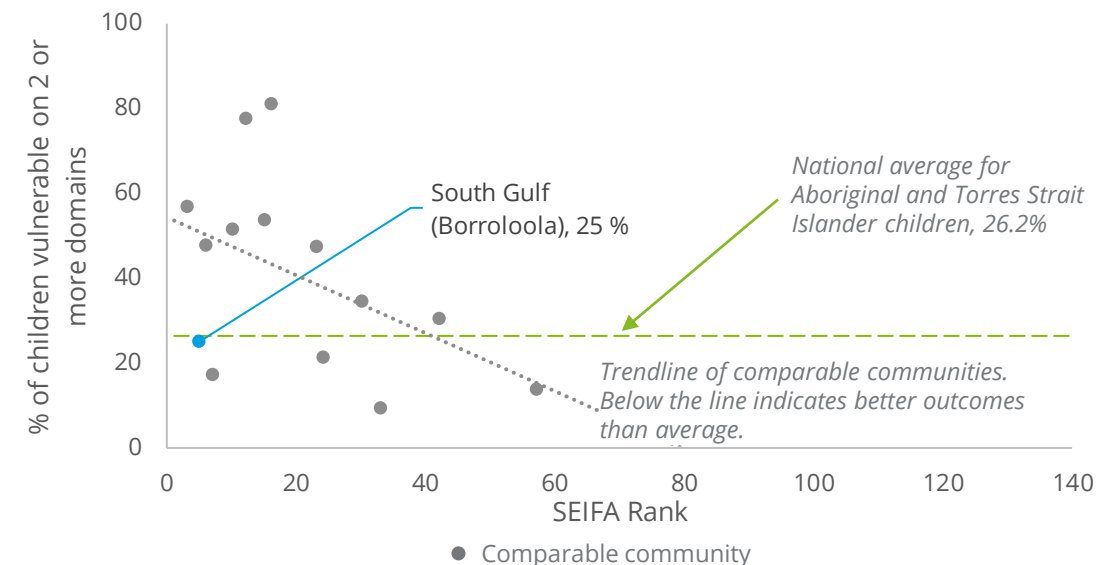
Chart 17 below indicates that despite belonging to an SA2 region which ranks within the bottom 5 SA2 regions for SEIFA in Australia, the South Gulf region (which includes Borroloola) outperforms comparable SA2 regions in the proportion of children assessed as vulnerable on 1 or more AEDC domains. Chart 18 below shows that the South Gulf region outperforms comparable SA2 regions in the proportion of children vulnerable on two or more AEDC domains, and is slightly lower than the national average for Aboriginal and Torres Strait Islander children.

Chart 17: Proportion of children vulnerable on one or more domains in comparably disadvantaged communities



Source: Deloitte Access Economics using ABS data, AEDC data

Chart 18: Proportion of children vulnerable on two or more domains in comparably disadvantaged communities



Source: Deloitte Access Economics using ABS data, AEDC data

\*Comparable remote SA2s were selected if SEIFA decile 1 (high level of disadvantage) and a national SEIFA ranking in the lowest 150 SA2 regions and more than 50 per cent Indigenous population. South Gulf is plotted using the SA2 SEIFA rank, but represents a smaller component geographical area of comparable disadvantage (see Appendix C).

# Educational outcomes

## 2) Enabling attendance at preschool is another core educational pathway provided by Indi Kindi

Indi Kindi aims to support children to attend preschool, transition and primary school. Educators work with families to understand that the first year of school is compulsory, and 'graduation' ceremonies support both families and children to understand how children are now ready for preschool, Transition, or school, by reflecting on all the things they have learned during their time at Indi Kindi.

The family's right to determine which services or programs are best for their child must also be respected. Preschool and Transition are optional. Although Indi Kindi encourages preschool attendance, recognising the extended hours and on site Early Childhood Teacher, some families may see different or greater benefits for their child by attending Indi Kindi, and receiving on Country education through Walking Learning@.

The transition to preschool (which takes place at the adjacent primary school campus) is also supported through John Moriarty Football. Indi Kindi children are able to observe their older siblings engaging with the JMF program, which takes place both during and after school hours, as an adjunct to a positive schooling experience.

It should be noted that as preschool is only three days a week (Tuesday to Thursday), there may be children who attend both Indi Kindi and preschool. Educators spoke of how this can encourage younger children to be curious and excited about preschool, especially during joint activities with other early years' services on the school grounds.

By facilitating the transition to preschool, Indi Kindi can contribute to improved school outcomes, particularly in terms of academic outcomes (test scores). This is often attributed to improved development foundations, as discussed previously, with preschool associated with a more significant impact on development than other structured early learning programs like supported playgroups.

"IK staff are supporting families to attend the important Transition to Pre-School sessions in Semester 2 to encourage a smooth transition and strong school attendance.

*Comment: The Group are pleased that the programs are supporting school attendance."*

**- Community Advisory Group Minutes, 2018**

"[one student] she was a bit shy going to school...until we took her there. Yeah, but she's there now at school now... she was with us until we kept on taking her to preschool"

**- Indi Kindi Educator**

Image 5: Examples of graduation certificates for Indi Kindi Alumni





# Educational outcomes

## 2) Enabling attendance at preschool: Developmental outcomes for children attending preschool are well established in the literature

A multitude of studies establish a strong relationship between preschool attendance and positive child developmental outcomes (measured through developmental vulnerability using AEDC domains) with specific reference to Indigenous children.

- Elek et al (2022) undertook an evaluation of an Aboriginal Early Childhood learning centre in Central Australia and found a positive relationship between attendance hours and children's language and development (through auditory comprehension and expressive communication).<sup>1</sup>
- Benzies et al (2011) examined the effects of a multicultural preschool program on Aboriginal children and their families and found attendees improved their receptive language scores by 10 points between entry and exit. Furthermore, the benefits of these improved language scores were maintained across a 7 year period following exit.<sup>2</sup>
- Nutton et al (2013) undertook an evaluation into a Mobile Preschool Program within remote Northern Territory communities to understand and quantify the value of preschool availability and consistent preschool attendance on school readiness and developmental outcomes.<sup>3</sup> The study found that:
  - Availability: children with 192+ days of mobile preschool available were 6.5 times more likely to not be developmentally vulnerable on two or more Australian Early Development Index domains than children who had <192 days of mobile preschool available
  - Consistency: children attending 80+ days were 3.6 times more likely to not be developmentally vulnerable on two or more Australian Early Development Index domains than children who attended <80 days of mobile preschool
- Biddle et al (2015) test the association between preschool and child-care attendance on cognitive and developmental outcomes for Indigenous children using the Longitudinal Study of Indigenous Children (LSIC). Both forms of ECEC are found to be associated with short-term and some longer-term cognitive and development outcomes, with preschool shown to have more significant effects. Importantly, hours of attendance are not significant for outcomes, with too many hours having detrimental impacts, and up to 15 hours per week appearing to be significant.<sup>4</sup>

Two studies in particular have undertaken statistical analysis into the likelihood of Aboriginal children being developmentally vulnerable on two or more AEDC domains following preschool attendance (see below).

Falster et al (2020) find that the adjusted risk difference for developmental vulnerability (vulnerable on  $\geq 1$  AEDC domains) among preschool attendees was -7.9 percentage points (95% CI, -9.8 to -6.1) in non-Indigenous children and -2.8 percentage points (95% CI, -4.8 to -0.7) in Indigenous children, compared with Indigenous children in home-based care.<sup>5</sup>

- 5051 (71%) Indigenous and 68 998 (74%) non-Indigenous children attended preschool.
- Among Indigenous children, 33% of preschool attenders and 44% of the home-based care group were vulnerable on  $\geq 1$  domains, compared with 17% of preschool attenders and 33% in the home-based care group among non-Indigenous children.

Guthridge et al (2014) use logistic regression models to measure the relationship between early life characteristics of children and early development, as measured by the AEDC domains.<sup>6</sup> Adjusting for a range of variables, they find that the increased risk of vulnerability for Aboriginal children compared to non-Aboriginal children is substantially moderated.

- For Aboriginal and non-Aboriginal children, the risk of vulnerability is influenced by factors like remoteness and gestational age at birth.
- For Aboriginal children only, attendance at a day care or preschool program also significantly influenced developmental vulnerability. Aboriginal children who had not attended a day care or preschool program were found to be 1.43 times more likely to be vulnerable on one or more AEDC domains.

# Educational outcomes

## 2) Enabling attendance at preschool: preschool attendance at Borroloola is higher than in comparable regions

There is suggestion from ABS 2021 Census data that preschool attendance is higher in Borroloola than comparable regions, perhaps influenced by Indi Kindi. Comparable remote SA2s were selected if they had:

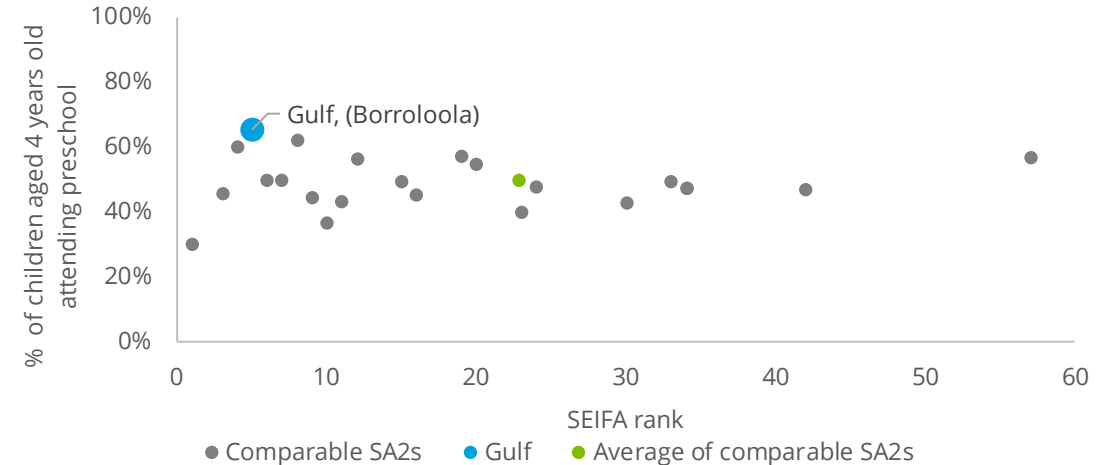
- A SEIFA decile 1 (high level of disadvantage) and a national SEIFA ranking in the lowest 150 SA2 regions
- More than 50 per cent Indigenous population

Chart 19 indicates that despite ranking within the bottom 5 SA2 regions for SEIFA country rank, the Gulf region (which captures Borroloola) outperforms comparable SA2s in the proportion of 4 year old children attending preschool. It is worth noting that the preschool attendance rates shown for the Gulf region include Borroloola preschool and Ngukurr preschool, showing a lower proportion of 4 year old children attending preschool than the proportion of 5 year old children identified through the AEDC as attending a preschool program in the South Gulf region.

However, as discussed elsewhere in this report, ABS data does not capture Borroloola well, with the number of children estimated in the Gulf Region SA2 to be less than the number of children attending Indi Kindi.

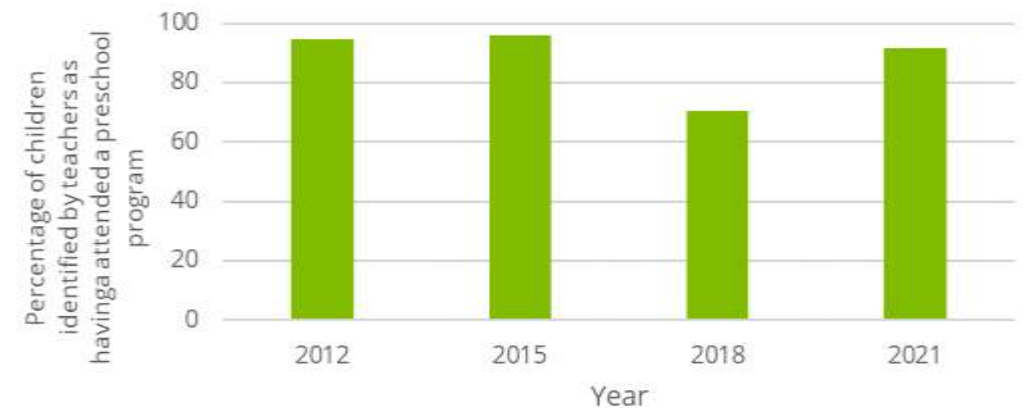
Chart 20 shows the percentage of children in the AEDC local community of South Gulf (which includes only Borroloola school), identified by their teacher as having attended a preschool program before school. This is higher than the ABS data, likely due to including 5 year old preschool attendance, and potentially due to other local AEDC communities being included in this data too.

Chart 19: Preschool attendance mapped against SEIFA rank for comparable SA2 regions



Source: Deloitte Access Economics (2024) using ABS data by SA2 Region\*

Chart 20: Percentage of children in Borroloola identified by teachers as having attended a preschool program



Source: Deloitte Access Economics (2024), using AEDC data from South Gulf

\*Note: The ABS Census is not as accurate for recording preschool attendance as the ABS Preschool Education dataset; however, it provides a more consistent basis for measuring attendance as a share of the population.

# Monetising educational outcomes

## Direct developmental outcomes and enabled preschool transition can be linked to reduced developmental delays based on Indi Kindi’s attendance profiles

This section has illustrated how national datasets like AEDC and SEIFA show Borroloola performing relatively well compared to similar areas on both developmental vulnerability and preschool attendance. Noting data reliability issues and the range of other factors at play in the area beyond Indi Kindi, this data is suggestive of the impact that Indi Kindi is having in the community.

Further, a range of research papers link ECEC attendance to development and academic outcomes, with some key findings for Indi Kindi including:

- The impact of ECEC on outcomes for Indigenous children is generally found to be smaller than for non-Indigenous children, but still significant and material
- Preschool has a more significant impact on development than other forms of ECEC like playgroups and long day care. This effect holds for Indigenous children.
- Adding more hours at an ECEC program does not continually lead to improvements for Indigenous children, with less than 15 hours per week found to be effective.

Table 5 below summarises the various studies that were identified as appropriate and robust for understanding the impact of early years programs like Indi Kindi on development outcomes. The disparity in outcomes (particularly the difference in share of children developmentally vulnerable) reflects a range of factors, such as different ECEC models considered, study design, and sample size.

Table 5: Studies which informed assessment of developmental outcomes

Source	ECEC model	Study design	Indigenous children	Share of children developmentally vulnerable on 1 or more AEDC domains		Difference in vulnerable share	Sample size	
				Baseline	Model		Baseline	Program
Falster (2020) <sup>1</sup>	Long day care in year before school	Cohort, cross-sectional study (NSW)	✓	43.9%	36.6%	7.3%	1,307	794
Nutton (2013) <sup>2</sup>	Mobile preschool (80 days or more)	Cohort comparison study of a specific preschool model (NT)	✓	56.0%	26.0%	30.0%	43	46
Guthridge (2016) <sup>3</sup>	Day care or preschool	Cohort, cross-sectional study (NT)	✓	79.0%	63.0%	16.0%	378	732
Sincovich (2019) <sup>4</sup>	Any playgroup in any year before school	Time series analysis of AEDC and linked datasets (AU)	✗	27.6%	16.8%	10.8%	41,310	72,133

Ultimately, the studies used in the quantification were selected based on the mapping of attendance profiles at Indi Kindi to ECEC models (see page 48), as well as robustness of the research.

- 1. Regular attendance & playgroups** – supported playgroups align with regular attendance at Indi Kindi, due to the similarities with program features. The Sincovich (2019) paper provides a robust estimate of playgroup attendance on AEDC domains, which is significant over time and utilises a significant sample, and while the estimate used is not Indigenous-specific, the authors note in the paper that the identified impact holds for Indigenous children.
- 2. Occasional attendance & transition to preschool** – less regular attendees of Indi Kindi will not realise the full impact of regular attendance but are still benefitting from the 'soft touch' experience of Indi Kindi operating in the community and encouraging family and community understanding of, and engagement with, ECEC services. As such, occasional attendance is associated with a greater likelihood of attending preschool. This impact on preschool transition is estimated based on Indi Kindi and Borroloola data presented in this report. The data discovery exercise on page 28 suggests that all children who attended Indi Kindi (even occasionally) go on to attend preschool, and the ABS preschool attendance data on p.66 suggests that for comparable areas, preschool attendance is 50%. The impact of Indi Kindi on preschool attendance is therefore assumed to be the difference (50%). The impact of preschool attendance on developmental vulnerability is then sourced from Guthridge (2016), who use a sizeable sample for an Indigenous cohort and leverage data from the Northern Territory.



# Monetising educational outcomes

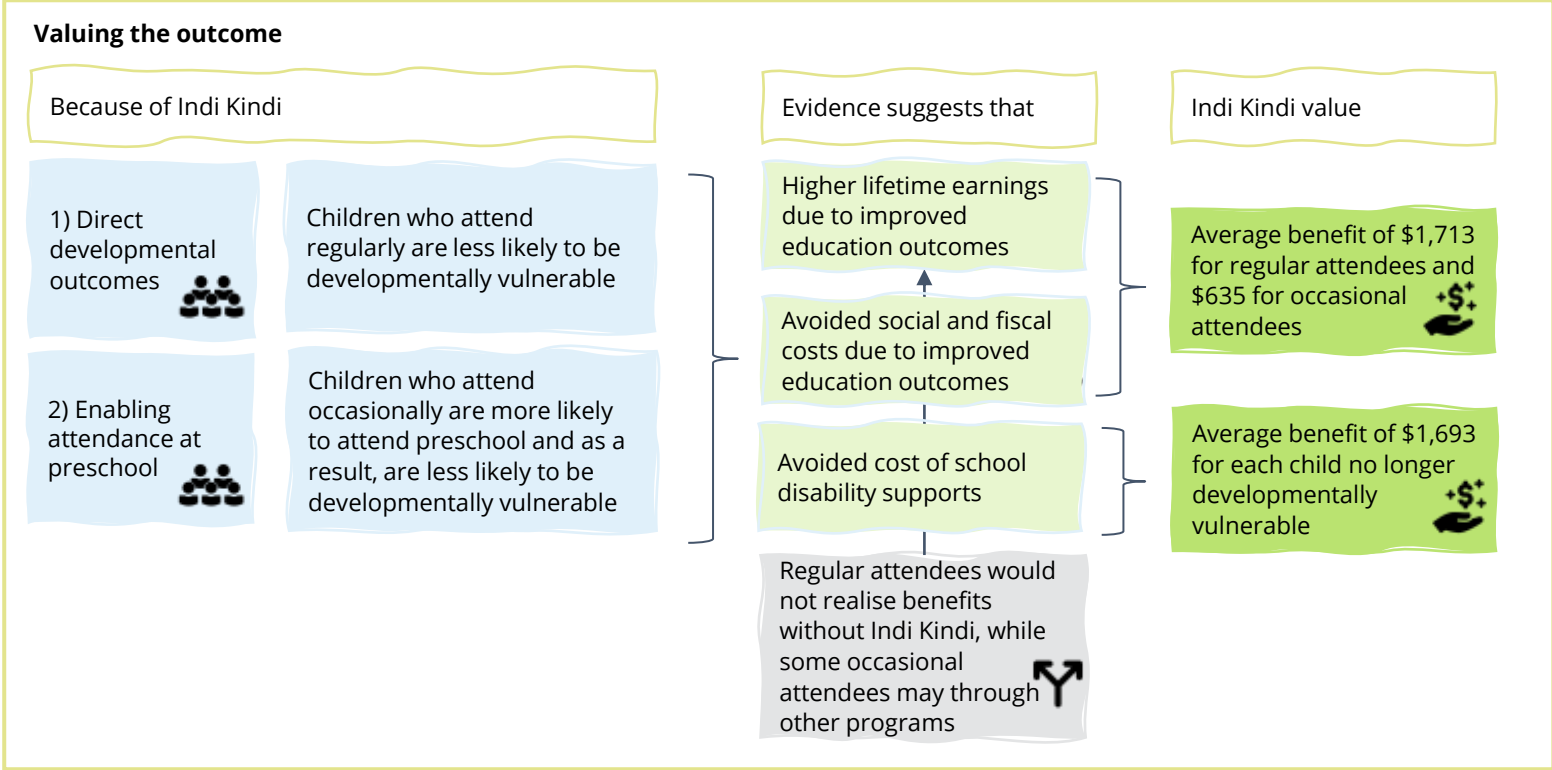
## Linking reduced developmental delays at Indi Kindi to educational outcomes and avoided school costs

The impact of reduced developmental vulnerability due to Indi Kindi is then monetised in three ways:

- based on the relationship between vulnerability and schooling outcomes, particularly high school completion and post-schooling educational attainment, which have two key economic impacts:
  1. Higher lifetime earnings
  2. Avoided social and fiscal costs (health and justice systems)
- based on the relationship between vulnerability and school disability supports for children with developmental vulnerability, which has one key impact:
  3. Avoided disability support costs

These relationships are visualised in Figure 5 on the right, with more detail on the evidence behind the components in the Appendix.

Figure 5: Reduced developmental vulnerability due to Indi Kindi



# Social and health outcomes for children

## Holistic health and development is core to Indi Kindi's approach

Western conceptions of early years health and development include links to fine and gross motor skills, early diagnosis of and intervention in developmental delays and disabilities, appropriate vaccinations, and healthy, hygienic practices and habits. However, an Aboriginal worldview considers a broader holistic measure of health. Health is not the absence of disease or illness; it includes physical, social, emotional, cultural and spiritual wellbeing, for both the individual and the community.<sup>1</sup>

Indi Kindi incorporates a focus on health and development outcomes by combining healthy behaviours in its day to day programming, and incorporating health check ups with the local clinic and visiting health professionals. Children are taught how to wash their hands, and the importance of doing so. This was noted by the health clinic manager as one of the most important activities to do with 0-5 year old children in Borroloola, given the high risk of scabies as one of the most prevalent health issues for this cohort.

Indi Kindi provides fresh, balanced meals approved by a nutritionist, and cooked by the Indi Kindi educator team, who receive training in safe food handling and education in healthy food choices. The high cost of groceries in Borroloola means that access to healthy food every day, including fruits and vegetables with every session, is likely to be a differential benefit of Indi Kindi compared to not attending. By providing access to high-quality and nutritious food, the program ensures that enrolled children, staff, and family members attending the sessions have improved nutrition. By combining the aforementioned strategies, Indi Kindi aims to promote nutrition, health, and well-being, particularly among children, and address the nutritional disadvantages and food insecurity experienced in these remote communities.

Educators also build trust with families and carers to access other systems, and provide practical help with knowledge of local services, pathways, and referrals.

"The cultural determinants of health are the protective factors that enhance resilience, strengthen identity and support good health and wellbeing. These include, but are not limited to, connection to Country; family, kinship and community; beliefs and knowledge; cultural expression and continuity; language; self-determination and leadership."  
– National Aboriginal and Torres Strait Islander Health Plan 2021–2031

Indi Kindi would like to support the COVID vaccine rollout in community and will ask the Clinic the best way to support families.

*Discussion: All agreed for IK to find out how to support the Clinic*

**- Community Advisory Group minutes, 2021**

"We prepare [a] meal for [the] kids, that's why they come along because then the parents trusts well, because we give them meals... we don't take them back home hungry we give them food...water"

**- Indi Kindi Educator**

"Today we went to visit at the clinic, and a nurse...came and checked the kids ears and weighing them. After that they went for a walk in the dentist room and the kids had turn laying on the bed after that they went in the x-ray room and another nurse...showed them how it works. Then...the kids did a role play nurses/doctors and the staffs pretend to play sick the kids played doctors and nurses checking their ears and eyes....after that they did filling out patient forms Deandra pretend to be the patient.

**- Indi Kindi Reflections Data 2017**

# Social and health outcomes for children

## Indi Kindi is expected to improve health outcomes for children through early diagnosis and treatment alongside reinforcing healthy practices in daily delivery

Alongside incorporating a focus on health, hygiene and nutrition into day to day activities at Indi Kindi, the program also facilitates access for other health programs and services. Indi Kindi, by virtue of having transport, is able to support families and children to go to the local health clinic, for instance to get vaccinations. Stakeholders reported that Indi Kindi will hold sessions at the health clinic from time to time, so that children get used to the health clinic and don't feel afraid to go.

In addition, mobile allied health services liaise with Indi Kindi, and Indi Kindi is able to facilitate access between these services and families. This can help to ensure the services are taken up, and ensure that they continue to come to Borroloola. These have included partnerships with dental services (Top End Oral Health Services (TEOHS)), health services (HealthLAB), and ear health checks.

**Note:** As with many services in very remote Australia, the consistency and sustainability of other programs and services can create barriers to long term partnerships with Indi Kindi – and program delivery was substantially affected by COVID-19. As such, it is not possible at the time of reporting to quantify or monetise these outcomes.

### Emerging research into ear health

Otitis media is a common childhood illness which affects the middle ear. It causes ear pain, reduced hearing, fever, and can go on to cause more serious issues such as glue ear (continued hearing difficulties), a ruptured ear drum or other rare complications. It usually begins from a cold and can heal by itself. However, it is more common for Aboriginal and Torres Strait Islander children, with a higher probability of repeated episodes which are onset earlier and can affect Aboriginal and Torres Strait Islander children for longer and more severely.<sup>1</sup> It has been found to be one of the leading causes of disease among Aboriginal and Torres Strait Islander children, and has been found to affect Aboriginal and Torres Strait Islander children at similar rates and severity to children in developing countries, and the prevalence in some communities is up to 10 times as much as the criteria for a 'serious public health problem requiring urgent attention'.<sup>2</sup> Otitis media has been found to interact negatively with pre-existing cognitive problems, and can affect children's ability to engage well with school.

Risk factors for Otitis media include overcrowded housing, exposure to smoking, low socio-economic status, and hygiene, among other things. While more research is needed into intervention programs for Otitis media generally (including, but not limited to, early diagnosis), some stakeholders of Indi Kindi have reported stronger than expected ear health outcomes for Indi Kindi participants. While the outcomes cannot yet be measured or the potential drivers validated by other best practice intervention studies, it may be that Indi Kindi leads to fewer or less severe instances of Otitis media.

Properly nourished kids show improved cognitive function, enhanced focus, and better overall health, setting them up for long-term success. Prioritizing nutrition in ECEC can have a profound positive impact on children's development and well-being as early childhood plays a crucial role in shaping health attitudes and behaviours.<sup>3</sup>

- **Mitigating impact of child hunger:** In Australia, the prevalence of nutritionally balanced meals in ECEC is rare. However, it is crucial to recognize the benefits of providing such balanced nutrition to young children. Research highlights the significant impact of food insecurity on children's future opportunities, particularly during the first five years of life, a crucial period for their development. Sub-optimal nutrition in early childhood directly affects health, brain development, and learning abilities. Further, food insecurity can also negatively impact family functioning, leading to behavioural problems in children.<sup>4</sup> Early childhood programs such as Indi Kindi that integrate nutrition by providing nutritious meals and snacks contribute to a child's overall health, physical development, and cognitive functioning.<sup>5</sup>
- **Mitigating health disparities (such as obesity) in Indigenous children:** Environmental factors including nutrition, can induce epigenetic changes that affect gene activity, potentially influencing obesity risk over generations.<sup>6</sup> Early intervention programs effectively reduce obesity in Indigenous children by targeting interventions during infancy or preschool years.<sup>7</sup> Children exposed to nutritious foods and positive eating environments in early childhood programs such as Indi Kindi are more likely to adopt healthier eating habits later in life, reducing the risk of nutrition-related diseases like obesity, diabetes, and heart disease.
- **Mitigating impact of compromised caregiving behaviour:** The health and mental well-being of the caregiver can influence their caregiving behaviour. A compromised state, whether nutritional (e.g., anaemia) or psychological (e.g., depression), can affect how well the caregiver provides responsive and sensitive care and feeding for the child.<sup>8</sup> Programs such as Indi Kindi which seek to improve both nutrition and child development not only focus on food intake but also on parenting, the quality of mother-child interaction, and the broader social and economic context, which promotes healthy child development.



