

CRAFTING
FUTURES
DIGITAL
COLLABORATION

BUILDING A LIBRARY FOR THE FUTURE

Munduruku
Craft Practices
and Indigenous
Knowledge

Final Report
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Colophon

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British Council**Crafting Futures
Digital Collaboration**

In response to increasing restrictions on global travel due to Covid-19, and rising concerns about the sustainability of face-to-face collaborations, the Crafting Futures Digital Collaboration Grants with support from Crafts Council UK seeks to foster important international connections and devise alternative ways of working virtually.

<https://design.britishcouncil.org/projects/crafting-futures/CF-grant-scheme/>

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Executive Summary

'Building a Library for the Future: Munduruku Craft Practices and Indigenous Knowledge' is an international collaboration between researchers at the Royal College of Art, University of Brasília, and members of the Bragança village, along the lower Tapajós River in Pará - a tributary of the Tapajós River, Amazon. The project builds upon the words of [Chief] Cacique Domingos Munduruku, who reasoned '...education, culture and health will only be possible for us Munduruku through a well-structured communication project'. As an ethical and applied communication project, researchers developed and delivered with the community [Bragança, Brazil] a virtual library of Munduruku Indigenous craft knowledge and practices.

The participants of the project have built a virtual platform to facilitate intercultural and intergenerational dialogue, reinforcing socio-cultural and craft identities of the Munduruku. The platform features video clips, audio recordings, and photographs sourced collectively by members of the Munduruku community who were interested in documenting local craft traditions and Indigenous knowledge in danger of being lost in the face of a changing political landscape. The clips were collected over a six-month period and can be continuously updated on the

platform, creating a sustainable, living archive of local craft practices. The project centres around the use of technology as a tool for fostering shared learning processes and aims to disseminate Indigenous knowledge emerging out of Munduruku's cultural practices through visual, auditory, and oral modes. This included the effective use of mobile telecommunication devices, WhatsApp, and digital-based approaches. The Munduruku community crucially led in identifying and pointing the way as to what and how the project might be developed. Collectively, we recognized the importance of ensuring a longer-term sustainable process while navigating digital and physical ways in which Indigenous traditional craft knowledge might be collected, documented, and disseminated. This cooperative process led to and reinforced the wider importance of socio-cultural identities and the Munduruku artisanal tradition.

'It is gratifying, because [through the project] we will have more access, and our students, to information [...]. It is great because our children, and grandchildren, will know how to use all of this technology and it will, surely, always get better.' Roberto, 2022 (Teacher of History of Belterra, Geography and Amazonian Studies).

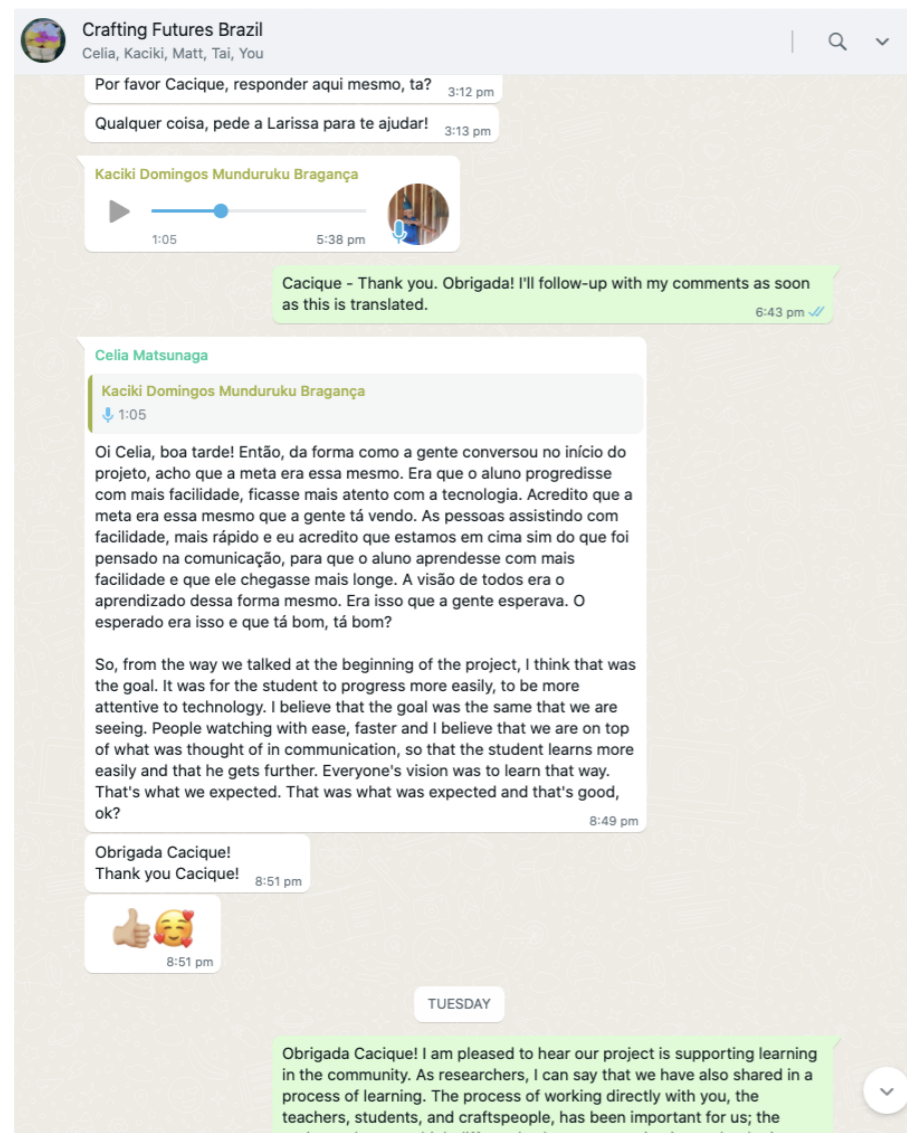


Project Statement

'From the way we talked at the beginning of the project, I think that was the goal. It was for the students to progress more easily, to be more attentive to technology. I believe that the goal was the same that we are seeing. People watch with ease, faster and I believe that we are on top of what was thought of in communication, so that the student learns more easily and that he gets further. Everyone's vision was to learn that way. That's what we expected. That was what was expected and that's good.' Cacique Domingos Munduruku, 2022.

Teal Triggs
RCA, London, UK
Celia Matsunaga
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'Families don't have access to information...we need a project to improve communication...we know the importance of education.'
Cacique Domingos Munduruku, 2016.