# Monetising social and health outcomes for children

## Indi Kindi is expected to reduce healthcare costs by setting up healthy nutritional habits and reducing related health conditions

Indi Kindi has a strong focus on nutrition and clean drinking water, forming 2 of the 4 key pillars: 'eat well' and 'drink well'. Children receive a nutritionally balanced meal, fruit, and clean drinking water (only) every day at Indi Kindi. As with all of Indi Kindi's services, there is no charge to the families. Parents who attend with their children can also get a healthy meal for free.

Adequate nutrition for children is a critical enabling factor for their development, including their physical development such as their growth, and their more general development, including learning outcomes and executive function. A hungry child cannot learn well. An undernourished child cannot grow well.

The threat of food insecurity can be a feature of the Borroloola context. Deliveries arrive from Darwin, 12 hours away, twice a week, but can be put at risk in the wet season if rains are very heavy. Indi Kindi educators plan for this, keeping a store of tinned and non-perishable foods, meaning that even when other local services may not be able to provide meals, Indi Kindi can meet that need. Even when food is available, healthy choices may not be accessible, including due to unaffordability.

Studies have confirmed that the cost of a healthy diet is more expensive and a higher proportion of income for families in very remote areas.

- The cost of a healthy diet per fortnight for a family of four in very remote communities is found to be \$868-\$1023, compared to, for example, \$589 for a low socio-economic area in Sydney or \$619 for a high socio-economic area in Sydney.<sup>1</sup>
- The cost of healthy diet as a proportion of income is found to be 39% for remote Aboriginal communities. This is compared to, for example, 26-28% for low-income groups in Sydney or 32% for median-income groups in Sydney.<sup>2</sup>

Finally, in Borroloola, fishing and hunting form part of the local diet. Indi Kindi supports this and the consumption of traditional Aboriginal foods, for example by cooking bush tucker, and by organising excursions, including fishing. Children at Indi Kindi learn from the women in the community and also benefit from high-quality nutrition from traditional foods like kangaroo and fish.

Poorer nutrition is a driver of the gap between life expectancy and health outcomes for Indigenous and non-Indigenous people. Combined dietary risk factors are the second highest contributor to the burden of disease experienced by Indigenous Australians, after smoking.<sup>3</sup> While there are many reasons for this, there are links between healthier habits of children and their dietary choices and behaviours as adults.<sup>4</sup>

ABS data, which reports on self-reported data, does not record worse long term health outcomes for Borroloola compared to nationally, possibly due to the low median age (25 years old), and underreporting.<sup>5</sup> However, consultations for this project indicate that it is likely that Indi Kindi will

impact children's longer term health outcomes through improved health behaviours and readiness to learn.

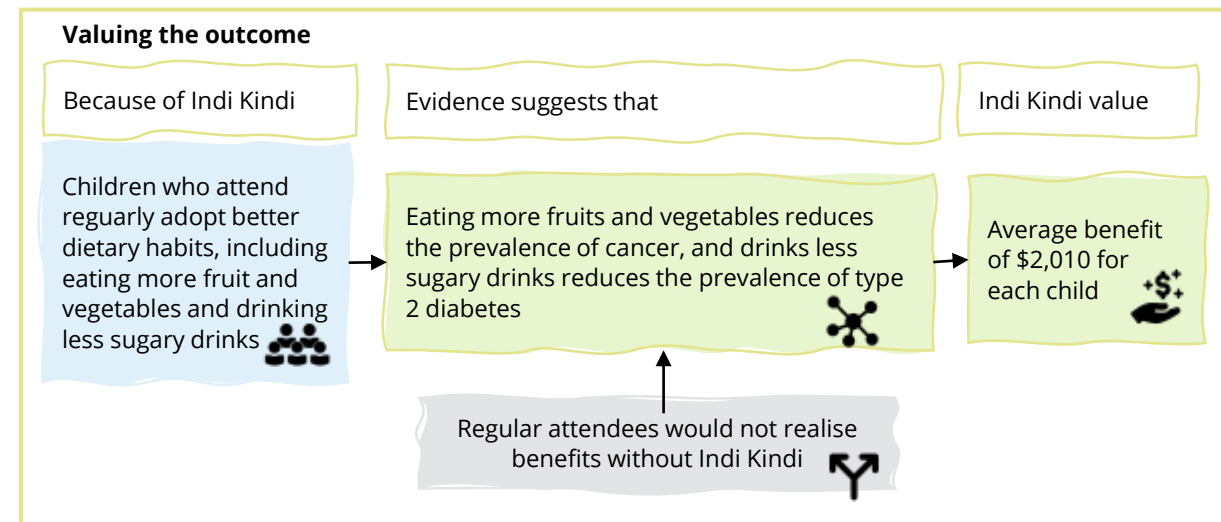
### Monetising nutritional habits

The benefits to children's learning and development are accounted for in the educational outcomes and are therefore not included here. However, the habits that children form are expected to lead to healthier behaviours in adulthood, resulting in reduced prevalence of disease and associated costs. Similarly to scabies, there are a range of associated costs such as reduced quality of life and lower productivity at work. Avoided costs to the healthcare system are shown below, and acknowledge that the full benefits of healthy behaviours over time are likely higher than quantified and monetised here.

- Costs related to treatment of cancer resulting from lower vegetable intake
- Costs related to treatment of type 2 diabetes resulting from sweetened beverages such as soft drinks (instead of water).

The quantification of the avoided costs associated with improved eating and drinking habits through Indi Kindi is visualised below in Figure 6 and in more detail in Appendix D.

Figure 6: Monetisation of avoided costs associated with improved nutrition



# Monetising social and health outcomes for children

## Reducing the prevalence of scabies and associated chronic conditions are key avoided costs expected to be realised by Indi Kindi

The emphasis on health and development in the everyday delivery of Indi Kindi is expected to improve health literacy in the early years, a key determinant of good health related behaviours and the prevalence of chronic and other health conditions.

As mentioned earlier, scabies is a common condition for children in Borroloola. Scabies is a skin infestation causing intense itching and scratching and associated with complications related to bacterial infection, including impetigo, pyoderma, and more serious issues such as renal failure and heart disease.<sup>1</sup> While scabies is rare in most parts of Australia, rates of scabies in the Northern Territory are some of the highest in the world. The Northern Territory Government reports that up to 50% of young children in north Australia have scabies, while a number of studies have identified even higher incidences:<sup>2</sup>

- Between 2001 and 2005, among 99 children less than 2 years old in East Arnhem, McMeniman et al (2011) identified that 68% had presented to their primary health care centre for scabies and 82% for impetigo.<sup>3</sup>
- Lucas et al (2008) similarly found that 63% of children in two remote Aboriginal communities had presented at the local clinic for scabies and 69% for skin sores.<sup>4</sup>

A program to manage scabies in Aboriginal communities that has proven successful is the recurring treatment of permethrin cream, with one study finding that prevalence reduced from 32.3% to less than 10% for children.<sup>5</sup> However, simple improvements in hygiene literacy and practices can also have an impact on the spread of scabies. A cross-sectional study of schoolchildren in Ethiopia identified a significant reduction in scabies prevalence related to improved hand washing practices. In particular, 24% of a cohort of children washing hands with water only were identified as having scabies, compared to 7% of those washing hands with water and soap. This difference was statistically significant.<sup>6</sup> For the purposes of this analysis, the proportional change in prevalence (30%) is applied to the conservative estimate of 50% prevalence among children in the Northern Territory.

Scabies is also strongly associated with chronic conditions, particularly acute rheumatic fever (ARF) and chronic rheumatic heart disease (CRHD). A 2018 New Zealand study identified a much higher prevalence of scabies in children aged 3 to 12 years that were hospitalised with acute rheumatic fever than children without ARD – a difference of 15%.

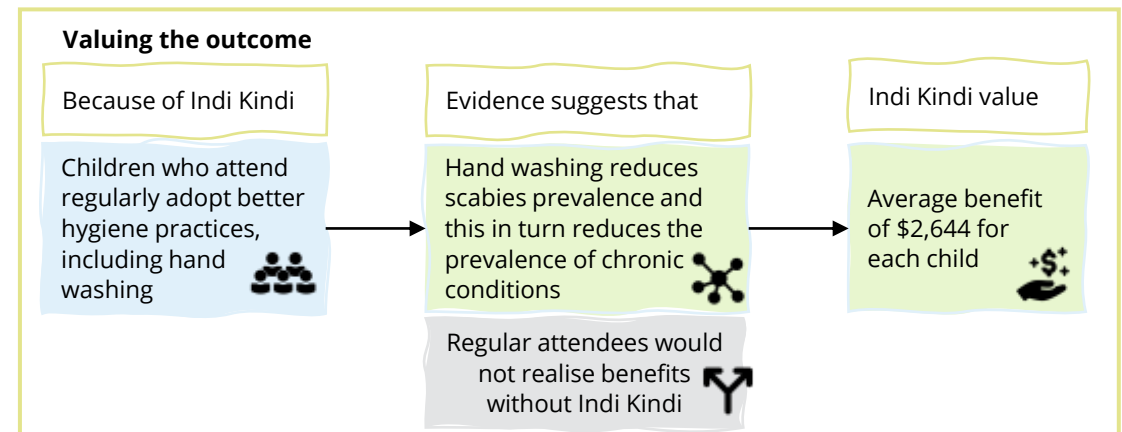
### Monetising scabies and chronic conditions

Like most health conditions, scabies is associated with a range of costs, including reduced quality of life for the patient and family, lower productivity at work and higher costs to the healthcare system. When hospitalised, individuals from remote Aboriginal communities often face long absences from family and community. Two avoided costs to the healthcare system related to a reduction in scabies are costed here, acknowledging that the true impact of scabies (including emotional and social costs) is larger than what is quantified:<sup>5</sup>

- Direct costs related to diagnosis and treatment of scabies at the local primary health clinic
- Indirect costs related to the reduced prevalence of acute rheumatic fever (ARF) or chronic rheumatic heart disease (CRHD) as result of fewer cases of scabies (hospital and ongoing management costs).

The quantification of the avoided costs associated with reduced scabies prevalence through Indi Kindi is visualised below in Figure 7 and in more detail in Appendix D.

Figure 7: Monetisation of avoided costs associated with reduced scabies



# Social and health outcomes for children

## Two-way learning at Indi Kindi boosts cultural wellbeing for children

Cultural wellbeing for Aboriginal children refers to creating an environment that nurtures and respects their cultural identity, traditions, and connections to their community and land. It recognises the importance of cultural continuity and the positive impact it has on a child's overall health and development.

### Cultural safety

Creating culturally safe environments is vital for the well-being of children, as it fosters a sense of belonging, identity, and cultural pride. The elements of a culturally safe and welcoming environment, such as outreach, communication in local languages, and recruitment of diverse members, all play a crucial role in contributing to the cultural well-being of the children.<sup>1</sup> Indi Kindi recruits educators who are culturally competent and understanding of Aboriginal cultures. Educators respectful, sensitive, and responsive to the needs and experiences of Aboriginal children. This creates a safe and supportive learning environment, where children can freely express their cultural identities and experiences.

### Improved Cultural Identity

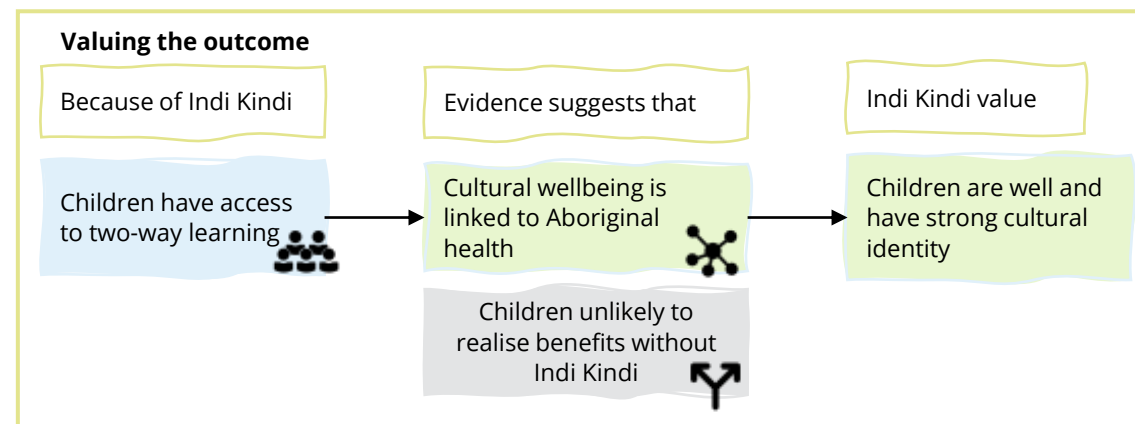
Programs that promote and preserve Indigenous culture, language, and traditions, allowing children to develop a strong sense of cultural identity.<sup>2</sup> By providing a culturally safe and supportive environment that nurtures the cultural identities of Aboriginal children, the Indi Kindi program boosts children's cultural well-being. In effect, it also promotes a sense of cultural pride, resilience, and connectedness among Aboriginal families and their children.

### Language Revitalisation

Language is not just a means of communication; it embodies the collective wisdom, stories, and values of a culture. Early childhood programs that promote the retention and revitalization of Indigenous languages, help to preserve cultural heritage and strengthen intergenerational connections.<sup>1</sup> Research supports the inclusion of local language and culture in education, leading to improved educational outcomes and overall community well-being. Programs like "Aboriginal Head Start" and Aboriginal and/or Indigenous language immersion initiatives promote these values and have shown positive results in enhancing child development, self-esteem, and language proficiency boosting overall cultural wellbeing.<sup>3</sup> At Indi Kindi, through songs, stories, and conversations, children engage in natural language learning, facilitating a deeper understanding and connection to their cultural heritage.



Figure 8: Value of access to 'two-way' learning





# Outcomes for educators

## Indi Kindi means sustainable employment and higher education outcomes for educators

While delivering strong developmental outcomes for children is Indi Kindi's core business, the Indi Kindi educator team are key to unlocking these outcomes. Their role includes not only educating children as a 100 per cent local Aboriginal team (unique in the Borroloola ECEC context), but organising sessions, cooking meals, driving the bus, building relationships with families, providing outreach to new members to community, and liaising with other services in Borroloola. The quality of the educator team is what drives most of the outcomes for children, and this is linked to their tenure and experience, with over half of the current educators being in role for 8 years. This is double the national average of 4 years tenure for staff with ECEC qualifications at their current service.<sup>1</sup>

### Employment

Indi Kindi provides benefits and enabling mechanisms for participation, such as vehicles to get to work, and allowing educators to bring their children to work with them. This is similar to many Western ECEC models which provide free or subsidised childcare, enabling female workforce participation.

In the Borroloola context, where 67 per cent of Aboriginal residents are not in the labour force, the benefits of employment are clear.<sup>2</sup> The Children's Ground program in the NT similarly looked to employ locals in delivery, and contributed to improvement in local unemployment. An evaluation of Children's Ground found that 84 per cent of the 59 staff were not working when they started and 34 per cent had never worked.<sup>3</sup> It is similarly likely that without Indi Kindi, educators would either not be in paid employment, or in lower paid jobs which do not upskill them for future work.

Employment can lead to improved health and nutrition, including the ability to buy healthy food and access medical care. Indi Kindi provides the educators with lunch and sometimes breakfast, and improved nutritional education through their qualification.

### Education and qualifications

Indi Kindi provides supported study time, travel to the Batchelor institute near Darwin to train in relevant qualifications (Certificate III in Early Childhood Education and Care), and professional mentoring from the Sydney-based Early Years Specialist. This has enabled one of the educators to undertake study for a diploma. Only 11 per cent of those in Borroloola are qualified to diploma level or above according to the 2021 ABS Census. Other educators expressed interest in studying for their diploma, showing their passion and commitment to the role, especially given the additional time commitment to study that the remote location demands - including a 12 hour drive to Darwin for training at Batchelor Institute. The qualification level of the Indi Kindi team therefore surpasses most of the local ECEC workforce, and demonstrates Moriarty Foundation's success of investing sustainably in workforce capability over time.

"Working with all them ladies [the Indi Kindi educator team] that's the one that keeps pushing [me] for the studies, they help me, they showed me the reports and everything and all them different thing... I didn't know how to do these reports and stuff and they showed me till I learnt myself."

- Indi Kindi Educator

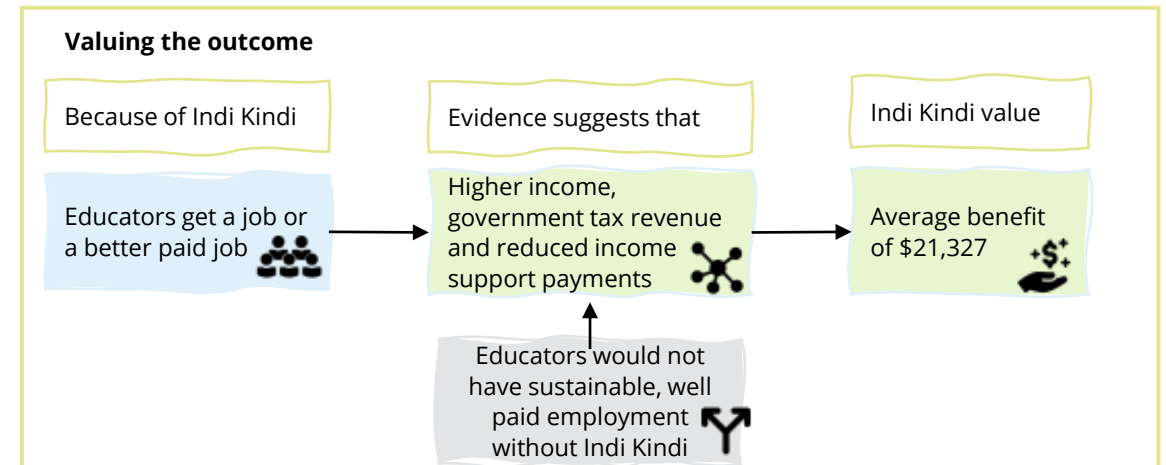
"I love doing my studies too when I was at Batchelor"

- Indi Kindi Educator

"Went to Katherine for that [lifeguard] training. There was a lot of white people doing it...I think me and her [the other member of staff] was like the only two Aboriginal ones there. Doing it with them, like I was nervous, you know [by] myself."

- Indi Kindi Educator

Figure 9: Value employment outcomes



# Outcomes for educators

## Meaningful work contributes to improved life satisfaction for educators

In addition to the direct employment and educational outcomes for educators, there are further outcomes that come from not only having a job, but a job that is fulfilling and meaningful, that provides opportunities to connect with culture and to be recognised as a role model and leader. These outcomes are likely to include improved confidence, social and emotional wellbeing for educators, and cultural wellbeing. It encompasses their interactions with colleagues, students, and the broader school community, and the sense of connectedness, support, and positive relations they experience in their professional environment.<sup>1</sup> Indi Kindi fosters cultural pride, a strong sense of camaraderie and identity among the educators and overall well-being of Aboriginal educators within their professional roles and personal lives.

### Team, community and peer connections

Supportive relationships between colleagues and time for collaboration promote educator well-being.<sup>2,3</sup> Indi Kindi educators have opportunities to build meaningful connections with other educators, Elders, and community members, who are also family. This provides emotional support, mentorship, and collaboration. Spending quality time with children, often also family members, supports educator well-being and educators take great pride in growing up the next generation.<sup>2</sup>

Equitable roles and responsibilities, along with opportunities for professional development also contribute to educator well-being.<sup>2</sup> Indi Kindi employs strength-based approaches that focus on recognising and building upon the unique strengths, skills, and experiences of Aboriginal educators. It also promotes qualification pathways for educators and offers professional learning opportunities which adhere to nationally consistent qualification requirements. These opportunities relate to areas such as capability, leadership, teaching and learning, cultivating a sense of self-worth and increased self-esteem.

### Connection to culture and Country

Working for mainstream organisations in Australia brings particular complexities with it if you belong to a minority group. Managing one's cultural safety, dealing with identity strain and cultural load are just some of the extra burdens that Aboriginal people face when working in teams that are majority non-Aboriginal. Indi Kindi offers the educators in Borroloola the safety of being amongst a 100 per cent local, Aboriginal team. Within the team, they are understood, and they are supported by Moriarty Foundation with their cultural obligations. This helps to manage stress, balance personal and professional responsibilities and foster emotional well-being. The two-way learning model means that the educators also spend time on Country, and participate in the cultural excursions. They are able to learn from Elders, speak two languages, and engage in their cultural responsibilities. These are all factors associated with higher life satisfaction for Indigenous peoples, and have been correlated with Ranger employment programs (see right).

"I always wanted to work with children. When I was in school that was my dream job - to work with children." - Indi Kindi Educator

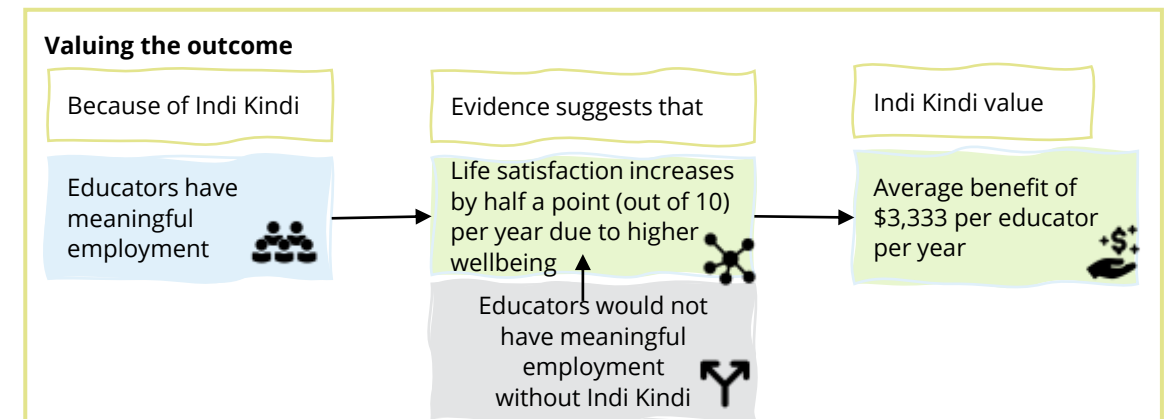
### Life satisfaction attributed to an Indigenous Ranger program

Indigenous Rangers combine traditional knowledge with conservation training to manage land, sea, and culture. The program has created more than 2,100 jobs in land and sea management and supported ongoing protection of Country. The program has long been argued to deliver particular benefits for Indigenous workers due to the connection to culture and holistic health. While longitudinal data is still being gathered, early studies have indicated that this is likely to be the case.

Analysis of the national Mayi Kuwayu survey found that Ranger participation was significantly associated with very high life satisfaction and family wellbeing. Links were found between working as a Ranger, a variety of cultural practices, and high life satisfaction. The paper suggests that, as such, 'determining policies that mutually acknowledge and enhance culture, health and wellbeing will likely have additional benefits for the broader Aboriginal and Torres Strait Islander population'.<sup>4</sup>

Indi Kindi is an example of one such program, and further research into the connections between Indi Kindi employment, culture, and wellbeing should be explored.

Figure 10: Value of meaningful employment



# Outcomes for families

## Outcomes for families include health outcomes, improved mental health and increased time for other responsibilities

### Health

Parenting capability can also be seen to support feelings of self-efficacy and reduced stress for parents and carers. Playgroups and other early years programs which include family engagement can benefit families and carers by providing ways for them to interact with other parents. Indi Kindi also facilitates access to other health services (see below).

Multiple stakeholders emphasised the importance of mums having support, either in the form of social support at Indi Kindi, or some time to themselves.

“Aboriginal health” means not just the physical well-being of an individual but refers to the social, emotional and cultural well-being of the whole Community in which each individual is able to achieve their full potential as a human being thereby bringing about the total well-being of their Community.”

- health in as defined in the Constitution of NACCHO

### Increased time for work, study, caring for family members or helping with community responsibilities

Due to low employment levels in Borroloola generally, Indi Kindi was not often seen as a method of enabling workforce participation by stakeholders (except for as educators themselves). Educators suggested that for those who do work, they are more likely to ask other family members to help care for children, such as grandmothers, and Indi Kindi helps to relieve them from child care duties for a while. It was not suggested by any stakeholders or educators that if it were not for Indi Kindi, families would use the local creche (centre based day care). Nationally, fees for centre based day care have been found to be between \$87.36 and \$110.79 in comparably disadvantaged communities.<sup>1</sup> While Aboriginal families have been eligible for 36 hours of subsidised care regardless of activity since 2023, there is still an out-of-pocket cost that may present a barrier to families.<sup>2</sup>

Indi Kindi may also recruit additional educators from family members who attend Indi Kindi regularly.

“And they trust us like with their kids. Some of the kids, well all of the kids what come is family. We all related in town, that's why the parents trust us and Indi Kindi for taking the kids out each day”

- Indi Kindi Educator

### Alcohol and Other Drugs (AOD) Support for Women’s Mental Health and Wellbeing

“During the Mums Camps, representatives from the AOD program spoke with the mums and staff, raising awareness and understanding how to deal with issues related to mental health and wellbeing.

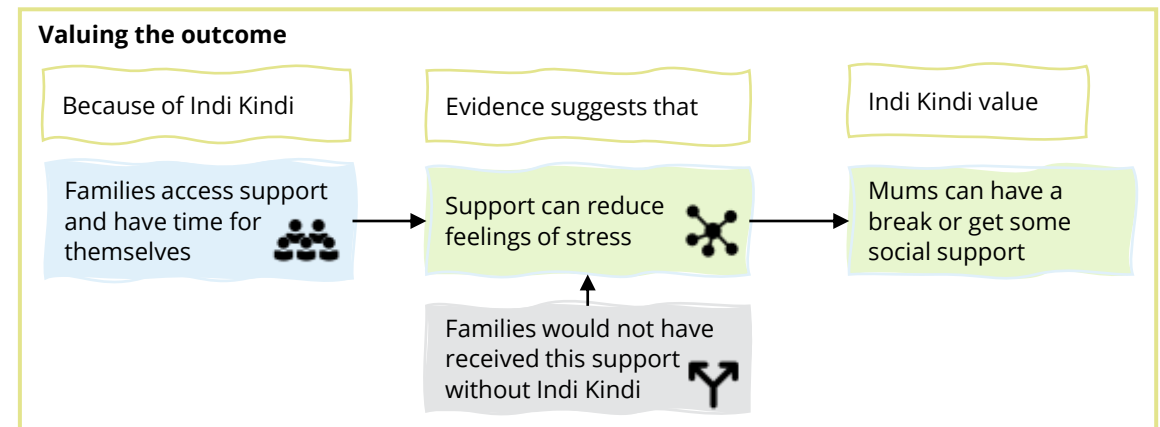
*A follow-up session from AOD was incorporated into an IK session with positive feedback from the mums and staff. Ongoing regular support from AOD during IK sessions has been planned.”*

- Community Advisory Group minutes, 2018

“We’re with the little ones you know helping them, encouraging them, helping their mums. They love sending these kids to us every day because they probably need a break at home too, to have time to do their stuff like cleaning.”