This report gives an account of a six-month pilot research project that brought together three partner organisations from the United Kingdom and Brazil in a digital-based collaboration to develop a virtual crafts library of Munduruku Indigenous crafts and stories. Funded by the British Council's Crafting Futures Digital Collaboration Grants, the proposal's main aim was to embark on a pilot project in a cooperative partnership between researchers from the Royal College of Art (RCA), University of Brasília (UnB) and the Munduruku village residents from the lower Tapajós River, Pará - a tributary of the Amazon. The village's chief, Cacique Domingos Munduruku, identified an urgent need for the Munduruku community to be able to have 'access to information' and the necessity to establish a 'project to improve communication' (Cacique Domingos, 2016). Cacique Domingos believes the need for mastery of technological resources remains a central issue in the struggle for his village's survival. To address the chief's concerns, the overarching research asks: In what ways might co-identified and cooperative communication practices and digital inclusion methods foster new ways of shared learning that would build upon and 'rediscover' Munduruku local craft traditions and Indigenous knowledge? An ongoing dialogue between academic researchers and villagers about craft and local cultural practices led to detailed documentation of cooperative ways of 'doing' and ultimately, fostering other 'ways of knowing'. One outcome of this project has been the building of a rich virtual repository of crafts and maker's stories as told through mobile phone audio and video recordings and photographs produced by the villagers. Digital modes of communication are key to this project, not only as tools for documen-

tation and recording, but to enable partners to connect over long distances: London to Brasília to the Amazon rain-forest. The challenges of time zones, weather conditions, and electrical failures had to be negotiated as and when they arose. Platforms such as WhatsApp and Google Meet, were crucial to ensure we could engage in our long-distance conversations between the partners and co-researchers. This project also necessitated a questioning and review of established and 'colonised' models of design and ethnographic research. The project highlighted a need for acknowledging nuanced cross-cultural and ethical concerns leading to an opportunity to question Western-centric research methods and methodologies. We were continually questioning our intentions and how formal and often linear structures were in danger of directing our research processes and outcomes rather than providing a more open and agile framework for inquiry. As university-based researchers working with Indigenous community infrastructures we became acutely aware of our own institutionalising - where a set of normative structures became at times, frustratingly restrictive and less responsive to different ways of working. Through this project, we understood how to adopt methods which consider a critical position and how to research through alternative communication practices cooperatively. We gained distinctive insights into the inner workings of the Munduruku community and to witness first-hand, leadership fuelled by an unwavering commitment to respond to an urgency 'to improve communication' through education. This project provides evidence as to the importance of Munduruku Indigenous knowledge systems through the sharing of craft objects, processes and craft maker's stories, and their place in craft history.



Headdress: Edicley Munduruku, 2022.
Photo: Nádia Munduruku, 2022.

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Classroom built in the form of an indigenous hut.
Classes are taught there for different school age groups.

1

- Project Overview
- 1.1 Introduction
- 1.2 Project Context
- 1.3 Munduruku Crafts
- 1.4 Design Methodology

1.1 Introduction

The British Council's scheme Crafting Futures Digital Collaboration set out to respond to the 'restrictions on global travel due to Covid-19 and rising concerns about the sustainability of face-to-face collaborations' as a new way to foster important international connections and devise alternative ways of working virtually.' (British Council 2021: 2) The scheme formed part of the wider Crafting Futures programme which aimed 'for a sustainable future through making and collaboration – supporting a future for craft by understanding its value in our history, culture and world today.' (British Council 2021: 2) Our pilot project, 'Building a Library for the Future: Munduruku Craft Practices and Indigenous Knowledge', set out to address the specific interests of the scheme focusing on craft and digital learning through making, highlighting the benefits of digital technology and sustainability, and importantly ensuring 'inclusion and mutual engagement of marginalised, Indigenous and/or female communities in a digital age.' (British Council 2021: 2)

The funded project asked: In what ways might co-identified and cooperative communication practices and digital inclusion methods foster new ways of shared learning that would build upon and 'rediscover' Munduruku local craft traditions and Indigenous knowledge?

Our project sought to build a virtual crafts library for the future by bringing together the inhabitants of the Munduruku village in Bragança, Marituba (located along the lower Tapajós River, Pará - a tributary of the Amazon) with design educators at the Royal College of Art (RCA) and Universidade de

Brasília (UnB). The project aimed to foster an intercultural dialogical space focusing on craft and collaborative learning to preserve the socio-cultural identity of the Indigenous peoples, including knowledge related to nature and the social and cultural environments. The project opened-up spaces for intercultural conversation by exploring Indigenous knowledge systems and traditional craft processes, digital technologies, and participatory communication design practices.

This final report covers the period of the six-month project (November-April) with an additional three-month website development period (May-August). The report presents an overview of the project describing the research processes, critical analysis and findings and reflecting on key challenges and successes. The report also considers next steps for the research and the feasibility of sustainability of the digital library by the Munduruku villagers in Bragança. An appendix is included in the British Council version of the report which outlines in detail the project's budget statement.

1.2 Project Context

Brazil's sustainable development goals reflect the complex set of challenges the country faces because of serious economic and socio-environmental concerns. At the start of the project, we took as our guide The Voluntary Local Review on the Sustainable Development Goals in the State of Pará-Brazil (2020). We responded to the goal of '...promoting the participation of traditional, Indigenous and Quilombola peoples and communities, their traditional knowledge and their visions of development in harmony with nature, respecting their social, collective and cultural iden-

20 tity, customs and traditions.' (Pará Governor 2020: 24) We focussed on a localised concern and sought to identify, through a case example, ways of foregrounding traditional knowledge and beliefs in the relation between humans, nature, and harmony, as evidenced through craft. The local government's annual report for 2022, furthered these highlights observing that 'culture contributes to the sociability and identity of a people, as it stimulates creativity, inclusion, and social wellbeing.' The sustainable development goal 1.4 suggests that by 2030, the intent is to ensure access to, alongside other basic rights and infrastructures, 'new technologies and means of production, information and communication technologies.' (Pará Governor 2022: 12)

In December 2021, the School Council received from the Municipal Secretary of Education of the Municipality of Belterra (PA), funding for the installation of the internet at the Nova Esperança school - Aldeia Munduruku de Bragança. Community residents were able to use their cell phones to contact family members who live in other villages, Santarém and even other regions of the Amazon. With this installation, the Internet made it possible to enable the facilitation of our project, to meet in collaborative Forums and to build cooperatively an online virtual library.

Our pilot project provides an example of a small, but significant contribution, toward ensuring positive cooperative ways forward for addressing Sustainable Development Goals (SDG), but more importantly the urgency of a need highlighted by Cacique Domingos and inhabitants of the village.

As the chief of the village, Cacique Domingos Munduruku, explained:

'This material that we are practising, this new technology; we know that the role of handicraft is very important for our family income, which is very low. For example, here in Brazil, people who work with the poor, with people who live here in the Amazon, in the forest, are frowned upon because they do not have an outlet for production. But for us, crafts are fundamental for us here [in the village], [we] have the materials that can be worked with craft.' (Cacique Domingos Munduruku 2021)

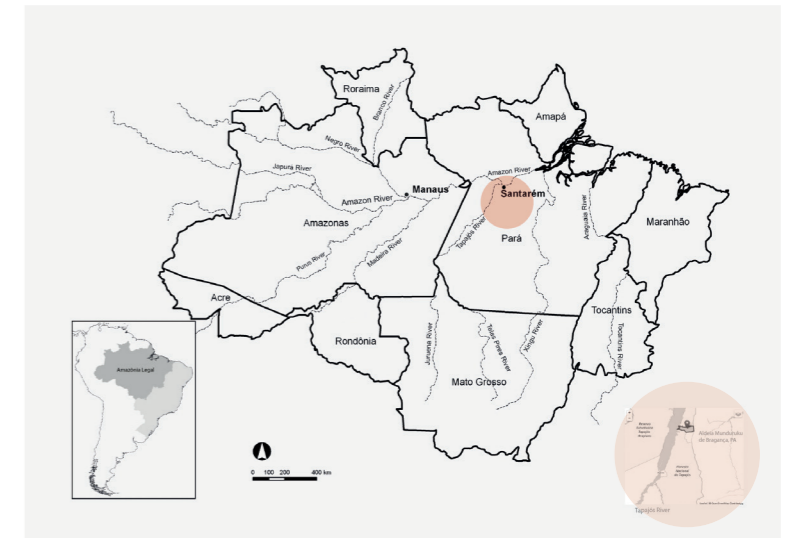
1.3 Munduruku Crafts

At present the Munduruku have a population of about 13,755 inhabitants (Siasi / Sesai, 2014), with 14 TI Indigenous lands located in the region of the Tapajós river in Pará, (municipalities of Santarém, Itaituba, Jacareacanga), Amazonas (river Canumã, Nova Olinda, Borba) and Mato Grosso (Rio dos Peixes, municipality Juara). (Instituto Socioambiental, 2020) The Munduruku village of Bragança (PA) has its territory inserted in the Tapajós National Forest (FLONA), where approximately 23 families live, with a population of approximately 60 inhabitants. The Munduruku Indigenous Lands of Bragança are in the municipality of Belterra, about 100 km and two hours by boat from Alter do Chão. Nearby are the Munduruku villages of Marituba and Taquara, in addition to the riverside communities of Nazaré and Lago do Marai, also located in this region of Flona.

Munduruku have long been admired in the West for the beauty of their feather work. Wolfgang Kapfhammer, a scholar of Munduruku crafts, writes that historically 'Munduruku's feath-

er headdresses (akeri) with their neck feathers (akeri kaha) were almost iconic of the Indian artistry of 19th-century Brazil.' (Kapfhammer 2012: 47) The knowledge relating to the manufacture and use of their traditional feather ornaments has all but disappeared amongst the Munduruku of today. This includes knowledge of featherwork in the Munduruku cosmology. Natural resources in the Amazon environment supports Munduruku craft makers bestowing them with the materials for production of headdresses, body painting, bracelets, earrings, necklaces, baskets and sieves, bows and arrows, and carved wood boats. This process led to discussions about the gendering of craft practices whilst highlighting the village's dependency on the land for harvesting natural materials for craft production. For example, the use of natural fibres including arumã, which is a local plant found in the forest and on the banks of the river and streams. The plant fibres are used to make utensils made by women in the village. Local palm trees produce tucumã seeds used in the making of necklaces by men and women decorated with representations of flora and fauna (e.g., fish, turtles, alligators). Basketry and braiding are shared, though women are primarily involved in the making of baskets used to carry the fruits and products.

Some Munduruku crafts are in danger of disappearing altogether. Weaving, which uses cotton nets, is in decline. In the village efforts have been made to further promote the making of pottery, though still more can be done. Other crafts are actively preserved, or even recreated with new meanings. Fishing is one of the most important



Munduruku cultural practices. The respect afforded the hunting of animals in the daily practices of hunters to obtain food, is part of a wider cosmology of the Munduruku. Care for the river, forest and its wildlife are essential in ensuring Munduruku craft traditions survive. These things are in danger of being lost in the face of a changing political landscape. (Triggs, Matsunaga, Lewis 2022).

1.4 Design Methodology

In order to fulfil the main objectives of putting into practice the methodological planning and its realisation, many adjustments were necessary. In the project diagram, we present the process of including partners and collaborators in a day-by-day journey highlighting the use of specific technological devices and technical procedures. We indicate where in the planning, agreed methods were used to enhance the collaboration and its outcomes. The project mandated an agile and responsive process to adjust responsively and responsibly to a range of environmental conditions and institutional constraints.

Figure 1: Location of Munduruku of Bragança/Marituba village, in Pará, one of nine States of the Legal Amazon. Reference: Doi: <https://doi.org/10.1371/journal.pone.0104144.g001> Plos One.

Phase 0

0

October 2021

Scoping Literature
Identifying research questions
and learning goals
WhatsApp
Pilot Storytelling Forum
Google Meet
Collaboration Grants Meeting
15 October
Partner Meetings
18 October
Partner Meetings
25 October
conversation
28 October
conversation (Google Meet)
British Council Legal Forum
19 October
(Microsoft Teams)

Phase 1

1

November-December 2021

Partner meetings
10 November
(Google Meet and WhatsApp)
27 November
Forum 1: Storytelling Crafts
Forum 2: Storytelling Crafts
29 November
(Google Meet and WhatsApp)
Forum 3: Storytelling Crafts
10 December
(Google Meet)

Phase 2

2

January – April 2022

Dissemination: Representing
Craft/Crafting Representation
DHS Dialogues Presentation (Zoom)
14 January
Exhibition Team meetings
11 February
Partner meetings
17 February (Zoom)
Initial evaluations including
reflective presentation on
ethics, institutional Collaboration
Agreements signed
(WhatsApp)
7 - 8 March 2022
Storytelling Forums/Podcast
Workshops (Matt Lewis lead):
Music Making activities in
English/Portuguese/Munduruku,
followed by discussions on
associated craft activities
and reflections on activities.
Zoom and Whatsapp

16 - 18 March
Schoolteacher's meetings
for intergenerational
storytelling activities
videos, images and drawings
sent through WhatsApp
Website Presentation to Village
24 - 30 March 2022

Phase 3
3

31 March 2022 Feedback
and Evaluation
7 April conversation (Google Meet)
Forum 4: Website Architecture
13 April - 25 June 2022
(preparation) Making
Futures Journal
Dissemination: Crafts Council
Exhibition 'Gaining Ground'
20 April 2022
Partner Evaluation Forum:
29 April 2022
conversation
Dissemination

Phase 4
4

May-August 2022
Post-Award
Dissemination:
'Care, Craft and Ethics:
Gaining Ground' closing party
and project presentation

Phase 5
5

23 June 2022
Launch of a digital exhibition
with the Village

4 August 2022
September-December 2022
Post-Award
Dissemination: Project Report
Writing, Reflection and Publication
Dissemination: Writing and
Submission of 'Critical Ethics
for Communicating
Indigenous Craft Practices',
Teal Triggs, Celia Matsunaga,
Matt Lewis, Special Issue:
Journal of Design History
(2023)

Figure 2: Visualisation of the project's timeline
outlining the processes, methods and technology
platforms used.