- Indi Kindi Educator

Figure 11: Value of families accessing support





# Outcomes for families

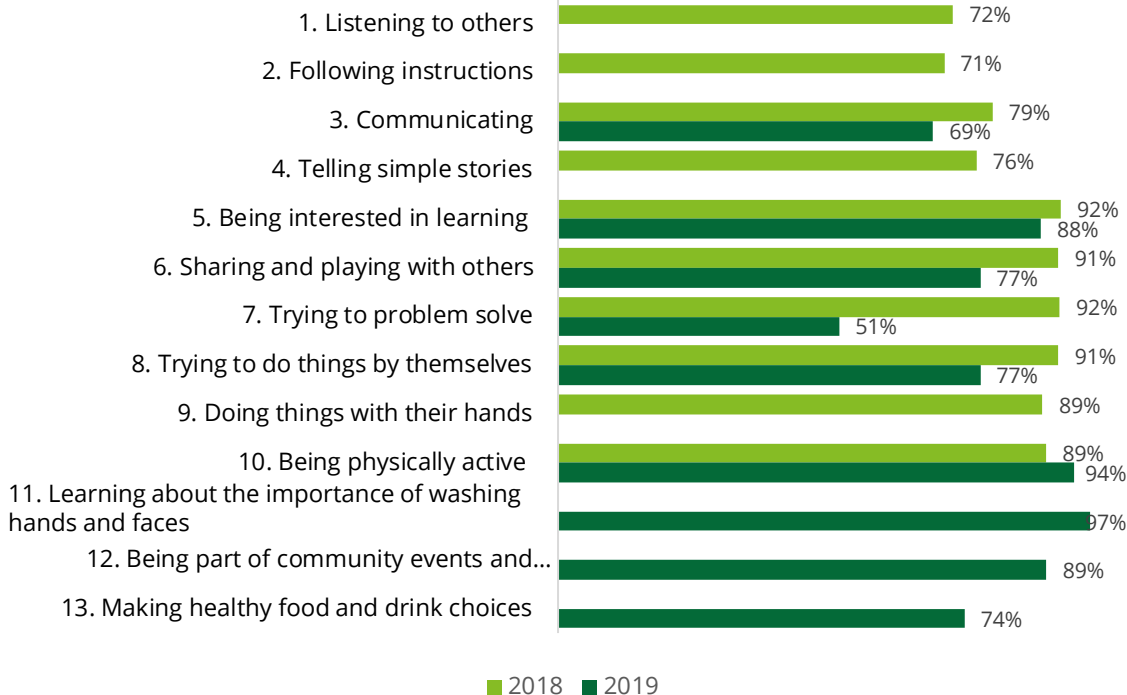
## Indi Kindi increases awareness of the value of early years education to families

Families of children attending Indi Kindi were asked by Indi Kindi educators how much Indi Kindi helped their child with the following activities in 2018 and 2019. Responses were very positive, reflecting a high degree of confidence in the program by families, which can enable further attendance. Families were asked to rate the extent to which Indi Kindi had helped their child in a particular activity with 1 = hasn't helped yet; 2 = helped a little; 3 = helped a lot. Not all questions were asked in 2018 **and** 2019, and some questions had different phrasing between years (see Appendix A). Families said that Indi Kindi helped 'a lot' with helping children to share and play with other kids (91% in 2018 and 77% in 2019), learning about the importance of washing hands and faces (97% in 2019), being physically active (89% in 2018, 94% in 2019) and being interested in learning (92% in 2018 and 88% in 2019).

Chart 21: Average families' responses on impact of Indi Kindi on child for the following activities: 'How much has Indi Kindi helped your child with'



Chart 22: Proportion of families answering that Indi Kindi 'helped a lot' for the following activities:



Source: Deloitte Access Economics (2024) using data from Moriarty Foundation

Source: Deloitte Access Economics (2024) using data from Moriarty Foundation

# Outcomes for community

Community outcomes include the intergenerational transmission of culture. Services, including the school, have improved access to young children and families

## Connection to culture

Indi Kindi supports transmission of culture through two-way learning, not only teaching children from a very young age, but also supporting the educators to learn from and with Elders in the community. Educators value the aspects of the program which allow them to build these skills and experiences, and there are also benefits for other community members who are able to join Indi Kindi on excursions and participate in cultural activities such as fishing or gathering bush medicine.

Borroloola's strong connection to culture can only be maintained by passing down knowledge and law from generation to generation. Indi Kindi's unique model means that the community will continue to benefit over time. Connection to culture was found to be one of the most significant factors in the social and emotional wellbeing for the community, including that community members felt heartened and reassured that their children and grandchildren would receive a strong educational experience. It was felt that if eventually children were to leave Borroloola for work or further education, they could return to their community at Borroloola for that connection.

While this outcome itself has not been monetised, the volunteered time of the Elders and the Community Advisory Group is a clear differential benefit of the Indi Kindi program.

## Improved trust in systems

Indi Kindi is one of the longest running and most consistent programs in Borroloola. The distinctive pink uniform, bus and logo and the proliferation of books around the town mean that the community recognises the Indi Kindi service. Within the Borroloola context where various projects and programs are started and stopped as government funding criteria are updated or priorities shift, where recruitment of qualified professionals is a recurring issue that affects service delivery, and where training of local staff is often seen as too burdensome, too hard, or too expensive, Indi Kindi is reliable.

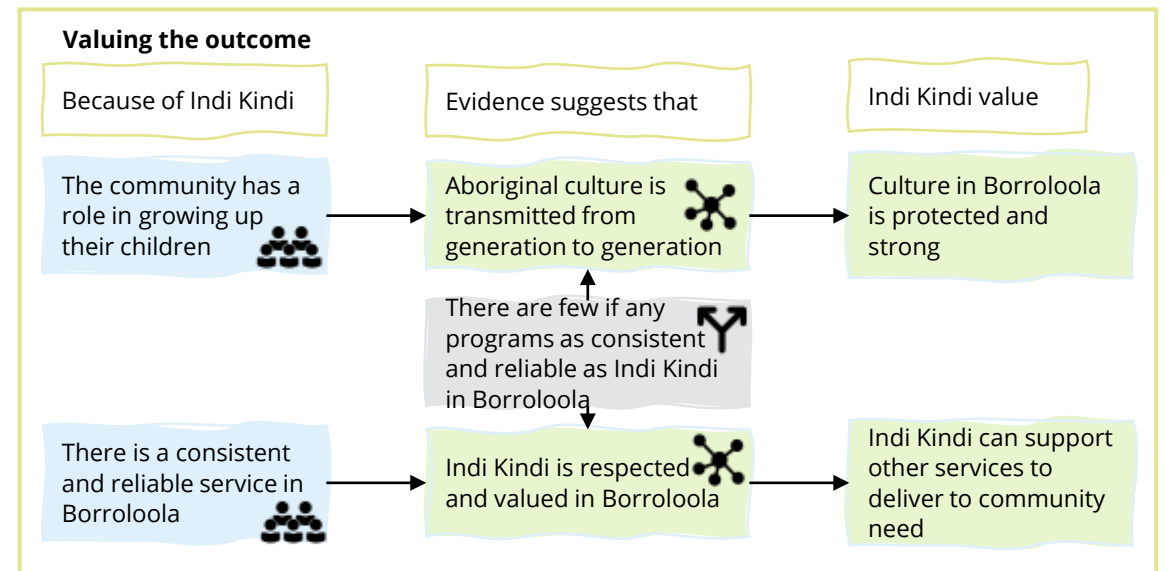
Indi Kindi can therefore act as a conduit to other services, by leveraging their expertise and status within the community. As a 100 per cent locally delivered program, Indi Kindi is able to respond to community need in real time, and anticipate or plan for solutions to locally known challenges, such as pro-actively training their staff as lifeguards to ensure pool-based delivery can take place in the heat of summer, given there are no lifeguards at Borroloola, and supporting other community members to receive training (see right).

"Indi Kindi usually deliver regular sessions at the pool during the warmer months. As BR pool do not offer a lifeguard service we are looking to train all the team plus our JMF coaches in a lifeguard course. Once the team have been trained, we will resume session at the pool.

*Discussion: Other organisations may be interested in attending in community training, also opening the training to the mums may be of interest"*

**- Community Advisory Group minutes, 2019**

Figure 12: Value of community involvement in raising children and consistent service for children in Borroloola



# Monetised benefits

## Available data shows strong promise for the value of Indi Kindi, which would likely be higher if specific outcomes data were available

Table 6 below summarises the monetised benefits referenced throughout the report, at a per beneficiary level. These values reflect a proof of concept of the monetisation of Indi Kindi, rather than an exhaustive picture of the impact of the program. The duration of benefit realisation is an important element of the analysis, reflecting that some benefits like reduced developmental delays will be realised by a child once during their time at Indi Kindi rather than each year of their attendance.

The absence of program data and inability to conduct comparative or longitudinal analysis had the following implications for the analysis:

- Many of the significant outcomes associated with Indi Kindi, particularly for children, were unable to be monetised. The total value of Indi Kindi is therefore not represented below.
- Educator benefits are significantly larger than benefits for children, largely due to the ability to draw on payroll data.

- Where outcomes were able to be monetised, estimates from the literature as well as assumptions were utilised with the intent of being conservative. A key example is the impact of Indi Kindi on developmental delays and education. This monetisation uses a range of estimates from the literature including the impact of delays on school test scores, the impact of school test scores on high school completion and so on. As such, specific outcomes data would better link the input and long-term outcome without requiring a range of necessary but conservative assumptions.

In light of these assumptions and limitations, this assessment of the ‘value for money’ of Indi Kindi should be understood as an indicative and conservative estimate. Paired with the conservative attribution factors employed, the actual social return of the program is expected to be higher.

In future years, a more robust figure can be determined by gathering longitudinal participant data.

Given these limitations, page 95 presents scenario and sensitivity analysis for understanding the potential full impact of Indi Kindi.

Table 6: Summary of monetised benefits per stakeholder level

Stakeholder	Outcome area	Monetised outcome	Duration of benefit realisation during time in Indi Kindi	Value per stakeholder	Sub-group
Children with regular attendance	Education	Higher lifetime earnings and avoided social & fiscal costs	One-off	\$1,713	Per child
	Education	Avoided cost of school disability supports		\$2,257	Per child who is no longer developmentally vulnerable
	Health & wellbeing	Reduction in scabies prevalence		\$2,644	Per child
	Health & wellbeing	Reduction in cancer and type 2 diabetes prevalence		\$2,010	Per child
Children with occasional attendance	Education	Higher lifetime earnings and avoided social & fiscal costs	One-off	\$635	Per child
	Education	Avoided cost of school disability supports		\$1,128	Per child who is no longer developmentally vulnerable
Educators	Employment	Additional income & tax revenue, reduced income support costs	Annual	\$21,327	Per educator
	Wellbeing	Higher life satisfaction	Annual	\$3,333	Per educator



# Probable impact of Indi Kindi

The culturally sensitive design of Indi Kindi is bridging the gap between Indigenous and non-Indigenous children who attend traditional ECEC models.

The monetised benefits of Indi Kindi presented in this report are considered to be conservative in representing the program's full impact. Figure 14 illustrates the way in which benefits are estimated conservatively in this report based on known research, despite acknowledgement that the probable impact of Indi Kindi is likely larger than this. This is visualised through educational outcomes.

The grey line represents the trajectory of an Aboriginal child with no intervention. In green, an Aboriginal child who attends a Western ECEC model is better set up to start school, but has a trajectory below the average Western child in a Western ECEC model.

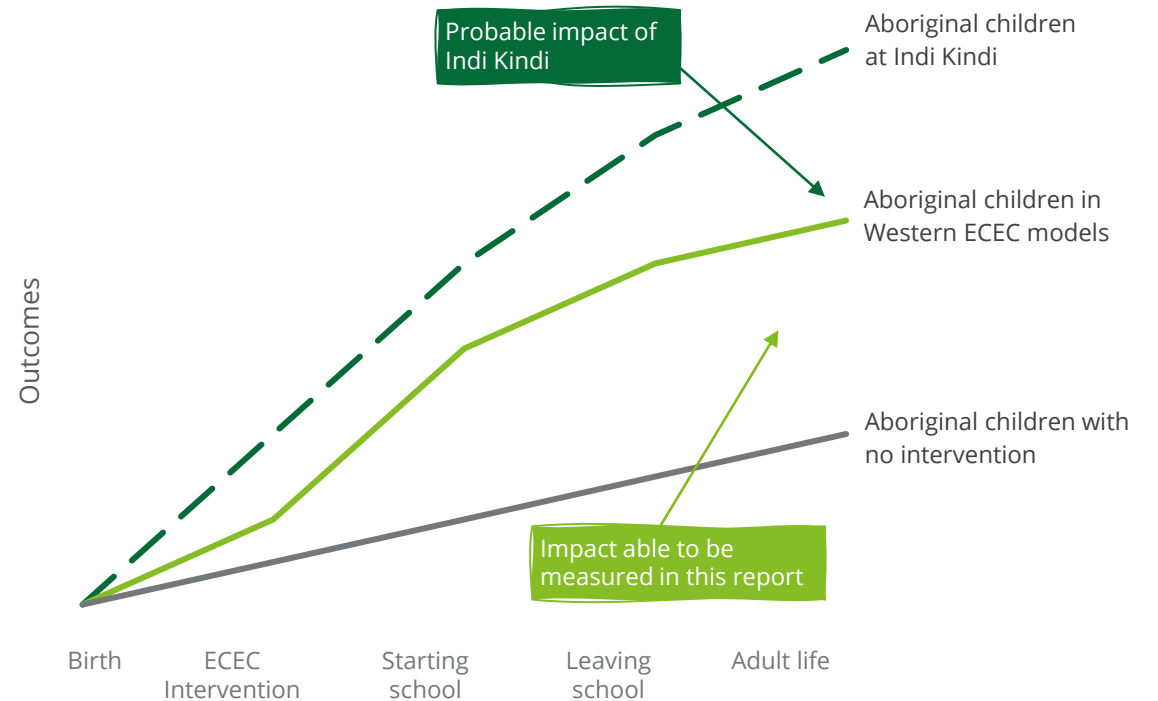
The literature typically points to effective early intervention being most impactful for those who are most disadvantaged. However, Indigenous-specific research indicates that this does not hold for Indigenous children. Falster (2020) for example finds a smaller effect of ECEC on Indigenous compared to non-Indigenous children, and Elek et al (2020) note that universal programs may not achieve outcomes for Indigenous children due to different historical and cultural contexts. This is why the green line sits below the blue line in the diagram. The analysis in this report uses estimates based on the green line, in the absence of more tailored program data.

However, what these studies also point to is the ability for culturally sensitive ECEC programs to help bridge the gap between educational outcomes for Indigenous and non-Indigenous children. This research strongly suggests that the impact of Indi Kindi is higher than what was able to be estimated:

- Falster (2020) finds that the identified gap in development for Indigenous and non-Indigenous children is largely attributed to differences in socioeconomic and health circumstances. They recommend that Indigenous families with young children have better health and social support alongside quality ECE services – such as the wrap-around health and social supports delivered by Indi Kindi.
- Biddle (2015) highlight the importance of culturally sensitive ECEC design for Indigenous children that builds “on the skills and values that Indigenous children bring to formal schooling.” They recommend culturally sensitive curriculums as a key means to incentivising ECEC participation and emphasise the importance of a culturally safe environment for Indigenous families. Indi Kindi adopts all these practices particularly with staff being parents and community members themselves.

The dashed green line therefore sits somewhere between the green and blue lines as the probable impact of Indi Kindi, with the estimated benefits in this report (green line) only representing the conservative impact of Indi Kindi.

Figure 13: Illustrative representation of the potential impact of Indi Kindi on child outcomes



Source: Deloitte Access Economics (2024).

Notes: The horizontal axis depicts different points in the life of an average individual, from birth to engagement with an ECEC intervention through to adult life. The vertical axis broadly captures the educational, employment and health trajectory of the individual.

# Costs of delivering Indi Kindi

Indi Kindi costs have fluctuated over time, and lack of reliable, long term funding may impede strategic investment in monitoring outcomes for program refinement

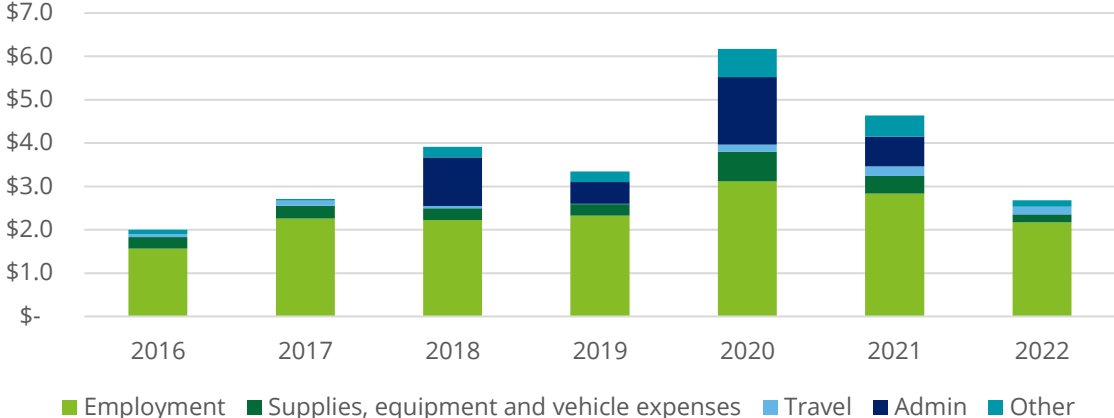
Delivering early childhood education and care is well understood to be more expensive in very remote Australia (as well as more complex and challenging). Even service delivery that is inconsistent and variable in quality is more expensive – regardless of the sector. Consistent, high quality service delivery can be not just costly, but unattainable.

The large majority of Indi Kindi’s costs are employment costs. Due to the nature of delivering on Country, there are no site costs, making Indi Kindi’s largest investment its workforce – people in Borroloola. Administrative costs vary over time and are linked to the Moriarty Foundation team in Sydney. Vehicle costs and other program costs and supplies reflect another larger category of expenses, and are critical to the accessibility, quality and safety of the program.

The successes of Indi Kindi have been achieved in the face of an uncertain and unpredictable funding environment. Access to recurrent Government funding is hampered by the fact that Indi Kind does satisfy the criteria required to obtain funding under the Child Care Subsidy (particularly those criteria related to hours, days and weeks of operation). This has meant a need to rely on grant-style funding arrangements.

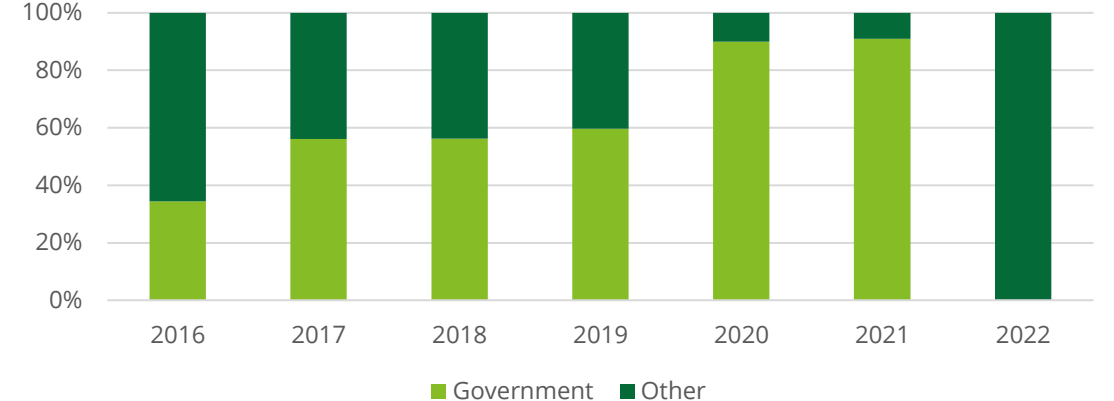
In the face of this, the role of Government funding in supporting the delivery of the Indi Kindi program has fluctuated over time (see Chart 24). With reliance on time-limited grant funding has come financial uncertainty and, with this, the inability to strategically plan and invest. It has also seen material amounts of administrative time directed toward the application and management of grants (over other activities that could benefit program participants). These observations are supported by the Productivity Commission report *Expenditure on Children in the Northern Territory* findings that “grant funding approaches used for children and family services in the Northern Territory do not facilitate a focus on long-term outcomes and create funding uncertainty for service providers”.

Chart 23: Costs of running Indi Kindi in Borroloola over time (100,000's)



Source: Deloitte Access Economics (2024) using data from Moriarty Foundation

Chart 24: Government funding of Indi Kindi over time (%)



Source: Deloitte Access Economics (2024) using data from Moriarty Foundation

# Costs of delivering Indi Kindi

## Delivering a program as multi-dimensional as Indi Kindi in a context as unique as Borroloola necessarily involves above-average levels of investment

Any analysis of the cost of delivering the Indi Kind program must consider its unique features, its delivery context, and the breadth of outcomes it is generating.

To this end, the SROI framework serves to provide a comprehensive basis for appraising the value that is being generated relative to the investment that is being made. However, the conclusions that can be drawn from the application of the SROI framework are limited by the fact that while the costs can be measured with a relatively high degree of confidence, the benefits are considerably less amenable to reliable quantification.

Noting that costs should not be considered in isolation, and that it is only in conjunction with the associated benefits that they can be fully understood, a number of observations can be made regarding the costs associated with the Indi Kindi program:

- The total annual cost of running the program (\$270,000 in 2022) is principally comprised of employment costs, which accounted for 80% of 2022 total program expenditure.
- When the total program cost for 2022 is considered relative to measures of population and participation, it can be observed that:
  - The cost per enrolled child was ~\$4,000
  - The cost per child under 5 in Borroloola was ~\$4,500\*
  - The cost per child that attended on multiple occasions was ~\$8,000
  - A 50% increase in the children attending would see the cost per child that attends occasionally fall to ~\$6000

While the ability to benchmark these figures is limited by the scarcity of direct comparators, the available points of reference suggest that, even before the full breadth of benefits generated by the program are considered, these figures compare favourably.\*\*

\* Note: the cost per enrolled child is lower than the cost per child in Borroloola due to more children attending Indi Kindi in 2022 than the ABS Census records living in Borroloola in 2021.

\*\* Available points of reference include grants for a supported playgroup in Borroloola, an intensive early childhood education and care model trial, and Children and Parenting support program funding from Department of Social Services











## Ongoing Measurement

**This section describes a series of enhancements that the Moriarty Foundation may wish to consider to their evaluation and monitoring approach in the short, medium and long term.**

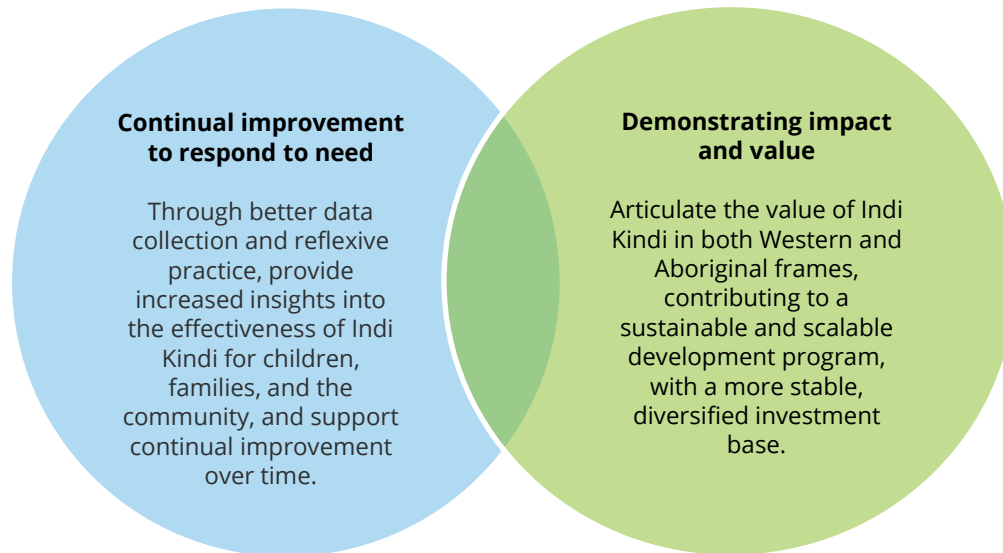
**Its purpose is to provide a set of options that can help drive continuous improvement and responsiveness to need while demonstrating impact and value to external stakeholders.**

# Ongoing measurement

An enhanced approach to evaluation and monitoring will allow the Moriarty Foundation to better demonstrate impact over time and to continue to tailor the program where needed

Strengthening the basis upon which the social return on investment of Indi Kindi to the Borroloola community can be demonstrated requires an enhanced approach to evaluation and monitoring and, critically, to collecting the data that these endeavours require. This will not only strengthen the basis of the social return on investment, but enable Moriarty Foundation, Indi Kindi team, and Community Advisory Group to reflect on the various components of the program logic and refine as needed to ensure that the needs of Borroloola children and families are being met. Improvements to data collection will sit alongside the broader strategy to build on Indi Kindi's strengths and continue to enhance its design, delivery and impact

This report has identified an array of impacts and benefits of Indi Kindi, through existing data, qualitative evidence and secondary data. It has also noted the data limitations to quantifying these impacts of Indi Kindi over time and the challenges in attributing outcomes in Borroloola to the Indi Kindi program. It is therefore recommended that the Moriarty Foundation implements a sustained approach to data collection. There are two broad and related objectives of ongoing measurement and quantifying outcomes for the Moriarty Foundation.



Recognising the current capacity to collect data, this report recommends a staged approach to implementing an enhanced monitoring and evaluation framework. The proposed approach has been developed through extensive discussion with the Moriarty Foundation and aims to leverage existing resources and processes where possible, and to prioritise efforts based on expected impact on outcomes, and readiness to implement. Improvements to data collection will sit alongside the broader strategy to build on Indi Kindi's strengths and continue to enhance its design, delivery and impact.

## Short term

1. Consistently track attendance data and type, in a format and/or data collection tool consistent with JMF data
  - This will allow for better information on program exposure (SROI attribution); development of strategies to increase attendance for greater benefits; and to track longer term outcomes for children participating in JMF
2. Consistently track systematic session details, including types of session
3. Consistently record educator data including qualifications and previous employment history
4. Update JMF surveys to include information relevant to Indi Kindi
5. Update and reintroduce family and educator surveys in line with the SROI benefits framework

## Medium term

1. Record reflective discussions about children's learning strengths and areas for attention, using a framework
  - These can be used for case studies and developing tailored educational plans
2. Use ASQ-TRAK through the early years network in Borroloola to identify developmental delays
3. Work with the school to build a working relationship, implement an Indi Kindi survey, and gather child school-age outcome data
4. Record long term outcomes for Indi Kindi graduates through a database, supported by surveys as needed

## Long term

1. Partner with research team or commission a custom built assessment tool which meets requirements to assess children's literacy and language and/or executive function



# Ongoing measurement: Short term measures

Short term measures focus on enhancing existing data collection processes, including aligning with JMF data collection to better identify long term outcomes

## **1. Consistently track attendance data and type, in a format and/or data collection tool consistent with JMF data**

Attendance data should be enhanced by consistently tracking child and family member level attendance and storing in a format which allows analysis of attendance patterns and levels of exposure to the program. This will help Indi Kindi to better understand patterns of attendance and how to support individual children to get the most out of the program. Educators and program leaders should reflect on attendance data regularly and use this to develop strategies to, as and where appropriate.

Stronger attendance data which can be analysed at a child level over time will also help to attribute outcomes for children to Indi Kindi. This should include ways to align Indi Kindi data collection with JMF data collection, for instance by using consistent identifiers over Indi Kindi and JMF. This will support Moriarty Foundation to track the outcomes for children over a longer period of time, and also support in Short Term measure 4 (Updating JMF surveys).

Where possible, family connections between educators and children should be noted on child records, so that the enabling factor of parental employment by Indi Kindi can be tested.