2

- Project Research
- 2.1 Aims and Learning Goals
- 2.1.1 Aims
- 2.1.2 Learning Goals
- 2.2 Project Phases 0-4
- 2.3 Methods and Methodologies
- 2.3.1 Craft Stories: Visual and Textual Analysis
- 2.3.2 Digital Tools as Method
- 2.4 Indigenous Methodologies
- 2.4.1 Ethnographic Methods
- 2.4.2 Project Scaffolding
- 2.5 Partner Meetings, Forums and Workshops
- 2.5.1 Forum 1: Sharing and Shaping Expectations
- 2.5.2 Forum 2 The Stories of Craft
- 2.5.3 Forum 3 The Stories of Craft and Their Importance
- 2.5.4 Workshops: Storytelling and Song
- 2.5.5 Forum 4: Project Website: Interim Feedback

2.1 Aims and Learning Goals

2.1.1 Aims

‘Building a Library for the Future’ fosters an intercultural dialogical space focusing on craft and collaborative learning which preserves the socio-cultural identity of Indigenous people, including knowledge related to nature, the social and cultural environments. It aims to open-up space for conversation by exploring Indigenous knowledge systems and traditional craft processes, digital technologies, and participatory communication design practice. This brings certain complexities to craft-based community partnerships in ways that might challenge Western-centric approaches to thinking, making and practices as co-researchers. We acknowledge the complexity of communication processes and especially those which reach across geographies, language, culture, and traditions. As academics we are aware that approaches to communication digital platforms and practices are founded in Western-centric epistemologies and their corollary methods (e.g., design research and ethnography). We are also acutely mindful of our personal biases and limitations of research experiences from within established university frameworks, government funded research, and what challenges this brings. As Kovach acknowledges (2021), ‘While this is not a matter of one worldview over another, how we make room to honour both and bridge the epistemic difference is not going to be easy.’ (Kovach 2021: 42)

With this in mind, we set out to address the following research question: In what ways might co-identified and cooperative communication prac-

tices and digital inclusion methods foster new ways of shared learning that would build upon and ‘rediscover’ Munduruku local craft traditions and Indigenous knowledge?

This project responds to the British Council’s Crafting Futures Digital Collaboration Grant to address the increased restrictions on global travel due to Covid-19, and its impact on rising concerns about the sustainability of face-to-face collaborations. The main intent of the scheme was to ‘foster important international connections and devise alternative ways of working virtually.’ (British Council 2021)

Project partners were already in conversation regarding potential research projects which built on work initiated by Universidade de Brasília (UnB) with the Munduruku community in the Amazon. This scheme provided the catalyst to consolidate these efforts. Cacique Domingos Mundaruku invited partners to consider ways cooperative communication practices might improve access to information and education. He clearly established the motivation for this project remarking: ‘Families don’t have access to information, and they don’t have money: we need a project to improve communication...we know the importance of education.’ (Cacique Domingos Munduruku 2016) The British Council’s Crafting Futures Digital Collaboration provided an opportunity to develop a pilot project focussing Munduruku Indigenous knowledge through craft makers and their stories as a rich cultural area for collaboration.

The main aims of the six-month pilot project were to:

1	Address an already co-identified need for the development of cooperative communication practices and digital inclusion methods to foster new ways of bring the line together learning that builds upon and 'rediscovers' local craft traditions and Indigenous knowledge.
2	Develop, through agreed actions, a 'way of doing' leading to a cooperative approach in fostering other 'ways of knowing' thus, to ensure a sustainable process through which the repository continues to build toward a village library for the future.

2.1.2 Learning Goals

The key learning goals of the project were generated by the shared and specific interests of the three main partners (RCA, UnB and Cacique Domingos Munduruku on behalf of the aldeia (village). In column one, we set out the main learning outcomes addressing each of the

partners' interests in the collaboration. Partner meetings and wider co-researcher Forum discussions led to the identification and iteration of approaches used to meet the goals of the project. In column two, we include the list of methods and approaches to achieve our agreed learning goals.

Table 1. Main aims for 'Building a Library for the Future' project.

Table 2: (above) Statement of learning goals and the methods and approaches used to achieve these.

	LEARNING GOALS	HOW WERE THE GOALS ACHIEVED?
1	Through shared learning, to deepen and integrate 'ways of doing' and fostering other 'ways of knowing' for communication design pedagogy and craft practices. [RCA] [UnB]	Building a co-identified cooperative project of communication practices was possible due to new technology tools. Despite the challenges, our goals could be achieved by digital inclusion mainly because of its process and ways of doing communication pedagogy developed by the partnership of RCA, UnB and aldeia Munduruku.
2	Through collaboration and an applied project, to strengthen an understanding of a 'pedagogy of locality', using digital technologies, and of the value of Indigenous craft making within this process. [RCA]	By placing craft and storytelling of our collaboration, we were able to build a collaborative augmented locality through digital communication focussed on friendship building rather than problem solving. Indigenous education in Brazil is guaranteed by the Federal Constitution of 1988 and is based on the Indigenous right to have differentiated and also bilingual education. We were guided by the Sectoral Plan for Indigenous Cultures that considers socio-cultural rights, the exchange of knowledge between generations, and the valorization of traditional processes. In this research project, it was possible to learn about Indigenous education practices in the Bragança aldeia, through the exchange of knowledge about the handicraft creation processes within the community, it was possible to collect data, collect information and documentation about manufacturing processes and traditional Indigenous histories, based on the activities of the activities offered by the School's aldeia and its core curriculum.

3	Through collaboration, to expand knowledge and understanding of complex ethical processes in community action research and design pedagogy. [RCA]	Forums and workshops created non-hierarchical spaces where the project could be built together, constantly reviewed and reflected upon. WhatsApp was then used to keep the processes going in an informal, convivial and interactive way. Ethics in conducting research involving Indigenous people is quite specific, every action must focus on human rights, respect for culture, traditions, beliefs and religious practices, for the consolidation of a culture of peace and mutual respect. These actions take into account the permanent guarantee of the maintenance and/or social transformation of this and all future generations of these populations.
4	Establish new ways of bringing knowledge and experience back into the university classroom curricula for design students in both Brazil and the UK. [UnB]	The ways in which digital platforms were used and issues of digital sustainability and justice in the project have already been used in pedagogical situations in the UK at the RCA. With this in mind, new ways were established to bring knowledge and experience back into university classroom curricula for design students in Brasília.
5	Strengthen understanding of how Brazil might ethically engage with Indigenous populations to maintain and respect the country's multi-racial complexity. [UnB]	Facing the current political scenario in Brazil, in which Indigenous rights have been threatened, the project highlighted the need for work sustained by the production of shared knowledge that considers the ethics of research practice with Indigenous populations. Respect for cultural differences, so dear to our multi-racial nation, was the central theme of this work.
6	To learn collaborative ways of addressing the need for improving communication means through digital technologies and relevant networks. [Cacique Domingos Munduruku]	"... It was for the student to progress more easily, to be more attentive to technology. I believe that the goal was the same that we are seeing. People watch with ease, faster and I believe that we are on top of what was thought of in communication, so that the student learns more easily and that he gets further."
7	Through a virtual library to better understand the history of the community, its crafts, and traditions, in order to better prepare for the future. [Cacique Domingos Munduruku]	"... what we hope is that our work in the digital library in relation to handicrafts will be more publicised, and if there is no dissemination, so far, to other countries and here in Brazil, we will not be able to sell what we are doing, what we do in practice, our own craftsmanship. What we think is that the issue of disclosure can be improved."
8	To pioneer collaboration with university partners to shape future learning, in order to ensure that although the community might be isolated geographically, it is not intellectually. [Cacique Domingos Munduruku]	We propose that everyone involved in this project is a co-researcher. The project aims to develop, through agreed actions, a 'way of doing' leading to a cooperative approach in fostering other 'ways of knowing'. Ethically, we must ensure a sustainable process through which the repository continues to build toward a village library for the future.

30 **2.2 Project Phases 0-4**

The project was divided into three main Phases undertaken between October 2021 and April 2022 with a pre-phase 0 was held in October 2021 and a post-Award Phase 4 running May-August 2022. The Phase 0 (October 2021) was included for pre-start date meetings between partners and initial literature scoping and briefing the UnB website developer. A final Phase 4 (May-August 2022) resulted in post-award activities focussing on the delivery of the equipment, exhibition at the Crafts Council and the project website launch and final project findings and evaluation. (See Table 11)

Table 3 describes the research processes which were central to our praxis and the literature that supported our aims. The choice of methods and methodologies set out to ensure our agreed imperative which was to respect local practices and cultural ways of doing and knowing. Aligning with each phase are the project's Craft Forums 0-4. A discussion of each Forum is provided in section 2.6, highlighting the co-identified methods through which storytelling and documentation processes were realised. In summary, the project was structured into three main phases with a planning and evaluation phase bookending the project.

Table 3 The project's research intentions and corollary methods.

PHASE	INTENTION	METHODS
0	Introductory meetings moving toward trust building and context setting	Conversation, Literature Review Partner Meetings
1	Foreground the request from Cacique Domingos to support ways in which Munduruku craft practices might be recognized, documented, and disseminated to a wider audience.	Pre-existing relationship with UnB Partner meetings Institutional agreements Scoping craft practices Digital Craft Forums Literature Review Pilot recorded Storytelling Craft Forums with villagers Thematic analysis
2	Be immersive in the experiences of working with Indigenous communities to better understand the complexities of the research processes in this context and the importance of nuanced ways of working.	Reflective practice on ethics Digital-based participatory workshops Partner Meetings Storytelling podcasts Intergenerational storytelling podcasts Website architecture workshops
3	Explore the opportunities and limitations of working across two continents via digital platforms to build a Munduruku library for the future collaboratively.	Digital ethnographic interviews Digital ethnographic storytelling activities and craft maker podcasts Crafts Council Exhibition Evaluation Forums
4	Delivery of website, project outcomes and final reflections, Dissemination	Reflective practice, Celebration Event, partner website announcements, academic papers

2.3 Methods and Methodologies

As a tool for collecting and sharing stories, WhatsApp became the primary means of communicating between all participants. This practice was especially prevalent in educational contexts in Brazil during the Covid-19 pandemic. Photographs, audio recordings, videos as well as text-based information were easily shared through mobile communication devices. For example, the transfer of videos created by teachers Nádia, Darliane, Eldianne, Larissa in addition to Cacique Domingos, were all generated through WhatsApp. Since the installation of the first Huggies Net antennas at the home of Cacique Domingos (supported by a previous University of Brasília project) and Cacique Orlando in 2020, WhatsApp has been used. WhatsApp also became a speedy and expedient tool for following the progress of the project and exchanging information between project members.

WhatsApp was used both within and outside of scheduled sessions, for example, due to low internet speeds and the poor sync time over Zoom, sending recordings of parts of songs via WhatsApp audio was a much more effective way of learning songs in English and Munduruku. This method was initiated by the teachers in the village and represents a creative testing of the affordances of a standardised media object, where new responses to the failure of another platform are expediently created. The instability of electrical power in the village constantly had to be worked with and showed the infrastructural challenges the village has in relation to accessing stable electrical supply. More than

anything it highlighted the inequalities within Brazil when it comes to accessing basic resources.

As researchers, we acknowledged the need for ensuring our own flexibility and to consider methods in conjunction with the Munduruku that were accessible and effective in terms of their goals for telling stories about crafts. Davidson speaks of responsibility and how 'to remain attentive' in the research. (Davidson 2021: 27) This reinforced our collective commitment for gaining new insights into ways of knowing, ways of understanding in Indigenous craft practices. Respecting the choice of content generated by craftspeople, students, teachers, and villagers was a key imperative of this project, as was taking collective responsibility for ensuring how the material as represented maintains its integrity as it was intended. To this end, partners agreed a series of regular check points (e.g., Partner Meetings and Craft Forums) and as the research progressed, mechanisms for gaining invaluable feedback from the teachers and crafts people at all stages of the research (e.g., presentations and feedback) This acknowledges the value of different 'ways of knowing' and frames the project as a reflective, action learning practice that informs and supports an adaptive process. Kovach writes of qualitative inquiry as a '...story interpreted from experience with an aim of offering further insight into human experience from human experience.' (Kovach 2021: 24)