## **2. Consistently track systematic session details, including types of session**

Alongside the enhanced attendance data, session details should also be systematically tracked. This should include the types of session by primary focus, the location of the session, etc. The types of session should include the following categories:

- Walking Learning® + any particular development domain focus
- Sessions held in collaboration with other services including Families as First Teachers, the school, and the creche
- Sessions in which health and development checks or services are carried out, for example dental checks or ear health checks
- Excursions

The session details should be able to be linked to individual children's attendance patterns, so that it is possible to see how many health and development checks a child has attended through Indi Kindi.

Indi Kindi should also store the results of the health and development checks. At a minimum this could be at an aggregate level, i.e. the number of children assessed as having Otitis Media, so that these can be compared to national averages, and tracked over time.

## **3. Consistently record educator data, including qualifications and previous employment history**

Indi Kindi should also record educator data in a systematic way, including existing qualifications and previous employment history, alongside the qualifications they gain with and through Indi Kindi. While respect and sensitivity should be prioritised, Indi Kindi should attempt to record whether or not an educator has been employed before, and if so, their previous employment history. Indi Kindi should also record educators' educational histories, such as year 10 or 12 qualifications.

## **4. Update JMF surveys to include information relevant to Indi Kindi**

Currently, JMF distributes surveys to both children participating in JMF and schools. By using a consistent identifier for Indi Kindi and JMF data, over time it will be possible to track children who have attended Indi Kindi through their time at school. If this is not implemented, it would be possible to add a question about Indi Kindi or Indi Footi attendance.

While the current JMF surveys focus on the elements of the program that children engage with and the relationship between how they feel about school and the JMF program, a baseline question such as 'How do you feel about going to school', or 'How do you feel about learning' would allow for comparison between Indi Kindi graduates and others; and correlate to the family survey question which asks how much Indi Kindi helps children to be interested in learning. A small number of health related questions would also help to build the evidence base around the impact of Indi Kindi's healthy habit building. This may include asking children how many sugary drinks they have a week and how many fruits or vegetables they eat.

## **5. Update family and educator surveys in line with the SROI benefits framework**

Family and educator surveys should be updated to align with some of the SROI benefits framework. This includes building the evidence base on the impacts on families and educators, rather than focusing purely on child development outcomes. Informed consent, sensitivity and maintaining trusting relationships should be prioritised. For families, additional domains include whether Indi Kindi helps them to learn more about and support their child's development, make healthy choices, access health services, work, study or do things at home like house work, care for family members or help with community.

It should also explore the counterfactual, including other services the child might attend if not for Indi Kindi and whether the child attends multiple services in Borroloola, for instance, preschool plus Indi Kindi on the days when preschool does not run.

# Ongoing measurement: Medium term measures

Medium term measures focus on developing stronger datapoints which align to the SROI framework and may require additional resourcing to implement

## **1. Record reflective discussions about children's learning strengths and areas for attention, using a framework**

Formalising and recording reflective discussions about individual children's learning and development should also be considered in the medium term. These *formative assessments* of children's strengths and areas for attention would allow the Indi Kindi team, supported by the Early Years Specialist, to focus planning and activities to best support individual children. This may be strengthened by implementing a framework to ensure reflections are systematic. Considerations should be given to the ease of implementation, length of time taken, prioritising a strengths-based approach, and ensuring the framework allows for culturally responsive assessment.

These documented assessments can be used over time to develop case studies of individual children's learning, to demonstrate the impact of Indi Kindi on development outcomes. They could also be shared with families and the preschool/school, to further build strong partnerships which collaborate to support child development

## **2. Use ASQ-TRAK through the early years network in Borroloola to identify developmental delays**

Alongside the ongoing and formative assessments implemented by the Indi Kindi educator team, the ASQ-TRAK should be used to identify developmental delays for children attending Indi Kindi. This will help to ensure that diagnoses and appropriate allied health supports are sought, and that programming is tailored as needed.

### ***Why the ASQ TRAK?***

ASQ TRAK, updated in 2023 as ASQ-TRAK2, is a developmental screening tool specifically designed for Aboriginal and Torres Strait Islander children, covering ages from two months to 5 1/2 years. It is a culturally adapted version of the Ages & Stages Questionnaires, developed with input from indigenous communities. This family-centered tool aids in early identification of developmental delays and highlights children's strengths, involving caregivers directly in the assessment process.

The ASQ TRAK is used by the Northern Territory Families as First Teachers program and the Borroloola health clinic. This means that there are both practitioners in the Borroloola community, and that the tool is understood locally by health practitioners and members of the early years network. While other tools exist, the practical advantages of implementing the ASQ TRAK mean this has been recommended as the optimal developmental screening tool.

Over time, Indi Kindi educators could be trained to implement the ASQ TRAK themselves, and this should be explored with educators in line with their goals. However, in the meantime, it would be appropriate for other local professionals to partner with Indi Kindi to assess children at Indi Kindi, with families and educators.

## **3. Work with the school to build a working relationship, implement an Indi Kindi survey, and gather child school-age outcome data**

Indi Kindi should continue to work to build a partnership with the school, including for day-to-day collaboration such as joint events. This relationship should be expanded to include a survey for Indi Kindi, similar to the JMF survey, for teachers in the preschool and transition classes, which focuses on any differences between Indi Kindi students and others. This will require teachers to be aware of who has attended Indi Kindi. Ideally, this relationship will extend to sharing attendance data for children who attended Indi Kindi compared to other students, and the number of children requiring additional supports at school – this should be sought through a formal data sharing agreement.

## **4. Record long term outcomes for Indi Kindi graduates through a database, supported by surveys as needed**

Currently, medium to long term outcomes for Indi Kindi graduates are not recorded, but are often known by the Indi Kindi team. This includes knowing who is attending school, and where. As Indi Kindi reaches a mature age, efforts to record these outcomes should be systematised. This should include seeking informed consent from Indi Kindi alumni themselves.

Where possible, Indi Kindi should seek to obtain and record information about education and employment status of Indi Kindi alumni. If appropriate, an alumni survey could also build the evidence base for the impact of Indi Kindi on healthy habits, including fruit, vegetable and sugary drink consumption, along with any chronic medical conditions.

# Ongoing measurement: Long term measures

## Long term measures include the development of a custom-built assessment tool to track literacy and language or executive function outcomes

As part of this work, Deloitte Access Economics explored the appropriateness of implementing an existing assessment tool for child-level outcomes. This work was supported through consultation and guidance of Dr Dan Cloney from the Australian Council for Educational Research (ACER).

It was determined that none of the existing tools on the market meet the full needs of Indi Kindi and the Moriarty Foundation. These needs include:

- A tool appropriate for a range of ages (0-5 years old)
- A tool that is culturally responsive, including being able to be implemented in language
- A tool which has been validated to assess child level outcomes
- A tool which can be implemented in the Indi Kindi context; i.e. outdoors, without need for an internet connection
- Training which can be delivered in Borroloola, to educators at a Certificate 3 or diploma level qualification
- Suitable for assessing a program like Indi Kindi, using a Walking Learning® curriculum

In part, this reflects the lack of suitable tools for these age groups across Australia: as yet there is no consistent assessment tool used across Australia; the Preschool Outcomes Measure will be piloted in 2025 as part of a Commonwealth initiative. In part, it reflects the specific needs and contexts of the Indi Kindi program, and in particular, the desire to prioritise a culturally appropriate tool to maintain and further build trust with families.

An additional challenge of data collection emerges from the perspective of what our (traditionally Western) tools of measurements have been designed to capture in the context of understanding Aboriginal values systems and impacts.

Culturally appropriate and effective tools for assessing early childhood learning outcomes in Aboriginal communities, those that may provide educators with a formative tool for understanding the pre-literacy and oral language trajectory of the participating children, have only in very recent years been developed.

Should such a tool be able to be adapted to the Indi Kindi context and adopted in the future, this may in time come to form an ongoing resource for the educators, as well a measure of individual development progress that can inform an evaluation of learning outcomes and the further demonstration of the program's impact.

For this tool to be effective, it will need to be responsive to the languages spoken by the educators and endorsed by the community. It will also need to be customised to the unique cultural context in which Indi Kindi is delivered and place the Indigenous-specific methodology at its centre, including the Walking Learning® pedagogy and multi-sensory development approach.

In the meantime, the medium term measurement recommendations including using a framework for formative assessment, should allow for many of the benefits of an assessment tool. That is to say, although there may not be a quantitative and validated result, the process of reflecting on children's development, combined with using a tool such as the ASQ-TRAK, should ensure that the strongest outcomes for children are met.





A woman wearing a red polo shirt with the Moriarty Foundation logo and colorful embroidery on the sleeves stands with her back to the camera. She is surrounded by several children in a lush, green outdoor setting with large, mature trees. The scene is brightly lit, suggesting a sunny day. The woman's shirt has the text 'MORIARTY FOUNDATION ORG AU' on the back. The children are dressed in casual summer clothing, and they appear to be engaged in an outdoor activity or walk.

## Scalability

**This section explores the potential avenues through which the impact of Indi Kindi could be expanded, both through existing locations and expansion to new communities.**

**Its purpose is to present Moriarty Foundation with a number of scalability options through which further investment and impact can be assessed.**



# Why scale?

## Determining a pathway forward

For every successful model of a place-based program or initiative that is identified in Australia comes the inevitable question, “is it scalable?” Before addressing the question on whether Indi Kindi can scale, it is important to first consider why it should scale.

To address the “why” we can look first to Moriarty Foundation’s mission statement: “by embracing the Aboriginal worldview, our locally-led initiatives radically shift intergenerational disadvantage.” There are two important reflections on this statement. One, that radically shifting intergenerational disadvantage starts local. Two, that radically shifting intergenerational disadvantage takes time. If for the next decade, Indi Kindi continued to deliver on its current scope within its two delivery hubs and two satellite operations, it would still be a successful program, it would still deliver on its mission.

In the Australian Government Productivity Commission's Draft Report “A path to universal early childhood education and care (2023),” a commitment is made to charting a course for universal education and care that is affordable, accessible, equitable and high-quality and that supports children’s learning and development. One of the findings of the Draft Report is that “Aboriginal and Torres Strait Islander children are under-represented in ECEC services because mainstream providers are not always available and affordable, or they may not offer culturally safe environments.”

Further evidence emerging from the Australian Government Productivity Commission review of progress on the National Agreement on Closing the Gap (2024) describes: that “governments are not adequately delivering on their commitments to mobilise all avenues available to them to achieve the objective ‘to overcome the entrenched inequality faced by too many Aboriginal and Torres Strait Islander people so that their life outcomes are equal to those of all Australians’.

The most recent 2021 data release showed that Closing the Gap Target 4 – “increase the proportion of Aboriginal and Torres Strait Islander children assessed as developmentally on track in all five domains of the Australian Early Development Census (AEDC)” was worsening.

The question of scale then comes down to the fact that without more programs like Indi Kindi, there can be no universal access for Aboriginal and Torres Strait Islander children; governments have not been able to meet their commitments to address entrenched disadvantage; and developmental measures amongst Aboriginal and Torres Strait children will continue to decline. Indi Kindi cannot alone address the breadth and complexity of these challenges, but this is a clear role for the program in taking some of the solutions forward.

Thus, there is equally a great imperative and great opportunity for Indi Kindi to scale its efforts and impact. The following pages present a series of scalability options for the Moriarty Foundation to consider. While these options have been identified through the course of this program of engagement, they are by no means presented as exhaustive. Indi Kindi has shown its strength time and time over through its agility and responsiveness to community needs: the question of scale will be no different.

### **Our Approach**

*Moriarty Foundation has moved beyond program-centric delivery, to an enabling platform that is holistic and integrated, designed to build wellbeing among Aboriginal and Torres Strait Islander children, parents and communities. We create a space where families and our local staff can build resilience and achieve sustainable change.*

*Our strategic platform is designed to deliver successful program outcomes through resilient local engagement. Our underpinning framework is based on improved wellbeing and strong protective relationships for the staff, children, families and communities we work with.*

*We place the child at the centre, the family around the child, the community around the family and the nation around the community.*

### **Our Focus**

*Supporting key attachment relationships: Parent to child, child to Elder, child to staff, head office staff to local staff.*

*Providing wellness education and modelling: Nutrition, sleep, exercise and self-calming strategies.*

*Building on the cultural and family strengths of the Aboriginal body, spirit and Country worldview.*

*Being locally-led and building local staff capacity through mentoring, education and skills development to access best practice ideas and experience.*

# Scalability options

## Increasing the impact of the program benefits

### Three options for exploring scalability

While the report thus far has focused on framing the benefits of the Indi Kindi program to by children, families and communities in the town of Borroloola, this next section looks at opportunities to scale these benefits.

Three models of scale are presented for discussion:

#### 1. Scaling the Indi Kindi program into other communities

- Developing bespoke programs in other communities

#### 2. Scaling elements of the Indi Kindi program into other ECEC services

- Facilitating delivery of 'Walking Learning@' outside of Indi Kindi within other established ECEC services

#### 3. Scaling the impact of the existing Indi Kindi programs within their communities

- Introducing new complementary services and supports to families and children

Included in this section is a case study of the Tennant Creek Indi Kindi program as well as a deeper exploration of the John Moriarty Football program and how it could be further leveraged within the communities in which it operates.

The report considers the scalability options in regard to the potential increase in program benefits and expected inputs, drawn from internal consultations and publicly available data. These suggestions are intended to provide high level insights to help guide future decision making.





# Scalability options

## Scaling the Indi Kindi program into other communities

### Indi Kindi Tennant Creek as a model of scalability

Through understanding the core common components inherent to both the Borroloola and Tennant Creek programs it is possible to start to form an understanding of the critical success factors that would underpin a new standalone program in the community:

- *Governance* - The educators are all connected with each other through family or kinship ties, or other community ties. They all have pre-existing relationships with at least one other person in the program before joining the educator team.
- *Professional development* - The educators are supported by Moriarty Foundation to get their early childhood certifications and complete their First Aid training.
- *Flexible working arrangements* - The educator teams include mothers whose young children also attend Indi Kindi and the greater ratio of team members enables educators to balance other family and cultural responsibilities in their communities.
- *Delivery mode* - Mix of delivery modes through indoor and outdoor learning to accommodate the weather
- *Pedagogy* - Delivery of 'Walking Learning®' curriculum to embed best practice from Indigenous and non-Indigenous ways of knowing, doing and being
- *Age range* - Participation benefits ideally accrue from infancy (or even pre-natal care) as the recent investments from the Northern Territory government in preschool now mean most children will move from Indi Kindi to preschool when they are 3 or 4 years of age.

### Full standalone model – opportunity and needs profile

The potential “demand” for a full standalone Indi Kindi model can be understood in multiple ways. The underlying needs in Aboriginal and Torres Strait Islander communities – both from a child development and an employment and training perspective – and the programmatic gaps, as articulated by communities and by the Australian Government Productivity Commission.

There is an underlying need, as outlined by the Closing the Gap 2021-2 data releases, to do much more to support improvements in early childhood development amongst Aboriginal and Torres Strait Islander children. As has been demonstrated in the above sections, the Indi Kindi program can make meaningful contributions to support early childhood development in both direct and indirect ways.

Similarly, on a jobs and skills perspective, while the Closing the Gap 2021 data release shows progress towards meeting the targets in employment rates for Aboriginal and Torres Strait Islander people aged 25-64 years, engagement in employment, education or training for youth aged 15-24 years of age is improving but not on track to meet targets. Based on the Borroloola and Tennant Creek delivery models, a new standalone Indi Kindi program would have the potential to add anywhere between five and nine new job opportunities with additional training and education supports inbuilt. The Tennant Creek program is currently supporting many women under the age of 25 years.

In November 2023 the Draft Report “A path to universal early childhood education and care” was published by the Australian Government Productivity Commission. One of the draft findings is that “Aboriginal and Torres Strait Islander children are under-represented in ECEC services because mainstream providers are not always available and affordable, or they may not offer culturally safe environments.”

Further, it is understood from the Moriarty Foundation that in many of the communities where JMF Football operates but Indi Kindi does not, that the ECEC needs of these communities are not being fully met and there would be interest in establishing such a program.

# Case study overview

## Indi Kindi Tennant Creek

### History of Indi Kindi in Tennant Creek

In 2021, the Indi Kindi program was expanded to a new hub in Tennant Creek, including service delivery in nearby Mungkarta. Tennant Creek was identified as an expansion site through existing community relationships established through the John Moriarty Football program that commenced in the region in 2019.

The Moriarty Foundation worked closely with Connected Beginnings to design a tailored program that was responsive to the local needs and existing services within the community. Connected Beginnings is a 'place-based' grant program funded through the Australian Government that aims to improve access to existing early childhood, maternal and child health and family support services for Aboriginal and Torres Strait Islander children.

### What's different to Borroloola

#### *Operating model*

The delivery model of the Tennant Creek program was designed from the outset to complement the existing services in Tennant Creek and Mungkarta. Specifically, alternating days with Families as First Teachers (FaFT) so that when FaFT delivers in Tennant Creek, Indi Kindi delivers in Mungkarta and when FaFT is delivering in Mungkarta, Indi Kindi delivers in Tennant Creek. The program runs four days a week while Mondays are dedicated to internal planning and operations.

#### *Attendance demographics*

Around ten children typically attend Indi Kindi in Tennant Creek, the primary age group is 1-2 years, but includes infants under one year who attend with a parent. This is a younger cohort than the was observed in the Borroloola program and the Tennant Creek program also includes many more mums (and the occasional dad). Up to five children regularly attend the Indi Kindi Mungkarta program.

#### *Program features*

Given the bigger population and less remote location of Tennant Creek in comparison with Borroloola, there is a larger number of health and wellbeing services available to the Indi Kindi educators for which they can facilitate access to support the overall program benefits.

This includes additional supports for parents. As one example within Mungkarta, Indi Kindi educator Keara identified that families in the community were being negatively impacted by high interest rates on short-term loans that were being taken out to buy critical white goods such as refrigerators. She organised for a financial counsellor from the local Catholic Care service to visit Mungkarta and provide advice to the families to ensure they could continue to take out small emergency loans but in a safe and sustainable way.

#### *Place*

The Indi Kindi Tennant Creek program is delivered through a mix of indoor and outdoor sessions. The Marlungku-Kari Child and Family Centre provides access to its purpose-built early years care facilities (used by FaFT on alternative days). As well as providing refuge from extreme weather during periods of the year, families and educators enjoy the different learning opportunities that can be explored in the indoor space. At the time of writing this report, the Borroloola Indi Kindi team had also recently negotiated to use the local library for session delivery on days of intense rain.

The sites for outdoor delivery in and around Tennant Creek include a local park, a creek, and notable cultural sites such as Karlu Karlu.

Further details of the Tennant Creek program can be found in Appendix G.

# Scalability options

## Scaling the Indi Kindi program into other communities

### **Full standalone model - investment profile**

#### *Additional financial investment*

The investment in resources to establish, recruit, train and retain a new team of educators is not insignificant. To scale to another location would require not only additional early childhood educators, but also additional part time head count within Moriarty Foundation's head office to provide both the intensive, on-the-ground support to design and launch the new program, as well continuity of program leadership for a third team of educators.

Other additional costs would include buying or renting facilities to be used as a head office for storage and meal preparation (if existing JMF facilities cannot be leveraged), transport vehicle(s), plus ongoing food and educational and play material costs.

#### *Additional capability requirements*

While a flat governance structure could be established over time, to initially establish a program it would be critical to identify one or more individuals who would be willing and able to take on a leadership role. These individuals wouldn't necessarily need to have experience or qualifications in the ECEC sector, but would require suitably transferable administrative skills, strong relationship building skills and deep community connections. In Tennant Creek, this capability was initially found in Anthea, who had previously worked as parks ranger and later Keara who, had previously worked in public health and human resources.

Such capability may already exist in JMF programs within certain communities, this will be explored further in this section.



Outdoor delivery in Mungkarta, photo supplied by the Moriarty Foundation



# Scalability options

## Leveraging the John Moriarty Football Program

The John Moriarty Football program currently operates in 18 communities around Australia. While initially targeted at primary and secondary schools, the program has expanded to deliver sessions in preschools, responding to community requests.

The John Moriarty Football program has been able to scale both rapidly and extensively due to the lower operating costs and integration with existing services and infrastructure within communities (e.g. that is it able to be delivered on school grounds and in co-ordination with school leadership).

Whether exploring options for a full standalone program or only parts of the program into other established ECEC services, the footprint of the John Moriarty Football program offers critical social and capital infrastructure from which to leverage. Moreso, it offers the opportunity to engage in a long-term relationship with the child and family, supporting the key transitional moments into preschool, school and high school, being a fixed presence in the child's life from ages 0-18 years when so many other external government-funded and charitable otherwise supports come and go.

In each of the regional hubs – Dubbo, Kuranda, Borroloola and Tennant Creek, there is an Indi Footi program in operation targeted at children aged 2-6 years of age. This program is delivered in conjunction between the JMF and Indi Kindi teams, and focuses on activating young minds through movement, developing basic football and motor skills, balance and coordination in a fun and non-competitive way.

Figure 14. John Moriarty Football communities

New South Wales	Queensland	Northern Territory
<ul style="list-style-type: none"> <li>• Dubbo (Hub), incl Indi Footi</li> <li>• Gilgandra</li> <li>• Warren</li> <li>• Peak Hill</li> <li>• Wellington</li> <li>• Narromine</li> </ul>	<ul style="list-style-type: none"> <li>• Kuranda (Hub), incl. Indi Footi</li> <li>• Cairns</li> <li>• Yarrabah</li> <li>• Gordonvale</li> <li>• Mossman</li> <li>• Mareeba</li> </ul>	<ul style="list-style-type: none"> <li>• Borroloola (Hub), incl. Indi Footi</li> <li>• Robinson River</li> <li>• Tennant Creek (Hub), incl. Indi Footi</li> <li>• Mungkarta</li> <li>• Elliott</li> <li>• Alekerenge</li> </ul>



# Scalability options

## Scaling the Indi Kindi program into other ECEC services

In considering an approach to scaling elements of the Indi Kindi program into existing ECEC services, this could be executed through different tactics:

1. developing teacher training materials for ECEC services to enable non-Moriarty Foundation staff to deliver 'Walking Learning®' curriculum; and
2. delivering facilitated 'Walking Learning®' into ECEC services through Moriarty Foundation staff. This report will focus on the second tactic, in acknowledgment of the strong benefits accrued in the SROI model through employment.

While also acknowledging that there may be demand for Walking Learning® curriculum in services that are non-Indigenous and non-remote, this scalability option will focus on the existing ECEC services in remote Aboriginal and Torres Strait Islander communities, as this is where benefits are likely to have their biggest effect, and specifically those where JMF has an existing footprint, as the existing social and capital infrastructure creates significant efficiencies in financial investment and capability requirements.

### **Scale 'Walking Learning®' into existing ECEC services – opportunity and needs profile**

In the communities where JMF operates across NSW, Queensland and the Northern Territory, all operate a primary school and most operate at least two of the following ECEC services – supported playgroup, FaFT (NT only), centre-based daycare, kindergarten and preschool.

Furthermore, the National Quality Framework (NQF) that sets quality standards for the ECEC sector encourages services and educators to understand, and help children learn about, the history, culture and contemporary lives of Aboriginal and Torres Strait Islander people.

While a further research would need to be undertaken by the Moriarty Foundation to map within each community and at the service level, the specific needs for a facilitated 'Walking Learning®' program, this model of scale when tested with non-Moriarty Foundation educators and health professionals within the communities of Borroloola and Tennant Creek in the NT was positively supported.

In their November 2023 submission to the NSW IPART Early Education and Care review, SNAICC (the National Voice for Aboriginal and Torres Strait Islander children and families) identified a demand within ECEC ACCOs to be supported to develop culturally-responsive programs that are funded on an ongoing basis that can be contextualised locally to best fit community.

The aspiration for these programs in NSW would be to take a holistic view of culture that was not just defined by language but also included sharing knowledge, story, culture and dance. There is perhaps an opportunity for the Moriarty Foundation to work with some of these ECEC ACCOs in NSW and in other states and territories to co-design tailored Walking Learning® curricula that could fulfil many of these aspirations.

An additional hypothesis that may warrant further analysis, it that it is not just financial investment but also resource capacity within ECEC that limits the development and delivery of culturally-specific materials. Much is documented about the national shortage of ECEC workers and acute challenges faced by remote communities in maintaining their staffing ratios; being able to collaborate with the local Moriarty Foundation workforce to support design and delivery could remove a significant barrier to adoption.

# Scalability options

## Scaling the Indi Kindi program into other ECEC services

### Scale 'Walking Learning®' into existing ECEC services - investment and benefits profile

#### *Additional financial investment and capability requirements*

Looking to the existing JMF delivery team to identify potential hybrid JMF/Indi Kindi team members and providing them with additional supported training to co-design and/or facilitate the tailored 'Walking Learning®' program for that service/community would limit the need to recruit for new additional roles, but would still require additional financial investment to fund their extra hours.

It would be expected that the Moriarty Foundation Early Years Specialist would need to be closely involved in the co-design of any new community/service program, in addition to providing ongoing support, which may require an additional resources in the head office team should the opportunity to scale into new communities be significant.

The infrastructure and materials could be cross-subsidized through JMF, though some perishable delivery materials (e.g. art supplies) would need to be replenished ongoingly.





# Scalability options

## Scaling the impact of the existing Indi Kindi programs

In a future scenario where additional financial investment and capability could be limited, it is useful to explore what other benefits could the Indi Kindi model conceivably deliver within their existing programs.

While what follows is a discussion of opportunity and needs, it is important to acknowledge that the activities and aspirations of the Indi Kindi program must ultimately be assessed and endorsed by the authority of the Community Advisory Group and through the collective agreement of the Indi Kindi educators themselves. Part of the success of the Indi Kindi program to date has been the self-determining principles that are enshrined in the program's governance, and this will continue to be critical to the success of any future scalability option.

As a starting point, it is helpful to look back to the Moriarty Foundation four areas of focus: supporting key attachment relationships, providing wellness education and modelling, building on the cultural and family strengths of the Aboriginal body, spirit and Country worldview, being locally-led and building local staff capacity through mentoring, education and skills development to access best practice ideas and experience.

One such area that is aligned to these four areas of focus is maternal and infant care. While the mothers with infants and expectant parents are already welcome at the program, supporting the community with dedicated pre- and post-natal outreach and targeted advice and care isn't currently within the scope of the program or in the purview of the program benefits.

Given the lifelong benefits of high quality and culturally-appropriate pre- and post-natal maternal interventions have been well-established in health research, this final scalability option will focus on exploring what a complementary focus within the Indi Kindi programs could look like.<sup>1</sup>

### **Scaling support for maternal and infant care - opportunity and needs profile**

Both Indi Kindi educators and other professional health and social support workers in Tennant Creek and Borroloola have identified gaps in knowledge and good practice amongst the community when it comes to pre- and post-natal health and wellbeing for mothers and infants.

In Tennant Creek, the educator team was conducts outreach with expectant mothers in the community, letting them know about the program and encouraging them to attend during their pregnancy for social and emotional support and to learn from the other new mothers in the group.

While medically-supported births are not available in either Tennant Creek or Borroloola there are nurses and doctors within the community who can provide support during the pre- and post-natal care period.

There can be logistical challenges to accessing these supports (lack of transport) and there may also be a lack of culturally-informed practioners available at any one time which can act as a deterrent to making and attending appointments. While these health roles typically receive ongoing funding, there can also be lengthy periods of vacancies between contracts to recruit new professionals into the community.

An example of some of the activities that the Indi Kindi educators could engage in would be:

- providing transport and social, cultural and emotional support to women for health clinic visits and check-ups during pregnancy to identify and manage any potential risks;
- providing advice on positive eating and lifestyle choices that will contribute to a healthy birthweight;
- sharing knowledge around good hygiene, sleeping arrangements and feeding practices for infants.