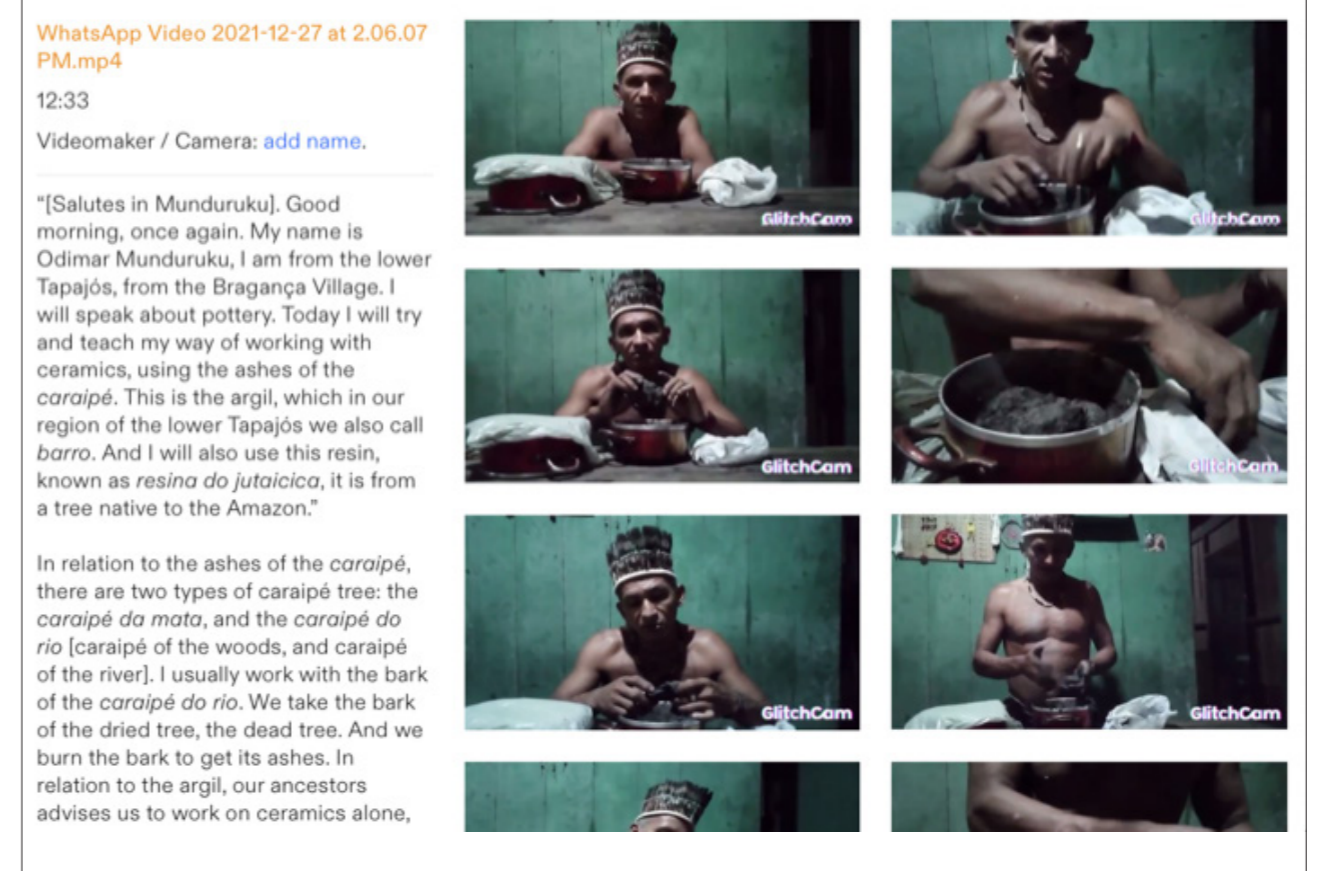
We adopted a thematic arrangement of the four Craft Forums to be used in the architecture and navigation of the project's website. Four key pro-

32 cesses were identified as important in craft production and aligned with the overarching methodological intentions of the research: meeting, communicating, storytelling and working together. The addition of the phrase 'a way of...' was used to introduce each theme on the final project website. These were used to organise the collected materials into identifiable categories: a way of meeting, a way of communicating, a way of telling stories, and a way to work together. This represented the active nature of our documentation processes and conversations that ensued during each Forum. As Martin and Mirraabooa, argue 'Ways of Knowing also entail processes that allow expansion and contraction according to the social, political, historical and spatial dimensions of individuals, the group and interactions with outsiders.' (Martin and Mirraabooa 2003: 209) We were keen to acknowledge different 'ways of knowing' for example, and ensure a range of processes (e.g., listening, sensing, viewing, observing, sharing, exchanging, and so forth.) were accessed and implemented in the collection and curation of Munduruku crafts and making. (Martin and Mirraabooa 2003: 209) The project's ongoing documentation including videos, photographs, audio recordings and their selected English translations were housed on a Cargo site curated under these four themes. This provided an accessible platform from which the final project website would draw its material. Technology operated in two ways methodologically: firstly, as a tool for documentation and, as secondly, as a means which 'encourages the actual living praction to happen'. (Steffesen in Archibald, et.al., 2021: 229)

2.3.1 Craft Stories: Visual and Textual Analysis

For this pilot research, the identification of general themes emerged from a process of researchers' reflections upon the rich descriptions offered by individual craft stories and participant-generated images. A full thematic analysis (Braun and Clarke 2006) of craft stories was intended though not fully realised within the project's timeframe. English transcriptions of each Forum meeting were provided as selected extracts where relevant to highlighting individual stories or quotes which provided insights as part of evaluation sessions. These were housed on the project Cargo site and although represented as extracts, were useful to apply a thematic analysis to the three of the Craft Forum conversations that took place. Though we did not apply a full thematic analysis to this material, it was useful to draw together under headings summaries of main points or key ideas raised by the crafts makers in conversation. These are highlighted in Tables 4, 5, and 6.

One approach to analysis of video imagery, for example, is through 'glitchcam', by taking apart a frame-by-frame way of pottery making. Set adjacent to the translated text (and original video) on the Cargo site, the image/text combination offered by craftsman Rodimar Munduruku describes and shows the richness of this craftsman's step-by-step process from taking resin from the trees native to the Amazon to the process of crafting the pot. Addressing an image's compositional modality (including sound, technologies and the production of imagery, content, etc.) deepens insights into the nuanced processes of craft making revealed through ways of doing. We propose to



explore in future research, what Gillian Rose (2007), terms as 'compositional interpretation' which suggests one way of looking at imagery that is not 'methodological or theoretically explicit' but allows for a 'way of describing' the image.' The 'effects' of an image or images, she argues, are 'always embedded in social practices.' (Rose 2007: 35)

2.3.2 Digital Tools as Method

As discussed in other parts of the report, the integration and testing of digital tools was fundamental to the project, both in terms of gaining an understanding of the access to tools, infrastructural barriers and challenges faced by the community but also informing the appropriateness

of platforms and hardware for the success of the project. Taking a post-digital approach where affordances of platforms was never taken for granted, the digital tools used were led by the activities we undertook rather than dictating how the activities took place. The main digital tools used were the conference platforms Zoom and Google Meet, the social media platform WhatsApp and various web design platforms including Cargo. These tools immediately amplified the power of present day digital tools to both connect but also to marginalise and disafford. Zoom, for example, was a very unstable tool for the village but WhatsApp proved an excellent tool that allowed us to carry on formal sessions over 'digital-time' long after formal scheduled sessions

Figure 2
Rodimar Vieira de Sousa's 'a way of making pottery' documented on the project's Cargo site for the showing and telling of Indigenous craft stories. (December 27, 2021)

34 were finished. As such, we expediently developed a method of flow of exchange video, audio and text that acted as a live gallery.