# Scalability options

## Scaling the impact of the existing Indi Kindi programs

### Scaling support for maternal and infant care – investment profile

#### *Additional financial investment*

While the team resourcing structure would likely remain the same, additional hours may need to be budgeted for to support transportation and co-attendance at medical appointments.

Additional goods may need to be purchased if there is an increase in mothers and infants attending the program (infant-appropriate food, sensory play materials, kimbies/nappies), these costs would be small.

Should any of the educators wish to take on further learning to support the program extension (e.g. attending antenatal courses for the purpose of sharing back information), there may be an additional cost for the training itself and to support the educator to attend outside of their local community.

#### *Additional capability requirements*

Moriarty Foundation achieves its outcomes by bringing together best practices and expertise across both Indigenous and non-Indigenous knowledge domains – whether in sports science for the John Moriarty Football program, or early years learning for Indi Kindi.

Should the decision be made to expand the program's focus more deeply into maternal and infant care, the team does not currently have the relevant expertise within the team, and it would need to be sourced. This may come in the form of an additional part time specialist in the head office, equally it could come through a partnership with a Northern Territory hospital or university medical faculty who may be willing to invest their time.



Outdoor delivery in Tennant Creek, photo supplied by the Moriarty Foundation

# Scalability options

## Connection to place, risks and challenges and recommendations

### Connection to place

An important reflection on the three scalability options is the significance of connection to place. The process and benefits of place-based approaches can be scaled, as we have seen with the Tennant Creek program and its early successes, but *connection* to place is neither replicable or scalable. The Borrooloola Indi Kindi program will always be unique in that its foundations sit with John Moriarty's relationship to that landscape and in turn his relationship to that community. The Borrooloola relationship may last for generations and generations to come, but as a relationship unto itself it cannot be scaled to other communities.

To what degree this connection to place has enabled the continued success of the Borrooloola program over the course of 11 years is not known and cannot be known.

This is not to expect that Tennant Creek or any other community in which the Indi Kindi program may wish expand could not similarly see continued success over the course of the next decade and beyond. It is merely to highlight that there is an element to the success of Indi Kindi Borrooloola that cannot be planned for, or engineered, because it is relational, and cultural and spiritual and it is by definition, unique.

### Risks and challenges of expansion

As outlined in the introduction to this section 'why scale,' there is both an imperative and an opportunity to do so. The recommendations to the right-hand side of this page speak to a need to continue to explore all options.

This section on scalability has focused on issues of feasibility from an investment/capability and benefits perspective. It is also critically important to consider the risks and challenges associated with any form of scalability. Replicating the critical ingredients of success is achievable, but it is by no means straightforward. When the need in community is so great, it is difficult to limit the imagination of what could be achieved with the right investment and support. But the pathway forward for the Moriarty Foundation is one that must also be measured in its movements. Any efforts to expand the program will have to be carefully considered and approached.

This includes consideration of the rate of change. Building the program in Borrooloola has been the efforts of over a decade, including ensuring that local capacity to deliver the program could be sustainable and effective. The expansion to Tennant Creek has proven that it is possible to scale at a more rapid pace, depending on the local capacity, resources and funding, and other enabling factors such as an existing JMF program, which provides other infrastructure such as a Community Advisory Group. Scaling should also be considered against the impacts on the existing program, including support for educators from the Early Years Specialist, and other Moriarty Foundation head office staff.

A mitigation strategy against these risks would be to seek long-term, ongoing and committed funding for the program; allowing for strategic planning to build capacity, and enabling the scale to take place at an appropriate pace conducive to success. Ideally, a funding commitment of 7 years should be sought, in line with Productivity Commission recommendations.<sup>1</sup>

### Recommendations

It is recommended that the Moriarty Foundation continue to explore all three options and this report recognises that each have the potential to increase the total benefits to Aboriginal and Torres Strait Islander children, families, educators and communities that being driven by the program.









## Concluding Observations and Recognition

**This final section provides some concluding remarks in regard to strengthening the impact of the Indi Kindi program and its place in the Australian policy landscape.**

**The report concludes by recognising the many individuals whose time and expertise contributed to the development of this report.**

# Concluding observations

## Indi Kindi models an approach through which stronger outcomes could be delivered to all Australian children

### Other considerations for the future

Beyond the potential for scaling, the research and analysis conducted to inform this report has given rise to a number of findings and observations regarding the potential to strengthen the program's impact into the future, chief among these are that:

- There is an opportunity to maximise the benefits for children by increasing exposure to the program.
- Strengthening the basis upon which the SROI to Indi Kindi can be demonstrated requires an enhanced approach to evaluation and monitoring and, critically, to collecting the data that these endeavours require.
  - Not only will this increase capacity to demonstrate the program's impact, it will provide valuable information to support its continuous improvement. Improvements to data collection will sit alongside the broader strategy to build on the Program's strengths and continue to enhance its design, delivery and impact.

### Concluding observations

All Australians want their children and future generations to thrive in the early years and have the best possible choices available to them throughout their lives. The Aboriginal communities of Borroloola are no different. Indi Kindi is a program that can support the children of Borroloola to thrive in their early years and set them up to have the best possible choices available to them throughout their lives. Not only that, but it can support the children of other communities to thrive. Indeed, there would appear much that early years policy and practice can learn from Indi Kindi and the ingredients that underwrite its success.

All indications point to Indi Kindi delivering sizeable benefits to the investment that is made in the program. Those that can be quantified provide a conservative view to the value of these benefits. Their true value is no doubt considerably greater.

As we look to major reform in the national ECEC landscape – including greater levels of integration and against a backdrop of needing to do considerably better in driving improved outcomes for Indigenous children – we should look to Indi Kindi for evidence of what works.





# Thank you

A final note of gratitude to everyone who supported this project.

Deloitte Access Economics would like to pay respects to the following groups of people and individuals whose contributions to this project have been significant:

- **The communities of Borroloola and Tennant Creek.**

In particular, the Indi Kindi educators Andrea, Annika, Amanda, Deandra, Kate, Keara and Vicki, who generously gave their time and knowledge to this research, and facilitated the observations of Indi Kindi and consultations of educators, the community and other local professionals. Without their contributions, this report would be undoubtedly be much less rich, to the detriment of those working to support Aboriginal children, and to sharing best practice and knowledge with Australia's remote communities. Moreover, without their dedication and passion for their work and the children they support, there would not be a story to tell.

The John Moriarty Football staff at Borroloola, who contributed to the research and supported an extended visit from the research team to Borroloola.

The Community Advisory Group at Borroloola, who not only approved this research project, but met with the research team and held a meeting in two languages, for the benefit of the research team.

Other health, education and child care professionals in Borroloola and Tennant Creek who met with the research team and shared their experiences and expertise.

- **Dr Dan Cloney, Research Director at the Australian Council of Educational Research**, who provided expert advice on the project, in particular on the relative merits and suitability of assessment tools, and the approach to identifying, framing and quantifying educational outcomes for children.
- **The Moriarty Foundation team**, who facilitated this project. Ros and John's commitment to sharing the Indi Kindi story and to driving outcomes for children in Borroloola has driven this research. Jessica Horne-Kennedy, Indi Kindi's Early Years Specialist, and Jamie Morriss, JMF Program Director, supported the research team in every stage of the project, including the trip to Borroloola.
- **The Paul Ramsey Foundation**, which funded the development of this report and provided early advice on methodology through their evaluation team.
- **The Allan and Gill Grey Foundation**, which also contributed to funding this report.



Hand painted bench for JMF spectators in Borroloola

# Appendices

# Appendix A: Indi Kindi data details

## Program data

Indi Kindi program data has been collated in various formats over time. Deloitte Access Economics was provided with:

- Daily attendance reports from 2016 to February 2018
- Weekly attendance reports from 2019-2021
- Daily attendance reports from 2022

The daily attendance reports from 2016 to February 2018 included daily session data with attendance records with children identified by name and children’s information, with some records including further information such as the neighbourhood they lived in and birth date; session data including staff reflections.

The weekly attendance reports from 2019-2021 provided overviews of weekly numbers of attendance for children and identification numbers for children.

The daily attendance reports from 2022 were provided as individual weekly spreadsheets with daily session data, which included session data such as attending children (identified by name), educators, location of the session, and some information on family members attending the session.

Deloitte Access Economics reconciled these data against revised identification numbers, including reconciling probable spelling errors. Where children were identified by only their first name, this was not possible. No reconciliation (by spelling or otherwise) was undertaken against the individual identification numbers used in the 2019-2021 data.

These data were then collated into overall weekly number of attendances per child, based on identification number. These data could then be analysed to establish attendance profiles over time.

For 2019 – 2021 data, the number of sessions delivered per week was derived from the maximum number of attendances by unique child per week, and therefore may be an underestimate of the number of actual sessions delivered.

## Family survey questions from 2018 and 2019

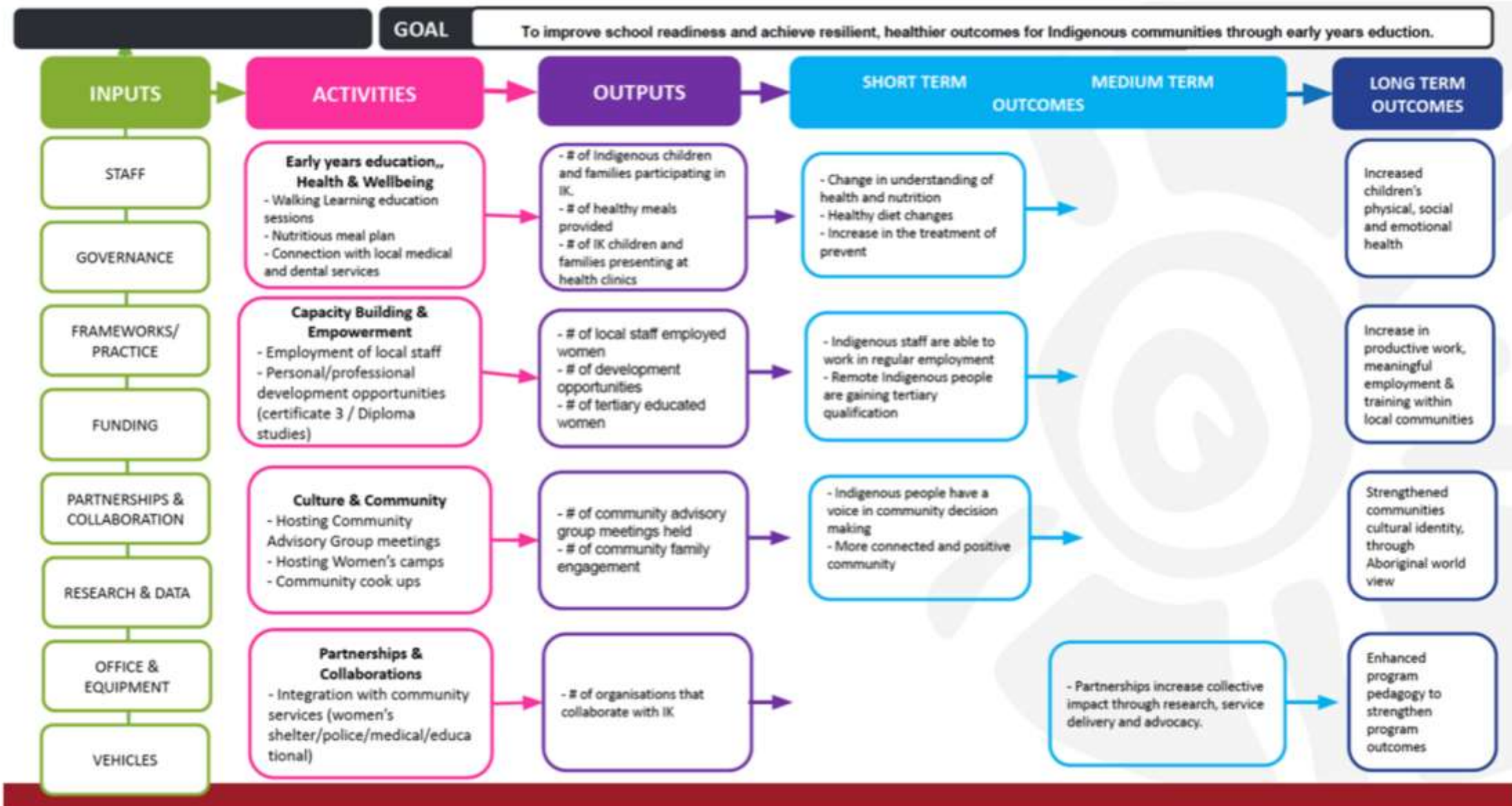
Table 9: List of family survey questions from 2018 and 2019

Question	2018 wording	2019 wording
1. Listening to others	Listening to others	
2. Following instructions	Following instructions	
3. Communicating	Speaking to others	Communicating with others to share their needs and ideas
4. Telling simple stories	Telling simple stories	
5. Being interested in learning	Being interested in learning	Being interested in learning
6. Sharing and playing with others	Sharing and playing with other kids	Playing with others showing respect and feelings for others
7. Trying to problem solve	Trying new activities	Trying to problem solve
8. Trying to do things by themselves	Trying to do things by themselves	Trying to do things by themselves
9. Doing things with their hands	Doing things with their hands	
10. Being physically active	Running, jumping and balancing	Being physically active
11. Learning about the importance of washing hands and faces		Learning about the importance of washing hands and faces
12. Being part of community events and accessing local services		Being part of community events and accessing local services
13. Making healthy food and drink choices		Making healthy food and drink choices



# Appendix B: The UNICEF Theory of change

Figure 15: UNICEF Theory of Change (Simplified)



# Appendix C: AEDC data

The AEDC geography was updated in order to match the Australian Statistical Geography Standard (ASGS) released by the Australian Bureau of Statistics (ABS) in 2021, including Local Government Areas (LGAs) and statistical areas 2 and 3 (SA2, SA3). The AEDC also reports at a 'community' and 'local community level', which use statistical area 1 (SA1) building blocks as boundaries.

An AEDC community is a geographic area made up of AEDC Local Communities, usually a region's local government area. The AEDC community for Borrooloola is 'Gulf' (indicated by the thin outlined area on the image to the right). This corresponds to the SA2 region 'Gulf'.

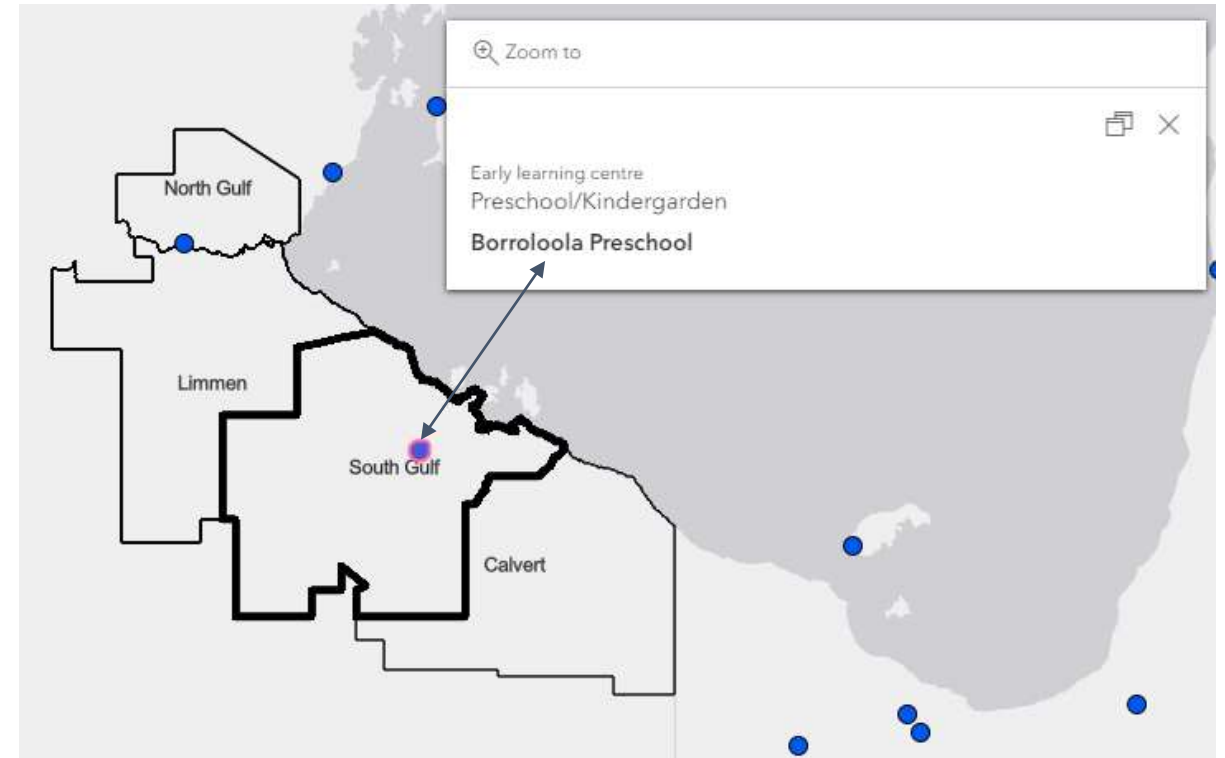
An AEDC local community is a small area locality within an AEDC Community, usually a suburb. The AEDC local community for Borrooloola is 'South Gulf' (indicated by the thick outlined area on the image to the right).

For the AEDC local community of 'South Gulf', the only Early learning centre is Borrooloola Preschool (indicated by the blue dot and pink outline on the image to the right), and the only school is Borrooloola School. AEDC collects data for children based on their place of residence in the first year of school. Given the distance to other learning centres, it is very likely that children living in South Gulf attended Borrooloola Preschool (if they participated in preschool). The data may pick up some instances where (1) children may have moved, or (2) children may have attended another preschool outside of South Gulf, however the effects are likely to be minor. Therefore, this report assumes that AEDC data collected for South Gulf applies to Borrooloola.

The South Gulf AEDC community is made up of multiple SA1 regions, and is smaller than the Gulf SA2 region. 10 of 11 SA1 regions in the Gulf SA2 region are SEIFA decile 1, except for a small SA1 covering the Borrooloola town proper (not the neighbourhoods around Borrooloola), which is SEIFA decile 2.

Where the SEIFA ranking is used for South Gulf, this is the SA2 SEIFA ranking applied to the AEDC local community, combining the more granular data from the AEDC with the lowest level of ABS data available (SA2).

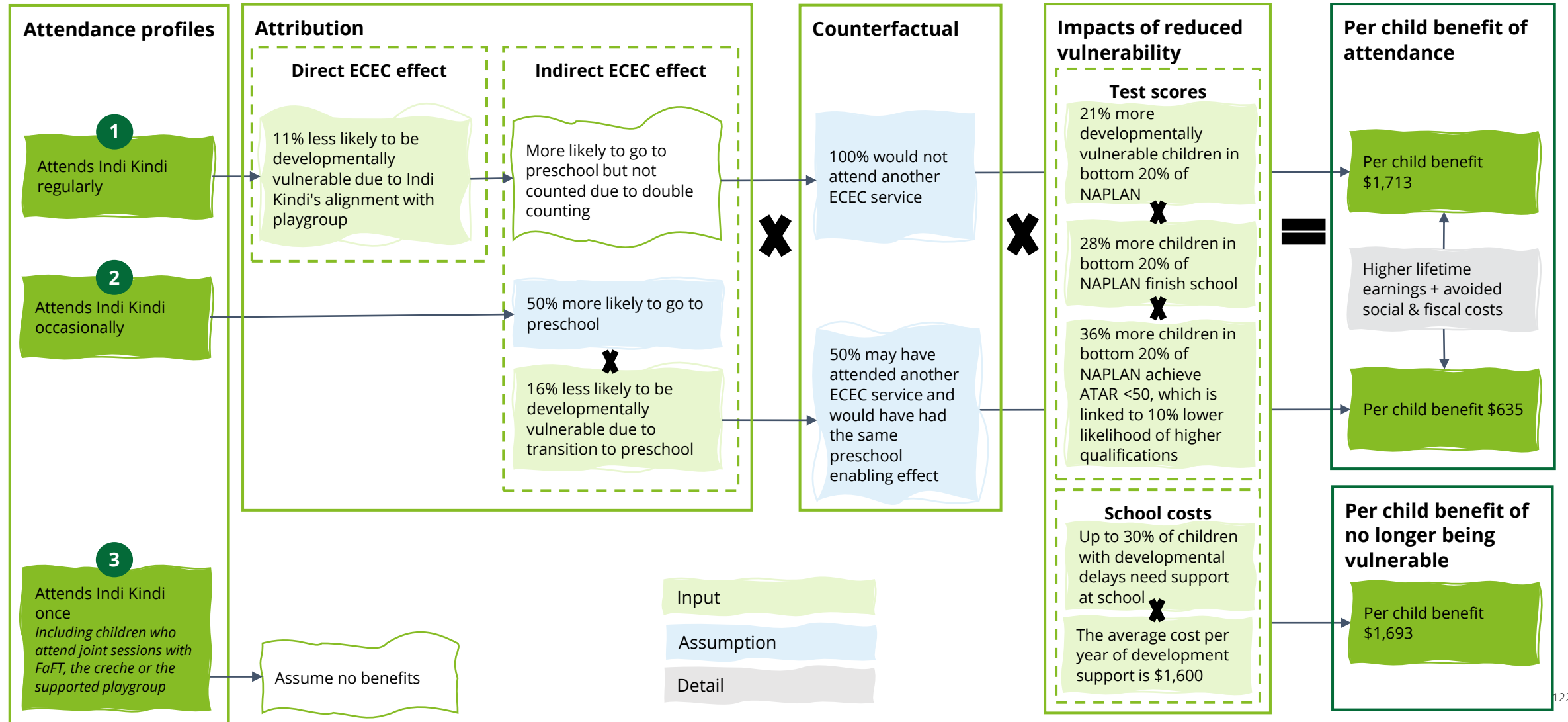
Figure 16: AEDC Community boundaries



# Appendix D: Quantifying educational outcomes

## Linking attendance profiles at Indi Kindi to reduced developmental delays and flow-on outcomes

Figure 17: Monetising educational outcomes





# Appendix D: Quantifying educational outcomes

## Development delay and schooling outcomes

### Impact of developmental vulnerability (AEDC scores) on test scores

There is limited evidence linking the impact of positive developmental outcomes (using AEDC domains) to school and/or test performance with particular reference to Indigenous students.

One study conducted by He VY et al (2021) in the Northern Territory linked AEDC outcomes to preschool attendance and Year 3 NAPLAN outcomes.<sup>1</sup> The study concludes a positive relationship between AEDC outcomes and Year 3 academic outcomes with results varying between Aboriginal and non-Aboriginal children. However, aspects such as remoteness, socioeconomic status and English proficiency have compounding negative impacts on Year 3 educational outcomes, most notably for Aboriginal children.

	Aboriginal	non-Aboriginal
<b>Direct path model</b>		
Preschool attendance	+0.17	+0.04*
Self regulation and executive function (AEDC indicator)	+0.21	+0.37
<b>Mediation model</b>		
Preschool attendance – indirect effects	+0.20	+0.05*
Self regulation and executive function (AEDC indicator) – indirect effects	+0.19	+0.38
Early literacy and numeracy skills	+0.23	+0.54
Early years attendance	+0.29	+0.05*
Remoteness	-0.11	+0.06*
Socioeconomic status	+0.09	+0.14
Non-English speaking	-0.21	+0.03*

\* *Not statistically significant*

Outside of the Indigenous context, a general study undertaken by Brinkman et al. (2013) finds that a child that is considered developmentally vulnerable on any one AEDC domain is 2.03 times more likely to score within the bottom 20th percentile of the NAPLAN in year 7.<sup>2</sup> In particular, 41% of those who are considered developmentally vulnerable are found to be in the bottom 20% of NAPLAN results, compared to 20% for the average population (a difference of 21%). This analysis is used in the monetisation of educational outcomes.

### Impact of test scores on school completion

Marks et al (2014) assess the relationship between NAPLAN results and school completion in Victoria, finding that:

- The average likelihood of finishing Year 12 is 63%
- The likelihood of finishing Year 12 if in the bottom 20% NAPLAN in Year 9 is significantly lower, at 35% (establishing a difference of 28%).<sup>3</sup>

For the purposes of this analysis, this relationship is expected to be consistent with the relationship between AEDC vulnerability and NAPLAN scores in year 9 (i.e. the conversion of Year 7 NAPLAN scores to Year 9 NAPLAN scores is assumed to be one-to-one).

### Impact of test scores on university qualifications

Huong & Justman (2014) found that a child that scored in the bottom 20th percentile in the NAPLAN in year 9 is 1.7 times more likely to have an Australian tertiary admission rank (ATAR) of 50 or below (36% higher chance, the difference between 91% and 55%). Again, it is assumed that Year 7 and Year 9 NAPLAN scores can be mapped one-to-one.<sup>4</sup>

Finally, Huong & Justman (2014) also show with Department of Education data that a ATAR of below 50 is associated with a 42% of completing a higher educational degree, compared to a 52% chance of the population (a difference of 10%).<sup>4</sup>

Source:

<sup>1</sup> He VY, Nutton G, Graham A, Hirschhausen L, Su J-Y (2021) Pathways to school success: Self-regulation and executive function, preschool attendance and early academic achievement of Aboriginal and non-Aboriginal children in Australia's Northern Territory. PLoS ONE 16(11): e0259857. <https://doi.org/10.1371/journal.pone.0259857>

<sup>2</sup> Brinkman, S., Gregory, T., Harris, J. et al. Associations Between the Early Development Instrument at Age 5, and Reading and Numeracy Skills at Ages 8, 10 and 12: a Prospective Linked Data Study. Child Ind Res 6, 695–708 (2013). <https://doi.org/10.1007/s12187-013-9189-3>

<sup>3</sup> Gary Marks (2014) Reaching Year 12 in Victoria, Australia: student and school influences, Educational Research and Evaluation, 20:5, 333-347, DOI: 10.1080/13803611.2014.964262

<sup>4</sup> Houng, B. and Justman, M., Melbourne Institute Working Paper Series, NAPLAN Scores as Predictors of Access to Higher Education in Victoria (2014) <<https://melbourneinstitute.unimelb.edu.au/downloads/working-paper-series/wp2014n22.pdf>>

# Appendix D: Quantifying educational outcomes

## Schooling outcomes and lifetime earnings and avoided costs

### Lifetime earnings and employment outcomes

Biddle (2007) predicts Indigenous males who complete year 12 have an internal rate of return of +0.24 compared to those who do not complete year 12 while Indigenous females have an internal rate of return of +0.18.<sup>1</sup>

Additionally, this research notes predicted employment and income benefits of education are lower for those in remote areas compared to those in non-remote areas, attributing this difference to smaller labour markets and low demand for labour in remote communities.

A more recent study into the earned income gap for Indigenous Australians by Birch & Marshall (2018) found a positive relationship between level of educational attainment and lifetime earnings. After controlling for job characteristics and subjecting the results to an exponential, the model revealed strong returns to education for Indigenous Australians who earn higher education qualifications, as well as returns to completing Year 11 and Year 12.

Additional studies support the theory of further study positively impacting projected lifetime earnings and/or employment outcomes of Indigenous persons. The majority of this evidence base attributes the attainment of a tertiary education qualification to stronger employment and/or earnings outcomes when compared to completing high school only.

- Savvas et al (2011) find that for Indigenous women, obtaining a degree returned a +16 percentage point probability of being in the labour force and a +19 percentage point probability with being employed compared to women with year 10 or 11 schooling with no other qualification. The increase in the probability of being employed associated with having a year 12 plus a non-school qualification, compared to those with year 10 or 11 education only, amounted to +17 percentage points. Indigenous men with year 12 plus a non-school qualification were +3 percentage points more likely to be in the labour force, and +6 percentage points more likely to be employed compared to Indigenous men with no non-school qualifications.
- Taylor et al (2012) find differences in the average weekly personal income for Indigenous persons unemployed, employed and employed with post-school qualifications.