2.4 Indigenous Methodologies

2.4.1 Ethnographic Methods

In this exploratory research, the ethnography study guided the understanding of the reality experienced by the Indigenous people in the Amazon, more specifically, the Munduruku of Bragança-Marituba, Pará. One main outcome of this project was the implementation of an Indigenous virtual library to assist elementary and high school students, based on the documentation of Munduruku of Bragança, Pará (Amazon) crafts and craft production. Therefore, as a methodological process, we engaged with ethnographic practices and considered:

- Approach – The ethnography took place in a natural environment, using observation and interview methods, with a focus on discovering the Indigenous point of view; including interviews between Indigenous craftspeople themselves. From Indigenous themselves to Indigenous as interviewees.
- Procedures – From observation, to understand the contexts, during a certain period, in order to know habits and customs, and at the same time, understand the reality.
- Source of information – Characterised by data collection.
- Instruments and techniques – documenting the voices of artisans in transcription and translation in which the researcher used the villager's self-recorded sound and video captures.

Through the ethnographic study, information was obtained in the collection of data made by the

Munduruku themselves and, at the same time, about them. Data on the object(s), production method, materials used were collected. In the next section we consider three phases of the data collection, documentation processes, and publication for dissemination on the website.

2.4.2 Project Scaffolding

Phase I - Data collection

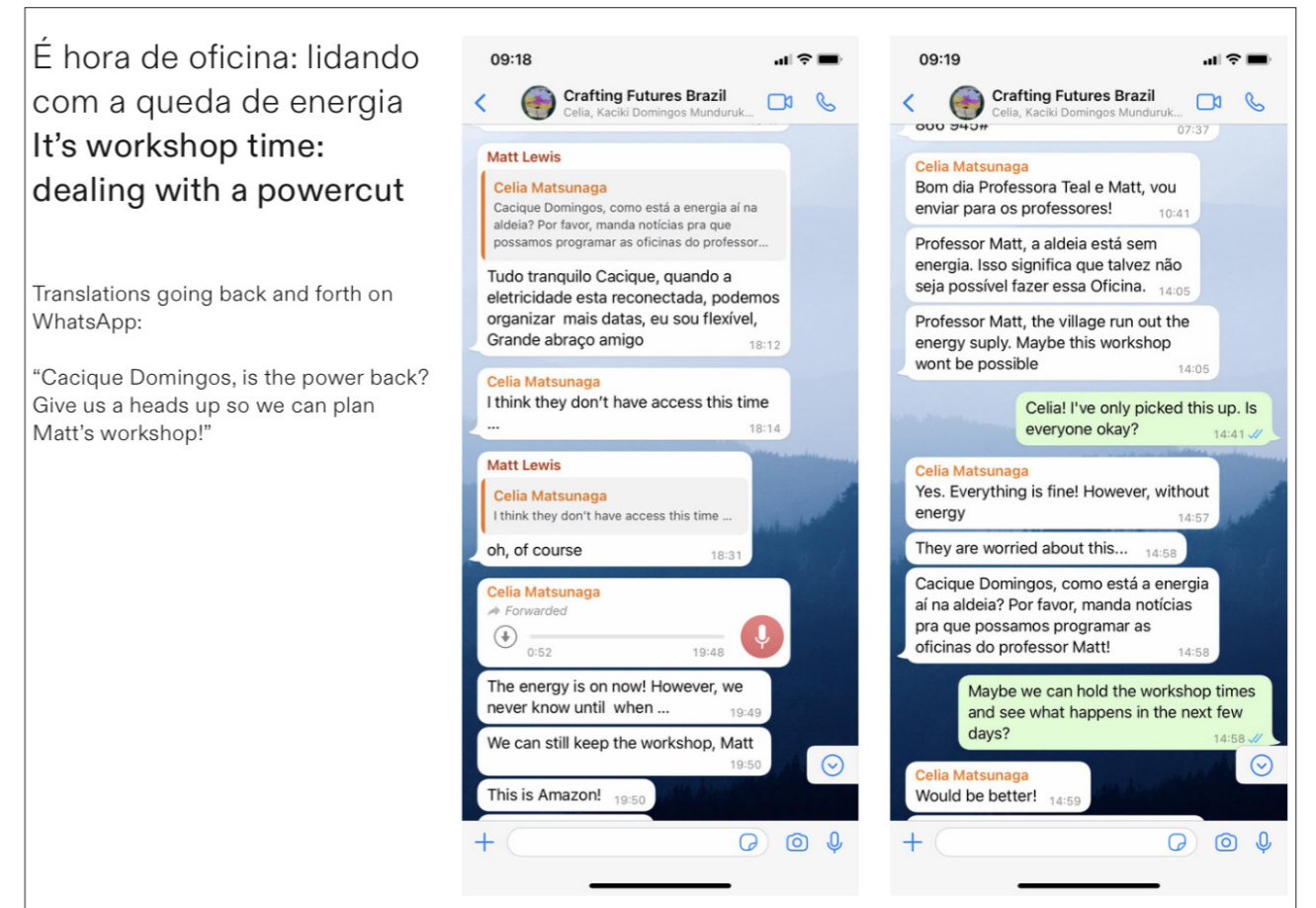
In the first step of the documentation process, teacher Nádia identified students interested in researching who are producing crafts in the village. High school students from the village helped in the identification and documentation processes. Artisans/craftswomen were interviewed, and photographs of the artisans and the works were taken alongside obtaining information regarding the processes and materials used.