Source:

<sup>1</sup> Biddle, N., Australian National University, *Does it pay to go to school? The benefits of and participation in education of Indigenous Australians* (2007) <<https://openresearch-repository.anu.edu.au/bitstream/1885/46223/6/02whole.pdf>>.

<sup>2</sup> Birch, E., and Marshall, D., *Revising the earned income gap for Indigenous Australian Workers: Evidence from a selection-bias corrected model* (2018) <[https://api.research-repository.uwa.edu.au/ws/portalfiles/portal/26816467/Birch\\_Marshall\\_2018\\_Revisiting\\_the\\_earned\\_income\\_gap.pdf](https://api.research-repository.uwa.edu.au/ws/portalfiles/portal/26816467/Birch_Marshall_2018_Revisiting_the_earned_income_gap.pdf)>.

<sup>3</sup> Savvas, A., Boulton, C., and Jepsen, E., Australian Government Productivity Commission, *Influences on Indigenous Labour Market Outcomes* (2011) <<https://www.pc.gov.au/research/supporting/influences-on-indigenous-labour-market-outcomes#:~:text=Results%20confirm%20findings%20from%20previous,employment%20and%20labour%20force%20participation.>>>.

<sup>4</sup> Taylor, J., Hunter, G., Yap, M. and Lahn, J., Australian National University, Centre for Aboriginal Economic Policy Research, *Higher Education and the growth of Indigenous participation in professional and managerial occupations* (2012) <[https://openresearch-repository.anu.edu.au/bitstream/1885/140387/1/CAEPRWP83\\_TaylorEtAl\\_0.pdf](https://openresearch-repository.anu.edu.au/bitstream/1885/140387/1/CAEPRWP83_TaylorEtAl_0.pdf)>.

<sup>5</sup> Lamb, S. and Huo, S., Mitchell Institute, *Counting the costs of lost opportunity in Australian education* (2017) <<https://www.vu.edu.au/mitchell-institute/educational-opportunity/counting-the-costs-of-lost-opportunity-in-australian-education>>.

In the quantification, findings from the Birch & Marshall (2018) study on the increasing probability of full-time employment based on highest level of education are applied to the additional earnings associated with Indigenous Australians working full-time as opposed to other working roles or not working. The calculation assumes a 40 year working lifetime and determines average lifetime earnings as a Net Present Value with a 3% discount rate.

### Avoided social and fiscal costs

Completing Year 12 is associated with a range of other outcomes aside from lifetime earnings, including improved health and risky behaviours. As shown in the analysis on the left, early school leavers are more likely to be in full-time employment, which leads to reduced spending on welfare (avoided fiscal costs). Similarly, school completion is associated with savings to the health and justice systems, related to those who finish high school being less likely to be admitted to hospital, or participate in crime or face imprisonment (avoided social costs).

Lamb and Huo (2017) quantified both the avoided fiscal and social costs associated with school completion over an individual's lifetime. In Net Present Value terms and 2023 dollars, they find:

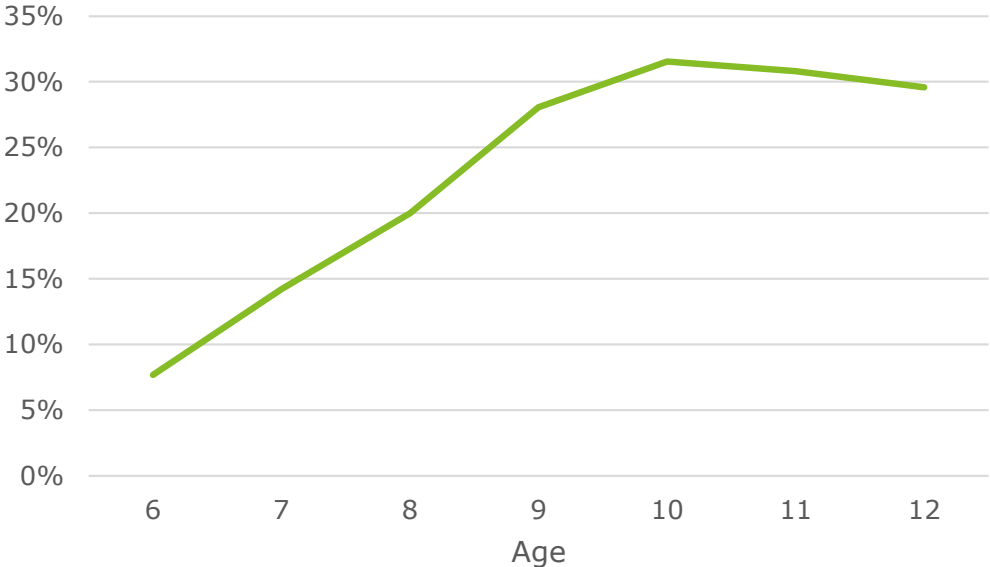
- \$55,241 in avoided social costs per person who completes school
- \$133,553 in avoided fiscal costs per person who completes school.

# Appendix D: Quantifying educational outcomes

## Development delay and avoided school disability supports

Reduced developmental delays also lowers government funding for development supports. However, not all children with an identified developmental delay require substantive in-school supports. Data from the Survey of Disability, Ageing and Carers (SDAC) shows the proportion of children with developmental delays, by age, that require substantive in-school supports.

Chart 25: Proportion of children with developmental delays requiring substantive in-school supports



Source: SDAC (2018) and Deloitte Access Economics (2023).

The cost of in-school supports is derived from Federal government disability funding data. There are four categories of disability student funding dependent on the level of assistance required: quality differentiated teaching practices (QDTP), supplementary, substantial and extensive.

The table below provides the average annual cost of assistance for students with disabilities, including relative to the average student. It is assumed that children with developmental delays require supplementary or substantial funding.

	Average student	QDTP	Supplementary	Substantial	Extensive
<b>Average annual cost</b>	10,374	10,374	10,374	15,256	23,803
<b>Incremental cost (relative to average student)</b>	-	0	0	4,882	13,429

Substantial funding is provided for nearly 30% of children in the supplementary or substantial categories. This is used to determine the weighted average annual cost of these two categories relative to the average student, estimated as \$1,351. In 2023 dollars, this implies an annual cost of developmental support in schools of \$1,600 per student.

This is applied to the share of students with developmental delays requiring in-school supports over their first seven years at school (ages 6 to 12) to determine the Net Present Value of payments per child, equal to \$2,260.

Source:  
<sup>1</sup>Australian Bureau of Statistics, Disability, Ageing and Carers, Australia: Summary of Findings (2019) <<https://www.abs.gov.au/statistics/health/disability/disability-ageing-and-carers-australia-summary-findings/latest-release>>.  
<sup>2</sup>Australian Government, Department of Education, A review of current government approved system authorities' arrangements for funding of students with disability and common reform directions (2021) <<https://www.education.gov.au/quality-schools-package/resources/review-current-government-approved-system-authorities-arrangements-funding-students-disability-and>>.  
<sup>3</sup>Australian Curriculum, Meeting the needs of students with a disability (2023) <<https://www.australiancurriculum.edu.au/resources/student-diversity/meeting-the-needs-of-students-with-a-disability/>>.

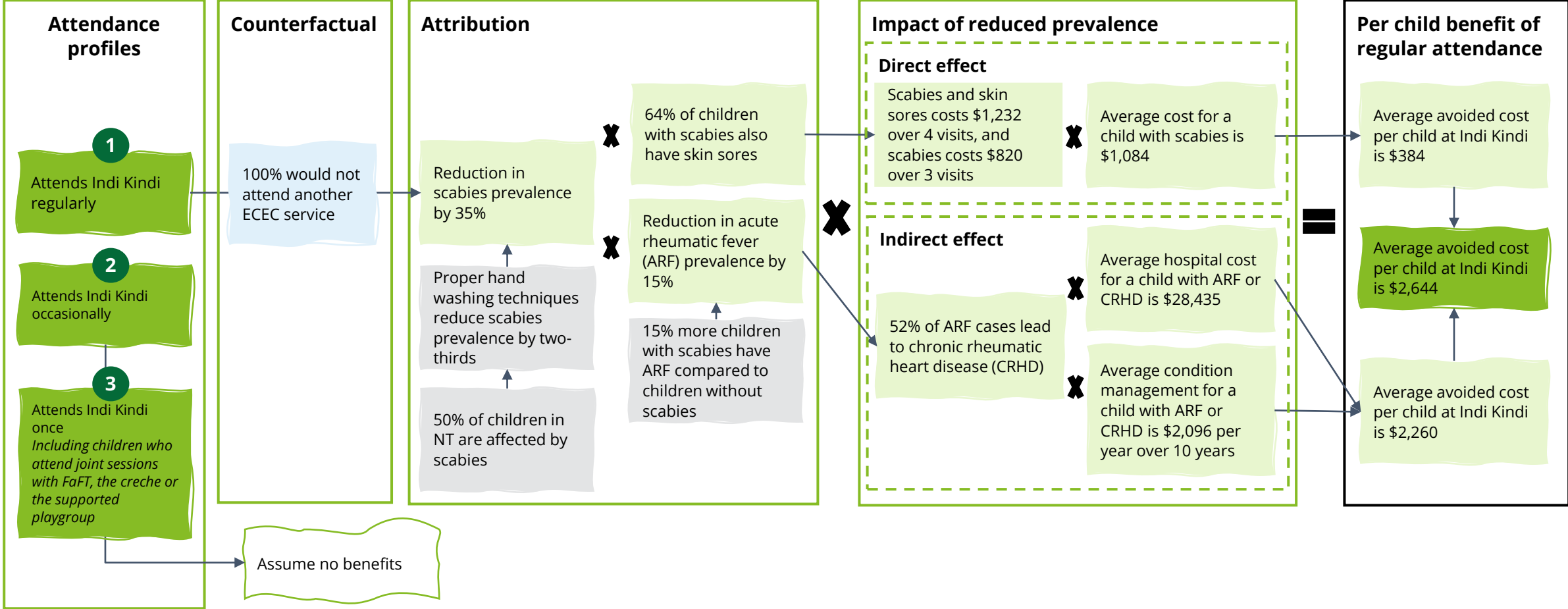


# Appendix D: Quantifying reduction in scabies and chronic conditions

## Linking attendance at Indi Kindi to improved hygiene and the reduced prevalence of scabies and chronic conditions

Input  
Assumption  
Detail

Figure 18: Monetising reduction in scabies and chronic conditions



# Appendix D: Quantifying reduction in scabies and chronic conditions

## Linking attendance at Indi Kindi to improved hygiene and the reduced prevalence of scabies and chronic conditions

### Direct costs

The direct costs associated with scabies and skin sores relate to diagnosis and treatment of scabies at the local primary health clinic.

Campbell et al (2022) calculated the health care cost of crusted scabies in Aboriginal communities in the Northern Territory, based on data from 30 government clinics in the Darwin, Arnhem Land and Katherine regions. The estimates from Campbell et al (2022) cannot be directly applied here as they are for adults with *crusted* scabies, a more severe form of scabies. However, two components of the study are useful proxies for the cost of diagnosing and treating any form of scabies; a clinic assessment costed at \$212 in \$2018 and permethrin cream costed at \$19. For children with scabies and skin sores, antibiotics are also required (valued at \$35).

Evidence also demonstrates that children with scabies attend clinic multiple times per year – 3 times for children with scabies alone and 4 times for children with scabies and skin sores.

Collectively, the average cost of treating a child with scabies for one year is estimated to be \$1,084.

### Indirect costs

The indirect costs associated with scabies relate to its association with acute rheumatic fever (ARF) and chronic rheumatic heart disease (CRHD). These costs are calculated using results from Cannon et al (2018), which estimated the prevalence and costs associated with ARF and CRHD.

Table 10: Severity of ARF and CRHD for children – eventual progression within 10 years

ARF or CRHD condition after 10 years	Percentage of people diagnosed with ARF
ARF only	48%
Any CRHD	52%
Mild CRHD (non-surgical)	32%
Severe CRHD (surgical)	20%

Source: Cannon et al (2018).

The prevalence of children with various forms of ARF from this table are applied to the costs associated with each type of condition, as presented below (figures from Cannon et al (2018) were inflated to \$2023). The unit costs demonstrate the significant additional cost of surgery for severe CRHD.

Table 11: Healthcare costs associated with ARF and CRHD for children

ARF or CRHD condition	Inpatient costs (per hospital episode)	Management costs (per year)
ARF only	\$13,983	\$-
Mild CRHD (non-surgical)	\$13,662	\$2,372
Severe CRHD (surgical)	\$86,756	\$4,540

Source: Cannon et al (2018).

Medical management is recommended for at least 10 years. Discounting this flow of costs at a 3% discount rate, the average weighted cost associated with a child with ARF or CRHD is \$42,654. For a child with scabies, based on the probability of being diagnosed with ARF, this translates to an expected avoided cost of \$6,381.

### Total costs

Combining the direct and indirect costs results in an expected avoided cost of \$2,604 related to reduced scabies prevalence for a child who regularly attends Indi Kindi.

Source:

<sup>1</sup>A,Campbell, M., Linden, N., Gardner, K., et.al, *Health care cost of crusted scabies in Aboriginal communities in the Northern Territory, Australia* (2022) <<https://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0010288>>.

<sup>2</sup>The Royal Australasian College of Physicians Proposal to list Benzathine Penicillin G on the Pharmaceutical Benefits Scheme Prescriber Bag List <[https://www.racp.edu.au/docs/default-source/advocacy-library/pharmaceutical-benefits-scheme-approves-inclusion-of-benzathine-penicillin-in-doctor-s-bag.pdf?sfvrsn=e0ce1b1a\\_4](https://www.racp.edu.au/docs/default-source/advocacy-library/pharmaceutical-benefits-scheme-approves-inclusion-of-benzathine-penicillin-in-doctor-s-bag.pdf?sfvrsn=e0ce1b1a_4)>.

<sup>3</sup>Kearns,T., Clucas,D., Connors,C., et al., *Clinic Attendances during the First 12 Months of Life for Aboriginal Children in Five Remote Communities of Northern Australia* (2013) <<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0058231>>.

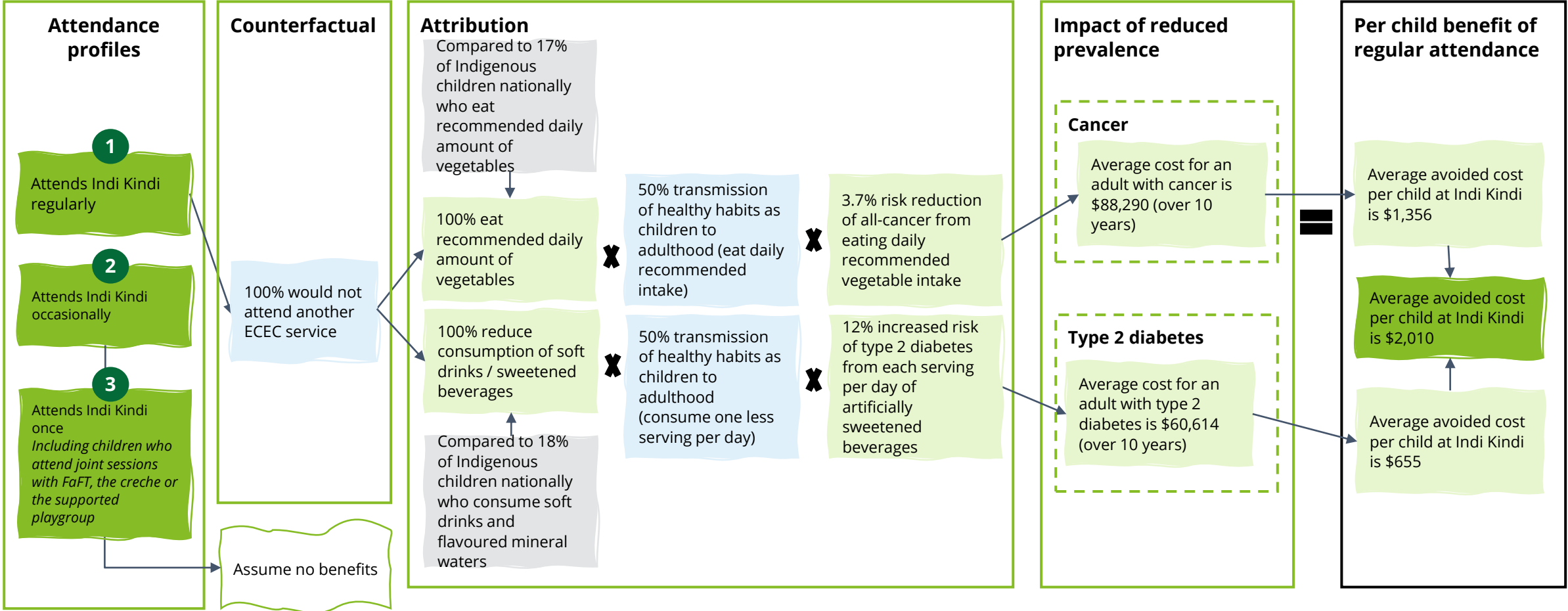
<sup>4</sup>Cannon J., Katzenellenbogen JM., Wyber R., et.al, *The cost of inaction on rheumatic heart disease: Technical report of the predicted human and economic toll of rheumatic heart disease for Aboriginal and Torres Strait Islander people by 2031* (2018) <<https://endrhd.telethonkids.org.au/siteassets/media-docs---end-rhd/research-docs/the-cost-of-inaction-on-rheumatic-heart-disease---technical-report.pdf>>.

# Appendix D: Quantifying improved healthy habits and chronic conditions

## Linking attendance at Indi Kindi to improved eating and drinking habits and the reduced prevalence of type 2 diabetes and cancer

Input  
Assumption  
Detail

Figure 18: Monetising reduction in scabies and chronic conditions





# Appendix D: Quantifying improved healthy habits and chronic conditions

## Linking attendance at Indi Kindi to improved eating and drinking habits and the reduced prevalence of type 2 diabetes and cancer

### Fruit, vegetable and soft drink consumption for Indigenous children

At a national level, the Australian Institute of Health and Welfare found that 17% of Indigenous children aged 2 to 4 years eat the recommended daily amount of vegetables. For Indigenous children aged 4 to 14 years, this falls to 3%.<sup>1</sup>

Nearly 1 in 5 (18%) Indigenous children aged 2 to 4 years consume soft drinks and flavoured mineral waters, rising to 37% for Indigenous children aged 4 to 14 years.<sup>1</sup>

### Transmission of healthy habits as children, to adulthood

The literature emphasises the importance of developing healthy habits in childhood for habits in adulthood. Kelder et al (1994) used longitudinal tracking of over 2,000 individuals from childhood into adulthood to demonstrate that food choices from childhood tend to largely remain in different stages of adulthood.<sup>2</sup> Lien et al (2001) also examined the stability of eating behaviour through a longitudinal cohort survey, and found that 50-70% of individuals had the same consumption patterns across four food groups (including fruit and vegetables) from ages 14 years to 21 years.<sup>3</sup>

### Impact of fruit and vegetable consumption on cancer incidence

A number of studies measure the risk reduction for cancer incidence associated with fruit and vegetable consumption, including Wang et al (2014), Wang et al (2015), Aune et al (2011), and Deloitte Access Economics (2016).<sup>4</sup> The latter uses many of these studies to estimate a 3.7% risk reduction for all-cancer from consuming the daily recommended vegetable intake (375 grams) compared to base consumption (174 grams).

### Impact of soft drink consumption on type 2 diabetes incidence

Similarly, a range of literature estimates the impact of soft drink consumption on the incidence of type 2 diabetes.<sup>5</sup> Hirahatake et al (2019) controlled for a range of confounding factors such as lifestyle, diet quality, and dieting behaviour, to find a 12% increased risk of type 2 diabetes from each serving per day of artificially sweetened beverages.

### Health system costs of cancer

Cancer care is increasingly expensive from a health system perspective, comprising Medicare and pharmaceutical claims, inpatient hospital episodes and ED presentations. Goldsbury et al (2018) estimated the average cost of cancer care per person using Australian health system data, finding that across all cancers, initial treatment following diagnosis is \$33,944 (\$2013), with subsequent years continuing to cost around \$4,000 (\$2013).<sup>6</sup>

For consistency with the scabies calculation, these costs are estimated over a 10 year period, and then discounted at a 3% discount rate. In 2023 dollars, this reflects a net present value per person with cancer of \$88,290.

### Health system costs of type 2 diabetes

Lee et al (2013) estimated the health system and non-health system costs per person of diabetes management in Australia.<sup>7</sup> Health costs included ambulatory services, hospitalisation and medication, while non-health costs included transport to hospital, supported accommodation and home supports. They found that the annual cost person for those with known diabetes was \$4,390 (\$2005). In 2023 dollars over a 10 year period, this reflects a net present value of \$60,614.

### Total costs

Combining both costs results in an expected avoided cost of \$2,010 related to improved eating and drinking habits for a child who regularly attends Indi Kindi.

Source:

<sup>1</sup> [Aboriginal and Torres Strait Islander Health Performance Framework](#)

<sup>2</sup> <https://pubmed.ncbi.nlm.nih.gov/8017536/>

<sup>3</sup> <https://pubmed.ncbi.nlm.nih.gov/11522162/>

<sup>4</sup> Wang et al 2014 , Wang et al 2015 , Aune et al 2011 , Deloitte Report

<sup>5</sup> Malik et al 2010 , Qin et al 2020 , Hirahatake et al 2019

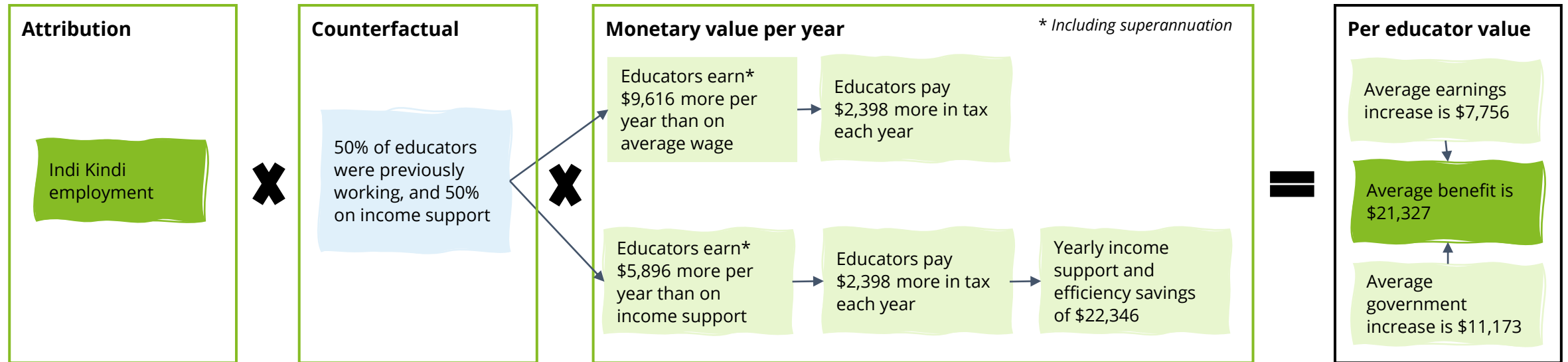
<sup>6</sup> Health services costs for cancer care in Australia: Estimates from the 45 and Up Study | PLOS ONE

<sup>7</sup> <https://pubmed.ncbi.nlm.nih.gov/23298663/>

# Appendix D: Quantifying educator additional earnings benefit and associated government savings

## Linking employment at Indi Kindi to higher earnings and tax revenue and a reduction in government spending on income support

Figure 19: Monetising educator additional earnings benefit and associated government savings



Input

Assumption

Detail

### Notes on monetisation:

- Wages, superannuation and tax payments for Indi Kindi employees are based on averages from 2023 weekly payroll statements for Borroloola workers.
- Wages earned outside of Indi Kindi for the counterfactual are based on average weekly income in the Gulf region from the 2021 Census. Superannuation and tax payments are calculated based on the wage figures (adjusted for inflation) using an online Pay Calculator.
- Income support earnings for the counterfactual are based on the fortnightly Jobseeker payment for a single adult with no children. A reduction in welfare expenditure also has an efficiency gain in the economy due to less taxation. In this analysis, there is an estimated to be a \$0.24 efficiency gain in the economy due to a \$1.00 decline in taxation associated with reduced demand for welfare supports.

Source:

<sup>1</sup>2021 Borroloola, Census Aboriginal and/or Torres Strait Islander People QuickStats | Australian Bureau of Statistics' <<https://abs.gov.au/census/find-census-data/quickstats/2021/IARE705001>>

<sup>2</sup>Mortgage Monster, *Pay Calculator* (2023) <<https://paycalculator.com.au/>>.

<sup>3</sup>Australian Government, Services Australia, *Jobseeker Payment* (2023) <<https://www.servicesaustralia.gov.au/how-much-jobseeker-payment-you-can-get?context=51411>>.

<sup>4</sup>Harrison, M. (2013). A Critique of the Productivity Commission's Cost-Benefit Analysis in the 'Disability Care and Support' Report. *Journal of Policy Analysis and Reform*, 20(2), 77-88.

# Appendix D: Quantifying educator life satisfaction

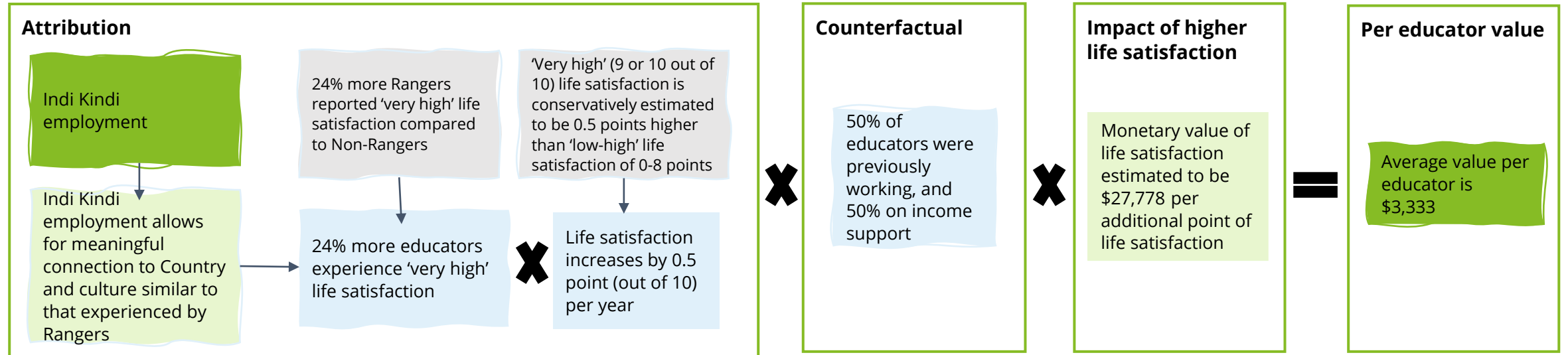
## Linking employment at Indi Kindi to improved life satisfaction related to connection to country

Input

Assumption

Detail

Figure 20: Monetising educator life satisfaction



### Life satisfaction quantification

The increase in life satisfaction uses a proxy from a study on Indigenous Ranger employment and life satisfaction, explored in more detail on page 74. In the study, Rangers reported 'very high' (9-10 on a 10 point scale) life satisfaction 24 per cent more than non-Rangers (after controlling for other variables). This increase from low-high (0-8 on a 10 point scale) to very high was conservatively estimated as a 0.5 point increase on a 10 point scale, in the absence of more detail on the average increase in points associated with Ranger employment.

### Life satisfaction monetisation

It is important to note that this valuation does not represent real additional money to the Indi Kindi educators, but aims to translate the value of life satisfaction into a standardised measure (dollars). It uses a central estimate of monetary value determined by the UK Treasury and Social Impacts Task Force, calculated using the value of a Quality Adjusted Life Year (QALY) and willingness to pay research, with a linear conversion (i.e. a constant unit value per point increase of life satisfaction). The value determined by the UK Treasury of £13,000 (Low: £10,000, High £16,000), was converted to \$2023 values. The value reflects the equivalent amount of money an individual would be willing to give up to maintain that level of life satisfaction.



# Appendix E: Learning styles in Indigenous and Western contexts

## 'Two-way'/'Both-ways' learning

In the **Indigenous context**, learning is rooted in Aboriginal and/or Indigenous knowledge systems, which have been passed down through generations through oral traditions, storytelling, and lived experiences. Some key aspects of Aboriginal education and knowledge include<sup>1</sup>:

- **Connection to Land and Environment:** Indigenous cultures have a profound connection to the land and the environment. The teachings and knowledge are deeply intertwined with the natural world, recognizing the importance of sustainability and the interconnectedness of all living beings.
- **Oral Tradition and Storytelling:** Knowledge is often transmitted through oral tradition, with elders sharing stories, myths, and histories that carry important moral and cultural lessons. These stories serve as valuable educational tools.
- **Cultural Identity and Language:** The preservation of language and cultural identity is central to Indigenous education. Language is more than a means of communication; it carries cultural values, knowledge, and ways of thinking.
- **Holistic Education:** Indigenous education values a holistic approach to learning, emphasizing the interconnectedness of physical, emotional, spiritual, and social aspects of life.
- **Community and Elders' Involvement:** Learning takes place in the context of the community, and elders play a significant role as knowledge holders and mentors.

In the **Western context**, education is largely influenced by the scientific method, empirical evidence, and a focus on individual achievement. Some key aspects of Western education and knowledge include<sup>2</sup>:

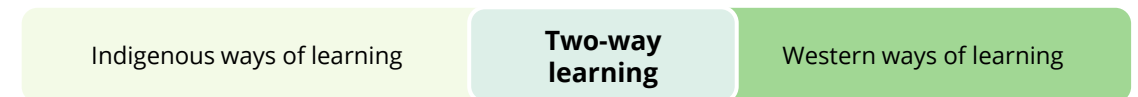
- **Empirical Inquiry:** Western education emphasizes the scientific method, critical thinking, and evidence-based learning.
- **Curriculum Standards and Subject Specialization:** Education is organized into formalized curricula with defined learning objectives, and subjects are often taught in isolation from one another.
- **Text-Based Learning:** Written texts, textbooks, and academic literature are primary sources of knowledge in Western education.

- **Individual Achievement:** Success in Western education is often measured through individual academic performance and standardized testing.
- **Classroom-Centred Learning:** Learning typically occurs within the classroom, with teachers as the primary source of knowledge.

**Two-way' or 'Both-ways'** learning refers to a model of education that incorporates both Indigenous knowledge and Western knowledge systems.<sup>3</sup> This approach recognizes the value of both Indigenous and Western knowledge systems and seeks to integrate them in a mutually beneficial way, creating a synergistic approach to education. The goal is not assimilation but mutual respect and understanding.

- **Integrating Aboriginal Knowledge:** Indigenous knowledge, perspectives, and practices are integrated into the curriculum across various subjects, enriching the learning experience for all students.
- **Language and Cultural Revitalization:** Efforts are made to preserve and revitalize Indigenous languages, making them an integral part of the learning process.
- **Respect for Different Learning Styles:** Teachers recognize and accommodate diverse learning styles, acknowledging that students may have different strengths and preferences in how they learn.
- **Community Engagement:** The community, including Elders and knowledge keepers, is actively involved in shaping the education experience.
- **Building Cultural Competence:** Non-Indigenous students and educators are educated about Indigenous history, culture, and perspectives, promoting cross-cultural understanding.
- **Nature-Based Learning:** Incorporating land-based learning and environmental education into the curriculum allows for a deeper connection to the natural world.

Figure 20: 'Two-way'/'Both-ways' learning



Source:

<sup>1</sup>Queensland Government Department of Education and Training, *Embedding Aboriginal and Torres Strait Islander Perspectives in Schools*, A guide for school learning communities (2011)

<[https://earlychildhood.qld.gov.au/fundingAndSupport/Documents/eatsips\\_2011.pdf](https://earlychildhood.qld.gov.au/fundingAndSupport/Documents/eatsips_2011.pdf)>.

<sup>2</sup>Stinson, J., Lusic, E., Murphy, T., Ryan B. et.al, University of Guelph, Social Sciences and Humanities Research Council of Canada, *What are Indigenous and Western Ways of Knowing?* (2018) <<https://www.criaw-icref.ca/images/userfiles/files/Fact%20Sheet%202%20EN%20FINAL.pdf>>.

<sup>3</sup>Batchelor Institute, *Both-ways learning* (2023) <<https://www.batchelor.edu.au/about/both-ways-learning/>>.

# Appendix F: Comparison of Indi Kindi to ECEC models – family day care

Indi Kindi offers a family-like setting, with many educators related to children and families, and a high ratio of educators to children

## Family Day Care

Family Day Care (FDC) is education and care that is provided by a professional educator in their own home. Like Centre Based Care, it is regulated under the National Quality Framework and eligible for the Child Care Subsidy (CCS), as an approved service type. In Family Day Care, families and carers also do not stay with their child or children. Family Day Care educators are required to have a Certificate III in Child Care, and Family Day Care centres have lower ratios of children to educator. They operate with the support of a Family Day Care Coordinator, who can support up to 15 services. Some educators may have an assistant educator, who can support or stand in place of the educator to provide transport.

Family Day Care can be lower cost than Centre Based Care and provide more flexible arrangements for families. The recent ACCC Inquiry into Child Care report found that the less advantaged an area, the higher the share of family day care. However, there are no Family Day Care services in Borroloola and the ACCC Inquiry also noted that there is a trend towards fewer FDC services in Australia in recent years.

## Differential benefits

Benefits include that parents may feel more comfortable to use FDC as it feels closer to a home environment.<sup>1</sup> FDC may also offer more flexible hours than other forms of care, which can suit family's working arrangements more.

Source:

1. The Front Project. (2021). Work and play: Understanding how Australian families experience early childhood education and care.

Legend:

	Program specific
	Similar to Indi Kindi
	Different to Indi Kindi

## Key similarities and differences to Indi Kindi

Educational program and practice	
	Aligned to the Early Years Learning Framework
Holistic health and development	
	Service specific, but less likely to integrate with health services and visiting professionals
Staffing	
	Required to have a Certificate III in Child Care
	Required to have first aid training
	Team of staff to cover for sick leave, Sorry Business and other commitments
	High educator to child ratio (1 educator to 4 children under school age, including educator's own)
	Local educators
Community engagement and governance	
	Less likely to have community-based governance structure
Accessibility and eligibility	
	Parents need to apply for CCS to access low cost/free care
	Parents and family members not able to attend with children
	Transport may be provided depending on the service, but may include an additional fee

# Appendix F: Comparison of Indi Kindi to ECEC models – supported playgroups

Indi Kindi is like some supported playgroups, which have diverse programs and models, and offers a high quality version that can be higher intensity than other playgroup models

## Supported playgroups

Supported playgroups are facilitated by a paid and qualified professional, often an early childhood educator or allied health professional, and provide targeted support to particular cohorts of families and children. Families and carers attend with their children, and may be referred to a supported playgroup by various partner services, or enrol themselves.

Supported playgroups may run more frequently than community playgroups, but once a week for 2-3 hours is common.

## Differential benefits

Supported playgroups vary in their implementation, across various delivery models including varied dosage, curriculum or activities, locations, and target cohorts. However, there is evidence that 1) playgroups in general support developmental outcomes for children, and that supported playgroups can increase participation in playgroup, and that 2) specific supported playgroups have led to better developmental outcomes for children.

They differ from community-run playgroups in that families do not need to self-organise and administer the program, which can act as a barrier to playgroup delivery in communities experiencing disadvantage. The presence of a qualified professional can also support stronger developmental outcomes for children, as a way of ensuring quality delivery.

Bridging the gap between social interactions between parents and carers and programmatic interventions, they provide a non- or low-confrontational soft entry point to formal early childhood development (ECD) structures.

Legend:

	Program specific
	Similar to Indi Kindi
	Different to Indi Kindi

## Key similarities and differences to Indi Kindi

Educational program and practice	
	Program specific, with no defined curriculum or framework – playgroups can choose their own set of activities or pedagogy
Holistic health and development	
	Program specific
Staffing	
	Qualified professionals
	Not required to have or be working towards a Certificate III in Child Care or have access to an Early Childhood Teacher
	Program specific ratio of facilitator to child (families retain legal responsibility for children)
Community engagement and governance	
	Program specific, though supported playgroups may have less community governance than community-run playgroups
Accessibility and eligibility	
	Usually free or low cost, and supported playgroups are usually free
	Can be for ages 0-5, and are usually targeted to ages before preschool
	Parents and family members are usually required to attend with their child, meaning children without families able or willing to attend cannot attend the program



# Appendix F: Comparison of Indi Kindi to ECEC models – centre based care

## Centre based care has some similarities to Indi Kindi, but fees and administrative requirements can act as a barrier to access

### Centre based day care

Centre based care (CBC) or long day care, is education and care provided by professional educators at a non-home based environment, usually a for-purpose building, is regulated under the National Quality Framework and eligible for the Child Care Subsidy (CCS), as an approved service type. Families and carers do not stay with their child or children meaning that it can be used as both a means to participate in the workforce, and to encourage strong developmental skills for children.

At CBC services, at least half of educators must be diploma level qualified or higher, with the remaining educators qualified at a Certificate III level. Services must also have access to an Early Childhood Teacher. Education and Care Services National Regulations do not specify what roles or responsibilities an ECT must undertake at a CBC. For fewer than 25 children, access to an ECT must be for a minimum of 20% of the operating time, and may be achieved by an IT remote solution. This can be seen as comparable to the Indi Kindi Early Years Specialist. However, this is not taken as comparable for the majority of the research into CBC benefits, which are expected to largely include an on-site ECT. Some CBC services may also choose to offer a preschool or kindergarten program (see next page).

### Differential benefits

Centre based care has been shown to have strong developmental benefits for children, when of high quality.<sup>1</sup> These benefits are stronger for children who may be experiencing disadvantage. There is also evidence of a peer effect for children experiencing disadvantage who attend with children from more advantaged backgrounds.

CBC also provides the option of longer hours of care, which is particularly of benefit to working families. In December 2022, the average weekly hours per child for CBC in the NT were 37.8 hours, and 29.6 for remote and very remote Australia.

Source:

1. Tayler, C., Cloney, D., Niklas, F., Cohnssen, C., Thorpe, K., D'Aprano, A., Final Report To the Partner Organisations For The Effective Early Education Experiences (e4kids) Study (2017)
2. Australian Competition and Consumer Commission, Childcare Inquiry: Final Report (2023)

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Legend:

■	Program specific
■	Similar to Indi Kindi
■	Different to Indi Kindi

### Key similarities and differences to Indi Kindi

Educational program and practice	
■	Aligned to the Early Years Learning Framework
■	Delivered mostly on site, with some excursions
Staffing	
■	On site Early Childhood Teacher
■	Access to an Early Childhood Teacher for 20% of operating time (for CBCs with fewer than 25 children)
■	50 per cent of educators at diploma level
■	Other educators required to have a Certificate III in Child Care
Collaborative partnerships with families and communities	
■	Service specific, but less likely to have community level governance and family engagement
Accessibility and eligibility	
■	Fees (Between \$110.79 and \$87.36 in comparably disadvantaged communities) <sup>2</sup>
■	Parents need to apply for CCS to access low cost/free care
■	Parents and family members are not able to attend with children
■	Transport may be provided depending on the service, but may include an additional fee

# Appendix F: Comparison of Indi Kindi to ECEC models – preschool

Indi Kindi complements preschool, supporting similar outcomes but with a focus on two-way learning, and is accessible to a younger cohort

## Preschool

Preschool is an early childhood program delivered by a qualified early childhood teacher at a school, dedicated preschool, CBC service or early learning centre for children in the year or two before formal schooling. It is not compulsory, and families can therefore choose to enrol their children and facilitate their attendance. Like CBC and FDC it is regulated under the National Quality Framework. The Northern Territory Department of Education has developed the Northern Territory Preschool Curriculum, aligned to the Early Years Learning Framework, as part of the Indigenous Education Strategy 2015-2020, and as a key commitment of the Northern Territory Government Starting Early for a Better Future early childhood development plan.

While government preschool is usually free, preschool at long day care centres or CBC centres can incur a cost to families. In the NT, all children can attend preschool from four years of age, and children in very remote areas can attend from three years of age. Borroloola preschool is mid way through a year long pilot of three year old preschool.

Indi Kindi is referenced in the NT Preschool Review Discussion paper as a ‘complementary program [to preschool] that supports outcomes by providing accessible and culturally safe introduction to formal learning or other services’, alongside Families as First Teachers and playgroups.

## Differential benefits

Preschool and kindergarten programs have strong evidence that they support children developmentally, and help to prepare them for school.

Legend:

	Program specific
	Similar to Indi Kindi
	Different to Indi Kindi

## Key similarities and differences to Indi Kindi

Educational program and practice	
	Northern Territory Preschool Curriculum, aligned to the Early Years Learning Framework and Outside School Hours Care, aligned to My Time Our Place
	Delivered mostly indoors with some excursions
Staffing	
	Delivered by an Early Childhood Teacher
Community engagement and governance	
	For standalone preschools often linked to school governance structures
Accessibility and eligibility	
	Only for children in the one or two years before formal schooling
	Free for children attending government preschools
	Parents and family members not able to attend with children
	Transport may be provided depending on the service

**A note on Preschool:** There has been a growing interest in expanding preschool provision to children **two** years before formal schooling (three year old children). However, the definition of preschool has become more contested amid these policy discussions, with the South Australian Royal Commission into Early Childhood Education and Care noting that preschool is sometimes conceptualised as a delivery mechanism, and sometimes framed by its intended outcomes.<sup>1</sup> Indi Kindi in its current form is seen as distinct from preschool in the first definition, with similar outcomes (in smaller magnitude) to the second.

# Appendix F: Comparison of Indi Kindi to ECEC models – vacation care and out of school hours care

Indi Kindi offers ad hoc care to families who may be visiting Borroloola, with a better qualified workforce, free of cost

### Vacation Care and Out of School Hours Care

Out of school hours care (OSHC) is education and care for primarily school age children before and after school and during school holidays. Although Indi Kindi is not aimed at school age children, it is listed here as Indi Kindi provides ECEC for children visiting Borroloola with family, ensuring they are able to access the benefit of quality education despite being away from home. It is also comparable as an *additional* program that some children may attend in addition to other ECEC programs in Borroloola such as the Families as First Teachers program and preschool, which only run 3 days a week, and the supported playgroup (when it is delivering). Attendance data also notes a small number of occasions where school aged children attend Indi Kindi.

There are no national qualification requirements for educators at centre-based services educating and caring for school age children in OSHC services.

### Differential benefits

The relevant differential benefits of OSHC are largely its flexibility, and to support workforce participation.

### Key similarities and differences to Indi Kindi

Educational program and practice	
	No requirement to align to an approved educational framework
Staffing	
	At least 50 per cent of staff must have or be working towards a child care qualification, a 2 year accredited post secondary course in child care, or a post secondary sports and recreation or teaching qualification.
Accessibility and eligibility	
	Fees
	Flexible booking and enrolment

Legend:

	Program specific
	Similar to Indi Kindi
	Different to Indi Kindi



# Appendix F: Comparison of Indi Kindi to ECEC models

## Indi Kindi has features of innovative programs that have less well established, but promising, evidence bases

### Multi- or inter- generational programs

There is growing interest in the benefits of multi-generational or inter-generational ECEC programs. These are programs which bring together older people and children aged 0-5.

#### Differential benefits

The actual benefits of intergenerational programs, especially on outcomes for children (as opposed to benefits for the community) have not been researched in detail. However, expected benefits of intergenerational programs include strong socio-emotional skills for children attending, and wider community benefits through fostering connection and social cohesion.

In the Borroloola context, the intergenerational transmission of culture is key – Elders and Law women who engage with Indi Kindi are not only growing up children but propagating language and culture.

#### Key similarities to Indi Kindi

Community members involved in attending program (rather than delivery or governance)

### Bilingual programs

Bilingual programs may be delivered in multiple languages, or teach language through early years programs.

#### Differential benefits

Bilingual programs, including playgroups targeted at particular cohorts, have been seen as ways to promote strong literacy and language skills for children, as well as enabling attendance through cultural appropriateness.

Victoria has recently expanded its Early Childhood Language Program, citing a range of long-term benefits including better pre-reading and pre-writing skills, improved cognitive flexibility and deeper connections with different cultures.

#### Key similarities to Indi Kindi

Indi Kindi delivers in both English and in language, with books and songs in language.

### Book lending programs

Book lending programs are often run in conjunction with early years education and care services as a way to enrich the home learning environment with educational resources, and support ongoing literacy development.

#### Differential benefits

There is a wealth of evidence that having access to books in the home has strong educational benefits for children. There is also evidence that these benefits are greater for children who may be experiencing disadvantage.

There is also evidence that shared reading practices in the home environment are important for children's literacy development skills, which can be aided by having appropriate reading resources, and family members who are aware of strong shared reading practices.

#### Key similarities to Indi Kindi

Indi Kindi distributes a book to each child who attends a session

Educators model strong shared reading practices when family members attend sessions

# Appendix G: Tennant Creek Program details

## Indi Kindi Tennant Creek

### About Deloitte Access Economics' Visit

Deloitte Access Economics (DAE) visited Tennant Creek in October 2023 and spent four days with the local Indi Kindi educators. In that time, DAE had the opportunity to observe a planning session, a Tennant Creek delivery session and were able to visit Mungkarta (while delivery was paused due to school holidays). DAE also met with the Marlungku-Kari Child and Family Centre managers and the local Connected Beginnings representative during their visit.

### Program Background

In 2021, the Indi Kindi program was expanded to a new hub in Tennant Creek, including service delivery in nearby Mungkarta. Tennant Creek was identified as a potential new delivery hub through existing community relationships established through the John Moriarty Football program that was established in the region in 2019.

The Moriarty Foundation worked closely with Connected Beginnings to design a tailored program that was responsive to the local needs and existing services within the community. Connected Beginnings is a 'place-based' grant program funded through the Australian Government that aims to improve access to existing early childhood, maternal and child health and family support services for Aboriginal and Torres Strait Islander children.

### About Tennant Creek and Mungkarta

Tennant Creek is located approximately five hours North of Alice Springs, along the highway between Alice Springs and Darwin. The population is more than three times the size of Borroloola, with 3080 residents, of which an estimated 271 children are between 0-4 years of age. In the greater Barkly region that is serviced by Tennant Creek (inclusive of Mungkarta), there are 552 children aged 0-4. There are a number of ECEC services operating in Tennant Creek, including a Families as First Teachers program, a centre-based day-care (Kentish), a playgroup (Pikka Pikkakari) and a preschool for children aged 3-5. The majority of these programs are delivered adjacent to the primary school grounds, in a facility managed by the Marlungku-Kari Child and Family Centre (CFC). At the time of Deloitte Access Economics' visit, the Marlungku-Kari CFC had identified the need for an additional centre-based day care facility in Tennant Creek and were working through plans to establish it.

Mungkarta is located approximately 50 minutes by road south of Tennant Creek. The number of residents is estimated to be around 40. While the community is not independently recognised in the Census, the local Tennant Creek Educators observed experiences of vulnerability disadvantage in Mungkarta to be extremely high. Services in the community are largely driven through outreach. There is no direct public transport available between Mungkarta and Tennant Creek and private car ownership is rare. There are no alternative ECEC services operating within Mungkarta. A Homeland Learning Centre (HLC) operates in the community to provide primary and secondary school education for anywhere between 3-15 children in the community.



Outdoor delivery in Mungkarta, photo supplied by the Moriarty Foundation

# Appendix G: Tennant Creek Program details

## Indi Kindi Tennant Creek

### Current operating model

The Indi Kindi Tennant Creek team designed its delivery model to complement the existing services in Tennant Creek and Mungkarta. Specifically, alternating days with FaFT so that when FaFT delivers in Tennant Creek, Indi Kindi delivers in Mungkarta and when FaFT is delivering in Mungkarta, Indi Kindi delivers in Tennant Creek. The program runs for days a week while Mondays are dedicated to internal planning and operations. The educators come together to design the week's program, purchase necessary food and other supplies and pre-prepare food and activity options for the week.

The Child and Family Centre manager felt that the operating model where the playgroup, FaFT and Indi Kindi were largely running on complementary days across Tennant Creek and Mungkarta was not only more sustainable from a delivery perspective, but optimal in that it gave parents choice. Ideally, families not utilising the centre-based day care or preschool would engage in an early years program most days of the week through a combination of Indi Kindi, FaFT and the Pikka Pikkakari playgroup (running two days per week in TC), but if the family felt that any one of these programs wasn't suitable to their needs and circumstances, it still meant that they options, increasing the likelihood that the children would have at least *some exposure* versus *no exposure* to early years programming.

Similar to the Robinson River outreach from Borroloola, Mungkarta itself can be cut off during the wet season after a big rain, prohibiting program delivery for periods of the year.

### Attendance demographics

Around ten children typically attend Indi Kindi in Tennant Creek, the primary age group is 1-2 years, but includes infants under one year who attend with a parent. In Tennant Creek it is common for children to attend preschool at age 3. At the time of Deloitte Access Economics' visit, eight children attended the session including three infants, two toddlers and one school aged child (it was school holidays). Up to five children regularly attend the Indi Kindi Mungkarta program.

While the Borroloola program was observed to be providing a "distinct" kind of service depending on the patterns of attendance by families (for some children this was more akin to a supported playgroup, for other children it was more akin to centre-based care), the Tennant Creek program was observed to be more aligned to a supported playgroup, given the younger age of attendees and higher participation from parents. The cadence of attendance however is similar to Borroloola:

"We have mums who come every time there is a session, other times Mums will come on Wednesday but not the Friday or vice versa, or some Mums come once every two weeks. We have been getting a lot of new mums as well, we have a lot of new and old faces as well." – Tennant Creek Educator



Indoor delivery in Tennant Creek, photo supplied by the Moriarty Foundation



# Appendix G: Tennant Creek Program details

## Indi Kindi Tennant Creek

### Program features

Given the bigger population and less remote location Tennant Creek in comparison with Borroloola, there is a larger number of health and wellbeing services available to the Indi Kindi educators for which they can facilitate access to support the overall program benefits.

#### *Prenatal health and infant care*

One of the unique features of the Tennant Creek program is the demography, which includes a large proportion of infants attending with their mothers. The educators conduct outreach with expectant mothers in the community, letting them know about the program and encouraging them to attend during their pregnancy for social support and to learn from the other new mothers in the group.

Parents learn tips from each other in relation to quality play, health and hygiene, sleep and nutrition – and not just for their infants and toddlers attending but for their older school-aged children too. The educators described the benefits of a safe and supported group where maternal wellbeing could be discussed amongst the focus on child outcomes.

Given the mix of infant and toddler aged attendees, there is a dual focus on language and literacy activities as well as sensory play activities – the educators are constantly looking for ways to innovate and have delivered such experiences to the infants as “slime” made from chia seeds, “mud” made from raw cacao, a “beach” constructed with crushed up biscuits as sand and blue jelly as water.

#### *Child health services*

The Indi Kindi team helps facilitate engagement with the local child health nurse, including visits to Mungkarta. At the time of DAE’s visit, they were also in dialogue with the local dentist to facilitate a visit to Mungkarta. The team noted that when a specialist team had previously visited Tennant Creek to conduct assessments for rheumatic heart disease, they had also arranged engagement through the Indi Kindi program, however it had been over a year since the specialists had visited.

### Family wellbeing

The Indi Kindi leader Keara identified that families in the community were being negatively impacted by high interest rates on short-term loans that were being taken out to buy critical white goods such as refrigerators. She organised for a financial counsellor from the local Catholic Care service to visit Mungkarta and provide advice to the families to ensure they could safely borrow money.

### Place

The Indi Kindi Tennant Creek program is delivered through a mix of indoor and outdoor sessions. The Marlungku-Kari CFC provides access to its purpose-built early years care facilities (used by FaFT on alternative days). As well as providing refuge from the extreme weather during periods of the year, families and educators enjoy the different learning opportunities that can be explored in the indoor space. At the time of writing this report, the Borroloola Indi Kindi creek team had also recently negotiated to use the local library for session delivery on days of intense rain.

The sites for outdoor delivery in and around Tennant Creek include a local park, a creek, and notable cultural sites such as Karlu Karlu (see photographs below).



Outdoor delivery at the creek, park and Karlu Karlu, photos supplied by the Moriarty Foundation

# Appendix G: Tennant Creek Program details

## Indi Kindi Tennant Creek

### Educator governance and professional development

As in Borroloola, new educators are identified through personal and familial connections. For many of the women, joining Indi Kindi is the first opportunity to experience paid employment and for others, the first opportunity to ignite their interest and passion in learning post their high school educating. Amongst the educator team, some educators have finished their Certificate III in ECEC and considering a diploma while newer members are working towards their qualifications.

The Indi Kindi Tennant Creek team follows a similar governance model to that of Borroloola, where decisions and responsibilities are shared amongst the group. Educator Keara Baker-Storey leads much of the outreach and administration on behalf of the team and is also recognised within the Tennant Creek community as the team's leader. It was typical to hear other community professionals refer to Indi Kindi in Tennant Creek as "Keara's program."

Keara has been recognised for her leadership in delivering ECEC to Aboriginal communities beyond the Indi Kindi program. In late 2022 Keara was appointed to a position in the the Early Childhood Care and Development Policy Partnership (ECP) - an Australian Government advisory group to bring together governments and Aboriginal and Torres Strait Islander representatives to develop recommendations to improve early childhood outcomes for Aboriginal and Torres Strait Islander children and families.

Keara, with a number of other Indi Kindi educators from Tennant Creek and Borroloola, attended the 2023 SNAICC – National Voice for Our Children Conference. Together with Indi Kindi Early Years Specialist Jessica Horne-Kennedy, Keara spoke to a national audience of early childhood educators and policy professionals about the impact that Indi Kindi was having in remote Aboriginal communities.

"I've learned more in my time at Indi Kindi than I did in the entirety of high school."

**- Tennant Creek Indi Kindi Educator**



Members of the Indi Kindi Borroloola and Tennant Creek delivery teams together with Indi Kindi Early Years Specialist Jessica Horne-Kennedy, photo supplied by the Moriarty Foundation.

# Appendix H: Children's Ground Program details

## The Children's Ground program in the Northern Territory operates in a similar way to Indi Kindi, and survey evidence illustrates its impact



### Case Study: Children's Ground

An evaluation into Ampe-kenhe Ahelhe - Children's Ground across 2017-19 revealed early progress and outcomes utilising a baseline participant survey data.<sup>1</sup> The evaluation revealed:

#### Features of program delivery

- Community are making the decisions and leading
- Arrernte language, culture and family are everywhere
- Employment for locals
- Elders are involved and leading
- Children and families learning together
- Next generation leadership
- Support for children and families

#### Child engagement

- 82% (n=223) of children aged 0-5 years across 4 communities engaged in early years learning. Before Children's Ground, only 14% had previously engaged in early learning.

#### Health outcomes

- 487 family members engaged in health promotion and support (150 youth aged 9-17 years, 337 adult family members aged 18+ years).
- 100% of families and staff reported increased access to services for physical and mental health.
- 224 children (aged 0-5 years) engaged in targeted preventative health (skin, ears, eyes, dental, weight, immunisation)

- 89% of families reported that children's physical health (their body and nutrition) and emotional health (their mind and behaviour) was better or much better.
- 319 family members 18+ years engaged in learning and health promotion alongside their children.

#### Staff outcomes

- 59 First Nations people were employed at Children's Ground. 84% were unemployed when they started at Children's Ground and 34% of staff had never previously worked.
- 83% of families/staff referred to the employment of young people and adults as role modelling for young children.

#### Family wellbeing

- 63% of families and staff reported feeling safe, comfortable, or free at Children's Ground (without being directly asked about feelings of safety).
- 100% of families reported that families are 'walking alongside their children' more or a lot more.

#### Community empowerment

- 107 First Nations people engaged in governance and decision-making for their families and communities
- As reported by families and staff, children engaging in early learning in their first language has improved children's cultural and Western learning and development outcomes

Source:

<sup>1</sup> Children's Ground. 2021. Evaluation of Ampe-kenhe Ahelhe - Children's Ground in Central Australia: 2017 to 2019 Baseline and early progress



# Footnotes

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53	Indi Kindi program features: Educational program and practice	<p>1 The Organisation for Economic Co-operation and Development (OCED), A Strong Start for Every Indigenous Child (2021) &lt;<a href="https://one.oecd.org/document/EDU/WKP(2021)8/en/pdf">https://one.oecd.org/document/EDU/WKP(2021)8/en/pdf</a>&gt;</p> <p>2 World Vision Australia, We're Working Towards Change with Indigenous Communities (2015) &lt;<a href="https://www.worldvision.com.au/docs/default-source/default-document-library/australia-program-prospectus-2016-18.pdf?sfvrsn=2">https://www.worldvision.com.au/docs/default-source/default-document-library/australia-program-prospectus-2016-18.pdf?sfvrsn=2</a>&gt;</p>
54	Indi Kindi program features: Staffing and workforce	<p>1 The Organisation for Economic Co-operation and Development (OCED), A Strong Start for Every Indigenous Child (2021) &lt;<a href="https://one.oecd.org/document/EDU/WKP(2021)8/en/pdf">https://one.oecd.org/document/EDU/WKP(2021)8/en/pdf</a>&gt;</p>
55	Indi Kindi program features: Governance and leadership	<p>1 The Organisation for Economic Co-operation and Development (OCED), A Strong Start for Every Indigenous Child (2021) &lt;<a href="https://one.oecd.org/document/EDU/WKP(2021)8/en/pdf">https://one.oecd.org/document/EDU/WKP(2021)8/en/pdf</a>&gt;</p> <p>2 Niitsitapi Learning Centre, Program, Focus &amp; Approach (2023) &lt;<a href="https://school.cbe.ab.ca/school/niitsitapi/teaching-learning/program-approach/pages/default.aspx">https://school.cbe.ab.ca/school/niitsitapi/teaching-learning/program-approach/pages/default.aspx</a>&gt;</p> <p>3 World Vision Australia, We're Working Towards Change with Indigenous Communities (2015) &lt;<a href="https://www.worldvision.com.au/docs/default-source/default-document-library/australia-program-prospectus-2016-18.pdf?sfvrsn=2">https://www.worldvision.com.au/docs/default-source/default-document-library/australia-program-prospectus-2016-18.pdf?sfvrsn=2</a>&gt;</p>
56	Indi Kindi program features: Health, hygiene, and nutrition	<p>1 The Organisation for Economic Co-operation and Development (OCED), A Strong Start for Every Indigenous Child (2021) &lt;<a href="https://one.oecd.org/document/EDU/WKP(2021)8/en/pdf">https://one.oecd.org/document/EDU/WKP(2021)8/en/pdf</a>&gt;</p> <p>2 Child and Family Integrated Services Biannual Report (2018) &lt;<a href="https://nt.gov.au/_data/assets/pdf_file/0011/900488/maningrida-child-and-family-integrated-services-biannual-report-july-2018-to-december-2018.pdf">https://nt.gov.au/_data/assets/pdf_file/0011/900488/maningrida-child-and-family-integrated-services-biannual-report-july-2018-to-december-2018.pdf</a>&gt;.</p>
70	Educational outcomes	<p>1 Tayler, C., Cloney, D., Niklas, F., Cahrssen, C., Thorpe, K., D'Aprano, A., 2017, Final Report To the Partner Organisations For The Effective Early Education Experiences (e4kids) Study.</p> <p>2 Lori Rubenstein, 'Love Grows Brains: Optimising the Development of Children Aged 0-3 Years, a Review of Key Concepts in Research, Policy and Practice', Aracy (February 2018) &lt;<a href="https://www.aracy.org.au/documents/item/762">https://www.aracy.org.au/documents/item/762</a>&gt;.</p> <p>3 Tayler, C., Cloney, D., Niklas, F., Cahrssen, C., Thorpe, K., D'Aprano, A., 2017, Final Report To the Partner Organisations For The Effective Early Education Experiences (e4kids) Study.</p>

# Footnotes

Page #	Title	Footnotes
71	Educational outcomes	<p>1 Sincovich, A., Harman-Smith, Y., &amp; Brinkman, S., The reach of playgroups and their benefit for children across Australia: A comparison of 2012, 2015, and 2018 AEDC data, for Telethon Kids Institute (2019) &lt;<a href="https://playgroupaustralia.org.au/wp-content/uploads/2020/02/The-reach-of-playgroups-and-their-benefit-for-children%E2%80%99s-development-across-Australia-Dec-2019-Telethon-Kids-Institute.pdf">https://playgroupaustralia.org.au/wp-content/uploads/2020/02/The-reach-of-playgroups-and-their-benefit-for-children%E2%80%99s-development-across-Australia-Dec-2019-Telethon-Kids-Institute.pdf</a>&gt;</p> <p>2 Williams, K.E., Berthelsen, D., Nicholson, J.M., &amp; Viviani, M., Systematic literature review: Research on Supported Playgroups (2015)</p> <p>3 PricewaterhouseCoopers Australia for The Front Project, A smart investment for a smarter Australia: economic analysis of universal early childhood education in the year before school in Australia (2019) &lt;<a href="https://www.thefrontproject.org.au/images/downloads/ECO%20ANALYSIS%20Full%20Report.pdf">https://www.thefrontproject.org.au/images/downloads/ECO%20ANALYSIS%20Full%20Report.pdf</a>&gt;</p> <p>4 Alaka, H., Bendini, M., Dinarte, L., and Trako, I., World Bank Policy Research Working Paper Series, Is Investment in Preprimary Education Too Low? Lessons from (Quasi) Experimental Evidence across Countries (2021) &lt;<a href="http://www.worldbank.org/prwp">http://www.worldbank.org/prwp</a>&gt;</p> <p>5 Guthridge, S., Li, L., Silburn, S., Li, S. Q., McKenzie, J., &amp; Lynch, J., Early influences on developmental outcomes among children, at age 5, in Australia's Northern Territory, (2016), Early Childhood Research Quarterly, 35, 124-134. &lt;<a href="https://doi.org/10.1016/j.ecresq.2015.12.008">https://doi.org/10.1016/j.ecresq.2015.12.008</a>&gt;</p> <p>6 Elek, Catriona &amp; Gubhaju, Lina &amp; Lloyd-Johnsen, Catherine &amp; Eades, Sandra &amp; Goldfeld, Sharon., Can early childhood education programs support positive outcomes for indigenous children? A systematic review of the international literature, (2020), Educational Research Review. 31. 100363. 10.1016/j.edurev.2020.100363.</p>
72	Educational outcomes	<p>1 Fox, S.E., Levitt, P. and Nelson III, C.A., How the Timing and Quality of Early Experiences Influence the Development of Brain Architecture. Child Development, 81: 28-40. (2010) &lt;<a href="https://doi.org/10.1111/j.1467-8624.2009.01380.x">https://doi.org/10.1111/j.1467-8624.2009.01380.x</a>&gt;</p> <p>2 Kok, R., Thijssen, S., Bakermans-Kranenburg, M. et al. (2015). Normal variation in early parental sensitivity predicts child structural brain development. Journal of the American Academy of Child and Adolescent Psychiatry, 54(10), 824–831.</p> <p>3 Phillips EAM, Goupil L, Whitehorn M, Bruce-Gardyne E, Csolsim FA, Marriott-Haresign I, Wass SV. Proactive or reactive? Neural oscillatory insight into the leader-follower dynamics of early infant-caregiver interaction. Proc Natl Acad Sci U S A. 2023 Apr 11;120(15):e2122481120. doi: 10.1073/pnas.2122481120. Epub 2023 Apr 4. PMID: 37014853; PMCID: PMC10104541.</p>
73	Educational outcomes	<p>1. Williams, K. E., Berthelsen, D., Viviani, M., and Nicholson, J. M. (2017) Participation of Australian Aboriginal and Torres Strait Islander families in a parent support programme: longitudinal associations between playgroup attendance and child, parent and community outcomes. Child: Care, Health and Development, 43: 441–450. doi: 10.1111/cch.12417.</p> <p>2. Weisleder, A., &amp; Mazzuchelli, D., &amp; Lopez, A., &amp; Neto, W., &amp; Cates, C., &amp; Gonçalves, H., &amp; Fonseca, R., &amp; Oliveira, J., &amp; Mendelsohn, A., (2017). Reading Aloud and Child Development: A Cluster-Randomized Trial in Brazil. Pediatrics. 141. e20170723. 10.1542/peds.2017-0723.</p> <p>3. Tayler, C., &amp; Cloney, D., &amp; Niklas, F., &amp; Cohrsen, C., &amp; Thorpe, K., &amp; D'Aprano, A., (2017). Final report to the Partner Organisations for the Effective Early Education Experiences (E4Kids) Study. 10.4225/49/58f99f47a2ab4.</p>



# Footnotes

Page #	Title	Footnotes
78	Educational outcomes	<ol style="list-style-type: none"> <li>1. Elek, C., Gibberd, A., Gubhaju, L. et al.,. An Opportunity for Our Little Ones: Findings from an Evaluation of an Aboriginal Early Childhood Learning Centre in Central Australia. <i>Early Childhood Educ J</i> 50, 579–591 (2022) &lt;<a href="https://doi.org/10.1007/s10643-021-01174-5">https://doi.org/10.1007/s10643-021-01174-5</a>&gt;.</li> <li>2. Benzies, K., Tough, S., Edwards, N. et al., Aboriginal Children and Their Caregivers Living with Low Income: Outcomes from a Two-Generation Preschool Program. <i>J Child Fam Stud</i> 20, 311–318 (2011) &lt;<a href="https://doi.org/10.1007/s10826-010-9394-3">https://doi.org/10.1007/s10826-010-9394-3</a>&gt;.</li> <li>3. Nutton, G., Bell, J. and Fraser, J., Mobile Preschool Evaluation: Summary Report. Darwin: Centre for Child Development and Education (2013).</li> <li>4. Biddle, N, Arcos Holzinger, L., The relationship between early childhood education and care (ECEC) and the outcomes of Indigenous children: evidence from the Longitudinal Study of Indigenous Children (LSIC), (2015)</li> <li>5. Falster K, Hanly M, Edwards B, Banks E, Lynch JW, Eades S, Nickel N, Goldfeld S, Biddle N. Preschool attendance and developmental outcomes at age five in Indigenous and non-Indigenous children: a population-based cohort study of 100 357 Australian children, <i>J Epidemiol Community Health</i>, (2020) Dec 8;jech-2020-214672. doi: 10.1136/jech-2020-214672. Epub ahead of print. PMID: 33293290.</li> <li>6. Guthridge, S., &amp; Li, L., (Lin) &amp; Silburn, S., &amp; Li, S., &amp; Mckenzie, J., &amp; Lynch, J., Early Childhood Research Quarterly, Early influences on developmental outcomes among children, at age 5, in Australia's Northern Territory (2016). 35. 10.1016/j.ecresq.2015.12.008.</li> </ol>
80	Monetising educational outcomes	<ol style="list-style-type: none"> <li>1 Kathleen Falster et al, 'Preschool Attendance and Developmental Outcomes at Age Five in Indigenous and Non-Indigenous Children: A Population-Based Cohort Study of 100 357 Australian Children' (2020) 75(4) <i>Journal of Epidemiology and Community Health</i> 371.</li> <li>2 Nutton, G., Bell, J. and Fraser, J. (2013). Mobile Preschool Evaluation: Summary Report. Darwin: Centre for Child Development and Education.</li> <li>3 Steven Guthridge et al, 'Early Influences on Developmental Outcomes among Children, at Age 5, in Australia's Northern Territory' (2016) 35 <i>Early Childhood Research Quarterly</i> 124.</li> <li>4 Alanna Sincovich et al, 'Exploring Associations between Playgroup Attendance and Early Childhood Development at School Entry in Australia: A Cross-Sectional Population-Level Study' (2019) 57(2) <i>American Educational Research Journal</i> 475.</li> </ol>

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83	Social and health outcomes for children	<p>1 Corinne J Williams and Ann M Jacobs, 'The Impact of Otitis Media on Cognitive and Educational Outcomes' (2009) 191(9) Medical Journal of Australia &lt;<a href="https://www.mja.com.au/journal/2009/191/9/impact-otitis-media-cognitive-and-educational-outcomes#0_i1092085">https://www.mja.com.au/journal/2009/191/9/impact-otitis-media-cognitive-and-educational-outcomes#0_i1092085</a>&gt;.</p> <p>2 Jack DeLacy, Tinashe Dune and John J Macdonald, 'The Social Determinants of Otitis Media in Aboriginal Children in Australia: Are We Addressing the Primary Causes? A Systematic Content Review' (2020) 20(1) BMC Public Health &lt;<a href="https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-08570-3">https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-08570-3</a>&gt;.</p> <p>3 Noble, K., Fetherston, H., Jackson, J., Carlie, M., <i>Integrating Health Promotion in Early Childhood Education and Care Settings</i> (2022) &lt;<a href="https://www.vu.edu.au/sites/default/files/effective-integration-of-health-promotion-in-ecec-settings.pdf">https://www.vu.edu.au/sites/default/files/effective-integration-of-health-promotion-in-ecec-settings.pdf</a>&gt;</p> <p>4 Thorpe K., Potia, A., Searle., B., et.al, <i>Meal provision in early childhood education and care programs: Association with geographic disadvantage, social disadvantage, cost, and market competition in an Australian population</i> (2022) &lt;<a href="https://pubmed.ncbi.nlm.nih.gov/36137366/">https://pubmed.ncbi.nlm.nih.gov/36137366/</a>&gt;</p> <p>5 Black, B., Pérez-Escamilla, R., Rao, S., <i>Integrating Nutrition and Child Development Interventions: Scientific Basis, Evidence of Impact, and Implementation Considerations</i> (2015) &lt;<a href="https://pubmed.ncbi.nlm.nih.gov/26875208/">https://pubmed.ncbi.nlm.nih.gov/26875208/</a>&gt;</p> <p>6 Brands, B., Demmelmair, H., Kolezko, B., et.al, <i>How growth due to infant nutrition influences obesity and later disease risk</i> (2014) &lt;<a href="https://pubmed.ncbi.nlm.nih.gov/24521522/">https://pubmed.ncbi.nlm.nih.gov/24521522/</a>&gt;</p> <p>7 Laws, R., Campbell, K., Plight, P., et.al, <i>The impact of interventions to prevent obesity or improve obesity related behaviours in children (0–5 years) from socioeconomically disadvantaged and/or indigenous families: a systematic review</i> (2016) <a href="https://pubmed.ncbi.nlm.nih.gov/25084804/">https://pubmed.ncbi.nlm.nih.gov/25084804/</a></p> <p>8 Engle,P. and Huffman,S., <i>Growing children's bodies and minds: Maximizing child nutrition and development</i> (2010) &lt;<a href="https://pubmed.ncbi.nlm.nih.gov/20715603/">https://pubmed.ncbi.nlm.nih.gov/20715603/</a>&gt;</p>
84	Monetising social and health outcomes for children	<p>1 'Food Prices and Affordability', Australia's Food Environment Dashboard &lt;<a href="https://foodenvironmentdashboard.com.au/food-prices-and-affordability/">https://foodenvironmentdashboard.com.au/food-prices-and-affordability/</a>&gt;.</p> <p>2 Food Prices and Affordability', Australia's Food Environment Dashboard &lt;<a href="https://foodenvironmentdashboard.com.au/food-prices-and-affordability/">https://foodenvironmentdashboard.com.au/food-prices-and-affordability/</a>&gt;.</p> <p>3.AIHW (Australian Institute of Health and Welfare) 2012. Australia's food and nutrition 2012</p> <p>4. Lise Dubois et al, 'Eating Behaviors, Dietary Patterns and Weight Status in Emerging Adulthood and Longitudinal Associations with Eating Behaviors in Early Childhood' (2022) 19(1) International Journal of Behavioral Nutrition and Physical Activity.</p> <p>5. ABS, '2021 Borrooloola, Census Aboriginal And/or Torres Strait Islander People QuickStats   Australian Bureau of Statistics', <a href="https://abs.gov.au">abs.gov.au</a> &lt;<a href="https://abs.gov.au/census/find-census-data/quickstats/2021/IARE705001">https://abs.gov.au/census/find-census-data/quickstats/2021/IARE705001</a>&gt;.</p>

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83	Social and health outcomes for children	<p>1 Corinne J Williams and Ann M Jacobs, 'The Impact of Otitis Media on Cognitive and Educational Outcomes' (2009) 191(9) Medical Journal of Australia &lt;<a href="https://www.mja.com.au/journal/2009/191/9/impact-otitis-media-cognitive-and-educational-outcomes#0_i1092085">https://www.mja.com.au/journal/2009/191/9/impact-otitis-media-cognitive-and-educational-outcomes#0_i1092085</a>&gt;.</p> <p>2 Jack DeLacy, Tinashe Dune and John J Macdonald, 'The Social Determinants of Otitis Media in Aboriginal Children in Australia: Are We Addressing the Primary Causes? A Systematic Content Review' (2020) 20(1) BMC Public Health &lt;<a href="https://bmcpublihealth.biomedcentral.com/articles/10.1186/s12889-020-08570-3">https://bmcpublihealth.biomedcentral.com/articles/10.1186/s12889-020-08570-3</a>&gt;.</p> <p>3 Noble, K., Fetherston, H., Jackson, J., Carlie, M., <i>Integrating Health Promotion in Early Childhood Education and Care Settings</i> (2022) &lt;<a href="https://www.vu.edu.au/sites/default/files/effective-integration-of-health-promotion-in-ecec-settings.pdf">https://www.vu.edu.au/sites/default/files/effective-integration-of-health-promotion-in-ecec-settings.pdf</a>&gt;</p> <p>4 Thorpe K., Potia, A., Searle., B., et.al, <i>Meal provision in early childhood education and care programs: Association with geographic disadvantage, social disadvantage, cost, and market competition in an Australian population</i> (2022) &lt;<a href="https://pubmed.ncbi.nlm.nih.gov/36137366/">https://pubmed.ncbi.nlm.nih.gov/36137366/</a>&gt;</p> <p>5 Black, B., Pérez-Escamilla, R., Rao, S., <i>Integrating Nutrition and Child Development Interventions: Scientific Basis, Evidence of Impact, and Implementation Considerations</i> (2015) &lt;<a href="https://pubmed.ncbi.nlm.nih.gov/26875208/">https://pubmed.ncbi.nlm.nih.gov/26875208/</a>&gt;</p> <p>6 Brands, B., Demmelmair, H., Kolezko, B., et.al, <i>How growth due to infant nutrition influences obesity and later disease risk</i> (2014) &lt;<a href="https://pubmed.ncbi.nlm.nih.gov/24521522/">https://pubmed.ncbi.nlm.nih.gov/24521522/</a>&gt;</p> <p>7 Laws, R., Campbell, K., Plight, P., et.al, <i>The impact of interventions to prevent obesity or improve obesity related behaviours in children (0–5 years) from socioeconomically disadvantaged and/or indigenous families: a systematic review</i> (2016) <a href="https://pubmed.ncbi.nlm.nih.gov/25084804/">https://pubmed.ncbi.nlm.nih.gov/25084804/</a></p> <p>8 Engle,P. and Huffman,S., <i>Growing children's bodies and minds: Maximizing child nutrition and development</i> (2010) &lt;<a href="https://pubmed.ncbi.nlm.nih.gov/20715603/">https://pubmed.ncbi.nlm.nih.gov/20715603/</a>&gt;</p>
85	Monetising social and health outcomes for children	<p>1 Campbell, Margaret et al, 'Health Care Cost of Crusted Scabies in Aboriginal Communities in the Northern Territory, Australia' (2022) 16(3) PLOS Neglected Tropical Diseases</p> <p>2 Government, Northern Territory, 'Scabies' (12 May 2016) <a href="https://nt.gov.au/wellbeing/health-conditions-treatments/parasites/scabies">https://nt.gov.au/wellbeing/health-conditions-treatments/parasites/scabies</a></p> <p>3 McMeniman, Erin et al, 'Skin Disease in the First Two Years of Life in Aboriginal Children in East Arnhem Land' (2011) 52(4) The Australasian Journal of Dermatology 270</p> <p>4 Clucas, Danielle B et al, 'Disease Burden and Health-Care Clinic Attendances for Young Children in Remote Aboriginal Communities of Northern Australia' (2008) 86(4) Bulletin of the World Health Organization 275</p> <p>5 Carapetis, Jonathan R et al, 'Success of a Scabies Control Program in an Australian Aboriginal Community' (1997) 16(5) The Pediatric Infectious Disease Journal 494</p> <p>6 Dagne, Henok et al, 'Prevalence and Associated Factors of Scabies among Schoolchildren in Dabat District, Northwest Ethiopia, 2018' (2019) 24 Environmental Health and Preventive Medicine 67</p> <p>7 Thornley, Simon et al, 'Scabies Is Strongly Associated with Acute Rheumatic Fever in a Cohort Study of Auckland Children: Scabies Linked to Acute Rheumatic Fever' (2018) 54(6) Journal of Paediatrics and Child Health 625</p> <p>8 Campbell, Margaret et al, 'Health Care Cost of Crusted Scabies in Aboriginal Communities in the Northern Territory, Australia' (2022) 16(3) PLOS Neglected Tropical Diseases</p>



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Page #	Title	Footnotes
86	Social and health outcomes for children	<p>1 Australian Government Department of Health and Department of Education, Australian Healthcare Associates, <i>Evaluation of the Connected Beginnings Program Final Report</i> (2019) &lt;<a href="https://www.education.gov.au/download/12632/evaluation-connected-beginnings-program-final-report-2019/23815/document/pdf">https://www.education.gov.au/download/12632/evaluation-connected-beginnings-program-final-report-2019/23815/document/pdf</a>&gt;</p> <p>2 Greenwood, M., University of British Columbia Open Journal System, <i>Children Are a Gift to Us: Aboriginal-Specific Early Childhood Programs and Services in Canada</i> (2016) &lt;<a href="https://ojs.library.ubc.ca/index.php/CJNE/article/view/196381">https://ojs.library.ubc.ca/index.php/CJNE/article/view/196381</a>&gt;</p> <p>3 Preston, J., Cottrell, M., Pearce, J., et.al, <i>Aboriginal early childhood education in Canada – Issues of context</i> (2012) &lt;<a href="https://journals.sagepub.com/doi/full/10.1177/1476718X11402753">https://journals.sagepub.com/doi/full/10.1177/1476718X11402753</a>&gt;</p>
87	Outcomes for educators	<p>1 Department of Education, Skills and Employment, 2021 Early Childhood Education and Care National Workforce Census report (2022)</p> <p>2 '2021 Borroloola, Census Aboriginal and/or Torres Strait Islander People QuickStats   Australian Bureau of Statistics' &lt;<a href="https://abs.gov.au/census/find-census-data/quickstats/2021/IARE705001">https://abs.gov.au/census/find-census-data/quickstats/2021/IARE705001</a>&gt;</p> <p>3 Children's Ground. 2021. Evaluation of Ampe-kenhe Ahelhe - Children's Ground in Central Australia: 2017 to 2019 Baseline and early progress</p>
88	Outcomes for educators	<p>1 Viac, C., and Fraser,P., Organisation for Economic Co-operation and Development, <i>Teacher's Well-being: A framework for data collection and analysis</i> (2020)</p> <p>2 Jones, C., Johnstone, FH., Waniganayake, M., <i>Early childhood educators' workplace well-being: It's everyone's right</i> (2020)</p> <p>3 Hascher, T., and Waber, J., <i>Teacher well-being: A systematic review of the research literature from the year 2000–2019</i> (2021)</p> <p>4. Wright A, Yap M, Jones R, Richardson A, Davis V, Lovett R. Examining the Associations between Indigenous Rangers, Culture and Wellbeing in Australia, 2018–2020. <i>International Journal of Environmental Research and Public Health</i>. 2021; 18(6):3053.</p>
89	Outcomes for families	<p>1 Australian Competition and Consumer Commission, 'Childcare inquiry 2023: December 2023 Final Report', <a href="http://www.accc.gov.au">www.accc.gov.au</a> (29 January 2024) &lt;<a href="https://www.accc.gov.au/inquiries-and-consultations/childcare-inquiry-2023/december-2023-final-report">https://www.accc.gov.au/inquiries-and-consultations/childcare-inquiry-2023/december-2023-final-report</a>&gt;.</p> <p>2 'Your Income Can Affect Child Care Subsidy - Child Care Subsidy - Services Australia', <a href="http://servicesaustralia.gov.au">Servicesaustralia.gov.au</a> (2022) &lt;<a href="https://www.servicesaustralia.gov.au/your-income-can-affect-child-care-subsidy?context=41186#familyincomeccs">https://www.servicesaustralia.gov.au/your-income-can-affect-child-care-subsidy?context=41186#familyincomeccs</a>&gt;.</p>
93	Probable impact of Indi Kindi	<p>1 Falster K, Hanly M, Edwards B, Banks E, Lynch JW, Eades S, Nickel N, Goldfeld S, Biddle N. <i>Preschool attendance and developmental outcomes at age five in Indigenous and non-Indigenous children: a population-based cohort study of 100 357 Australian children</i>, <i>J Epidemiol Community Health</i>, (2020) Dec 8;jech-2020-214672. doi: 10.1136/jech-2020-214672. Epub ahead of print. PMID: 33293290.</p> <p>2 Elek, C., Gibberd, A., Gubhaju, L. et al.,. <i>An Opportunity for Our Little Ones: Findings from an Evaluation of an Aboriginal Early Childhood Learning Centre in Central Australia</i>. <i>Early Childhood Educ J</i> 50, 579–591 (2022) &lt;<a href="https://doi.org/10.1007/s10643-021-01174-5">https://doi.org/10.1007/s10643-021-01174-5</a>&gt;.</p> <p>3 Biddle, N, Arcos Holzinger, L., <i>The relationship between early childhood education and care (ECEC) and the outcomes of Indigenous children: evidence from the Longitudinal Study of Indigenous Children (LSIC)</i>, (2015)</p>
111	Scalability	1 Steenkamp et al. <i>Aust NZ J Public Health</i> . 2010; 34:S5-8. Jongen et al. <i>BMC Pregnancy and</i> 2014, 14:25
114	Scalability	1 <i>Expenditure on Children in the Northern Territory Productivity Commission Study Report</i> (2020) < <a href="https://www.pc.gov.au/inquiries/completed/nt-children/report/nt-children.pdf">https://www.pc.gov.au/inquiries/completed/nt-children/report/nt-children.pdf</a> >.



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