Phase II - Documentation

The project draws from Clifford and Marcus (2016) who write: "The ethnographic tradition looks obliquely at all collective arrangements, distant or close. It transforms the strange into the familiar, the exotic into the everyday. (...) Ethnography is actively situated between powerful systems of meanings. It poses its questions on the borders between civilizations, cultures, classes, races and genders. Ethnography decodes and decodes, revealing the bases of collective order and diversity, inclusion and exclusion. It describes innovation and structuring processes and is itself part of these processes." (Clifford and Marcus 2016: 33)

In Phase II, the project focussed on the documentation of craft objects from the village Munduruku of Bragança, Marituba. Members of the

Figure 3 WhatsApp facilitated an immediacy of information exchange across continents, in this case the responsiveness of a power outage and workshop scheduling during the Workshops.



É hora de oficina: lidando com a queda de energia It's workshop time: dealing with a powercut

Translations going back and forth on WhatsApp:

"Cacique Domingos, is the power back? Give us a heads up so we can plan Matt's workshop!"

village led on the identification, collection and curation of items for inclusion in the project's repository (virtual library) sending via WhatsApp their videos, audio recordings, and photographs, to the web developer and partners. This process was immediate via the use of mobile phone technologies, resulting in an outcome that 'explicitly privileges Indigenous ways of knowing through telling stories' (Goodchild 2021: 82) All the collected personal craft objects including bracelets, earrings, necklaces, headdresses, bow and arrows, were uploaded in the first instance to the project's Cargo site. This tool allowed us to effectively document the collected materials alongside photographs of their craft creators with

a descriptive text and/or quotations related to the making of the craft object. Phase III – Publication on the website As the materials were collected on the Cargo site, the digital files were then forwarded to the web developer, Matheus Almeida, for uploading onto the repository section of the website eventually titled 'Munduruku Crafts and Stories'. (www.mundurukudebraganca.org) Figma and Webflow platforms served as a basis for the construction of the visual interface and for the implementation of the online digital library. The development of the graphical interface (information architecture and navigation) and content creation were done in Figma. The implementation took place in Webflow

36 to support developing a customised site and database. To create the digital library a task force was formed involving the co-researchers and residents from the village, as well as the teachers of Escola Nova Esperança Munduruku. To ensure correct attribution was made for each craftsman, information was collected to establish who they are, and what they do. This process made it possible to document important aspects of the material culture of the Indigenous people, resulting in a collection of Munduruku handicrafts available for wider consultation from the repository. On November 1st, 2021 the project was presented to all members of the village and included a schedule for delivery, the site's aims, objectives and goals as agreed, between Cacique Domingos, teachers and university partners. The idea of holding online meetings, debate forums and workshops involving the project partners: RCA, UnB and the village under the supervision of Cacique Domingos were already established through earlier developmental processes for submitting to the funding scheme. Considering the ethics involved in research with Indigenous communities, the project set out to ensure processes were transparent and that consultation and permissions from participants and co-researchers remained actively sought and agreed throughout all phases of the research journey.

It is fair to acknowledge that at first for the village, doubts were raised concerning the project's initial proposal. However, as the project conversations began, villagers not only confirmed their approval for the craft's project, but actively became protagonists in the process; especially through

the activities initiated and guided by teachers Nadia (Teacher, Portuguese, English, Art, and Religion) Portuguese language, English, Art and Religion) and Darliane (Teacher, Chemistry and Mathematics). Nadia collected important data, in addition to producing videos that helped in the perception of the Amazonian reality and the day-by-day life of its Indigenous inhabitants. The first video to be submitted was with Cacique Orlando Munduruku, as a distinguished craftsman, elder and first chief of the village. Cacique Orlando is an expert of the molongó tree and its existence in the swamps of the Amazon forest's streams. The video captured the Cacique Orlando locating this tree, filmed from the departure of his boat towards the location where the tree can be extracted, to the cutting and preparation of the wood through to his skilled carving of domestic utensils such as wooden spoons, shovels, and cutlery. As the videos were completed, Nadia sent these to the project's group through WhatsApp. This process resulted in establishing a unique energy and immediacy to the project. Images, reports and documentary videos were sent not only by the teacher Nadia, but prompted other members of the community including Indigenous craftspeople, teachers and their students to follow suit. The documented material (e.g., videos, photos, drawings) created by the Indigenous people, provided a small sampling of the potential for and richness of the artisanal production of the Munduruku people of Bragança, Marituba.

The arrangement of the collection was done fully with the involvement of Munduruku. The record of handicraft

memories, in addition to the current production in this exploratory research, took place using the following template for information:

Methodological process

1. Textual documentation (using interviews and writings made by the young students of Escola Nova Esperança);
2. Identification of the artisan: name, age and what he/she does;
3. What it produced;
4. What the object is for (the function);
5. Materials used with description of natural and/or industrialised elements.

The cataloguing of Munduruku handicrafts required great effort on the part of the participants of this project. First, there was no intention of organising the works into specific categories. Thus, the focus remained on the importance of each craftsman and their specific mode of production. Secondly, it was of fundamental importance that ethnographic research be scientifically based. In this particular case, the originality is characterised by the voice of Indigenous artisans who hold knowledge about the craftsmanship and processes of production.

The pilot project laid a foundation for the future collection of works and acknowledged the value and importance of documenting Munduruku traditional crafts, handling techniques and making of objects, their manufacturing processes and identification of raw materials used by the artisan residents of the village. We sought to systematise the entire process to ensure a wide representation of crafts objects including the documentation sent by key craftspeople, through portraits, brief biographical sketches and descriptions to ac-

company the object. Due to the time constraints for the project, this initial work only sets out the first phase of the website development, but with a robust content management system that means the community is able to continue to add to the repository.

At the start of the project, one of the most important anthropologists in Brazil, Lúcia Hussak Van Velthem was contacted. As an ethnologist, curator of the most important collection of Munduruku art and craft at the Museu Paraense Emílio Goeldi (<https://www.gov.br/museugoeldi/pt-br>; <https://www.museu-goeldi.br/assuntos/colecoes/etnografica>) Van Velthem is responsible for organising the largest collection of the Munduruku artcraft since the European invasion in the 15th century, having several pieces of handicrafts kept in the museum's collection. Van Velthem was identified as a key contact who would be able to assist in supporting a viable approach to undertaking ethnographic research with Indigenous people and in documenting Munduruku's cultural memory and cataloguing the works of the current Indigenous people of the Tapajós River region. The ethnologist was accessible to conduct this research willing to collaborate in the survey proposed by this project. The partnership was not specifically defined for the pilot project, leaving it open to extend the relationship to future projects.

38 2.5 Partner Meetings, Forums, and Workshops

This section sets out to describe the four phases of Project Meetings, Craft Forums and Workshops that were aligned with the intentions of each phase. Recordings of these activities ensured transparency and documentation in decision-making, storytelling documentation and evaluation. It also ensured the project held accurate recordings for undertaking English summary translations. Additional documentation materials provided by the Munduruku community via WhatsApp, followed each of these meetings.

Partner Meetings are defined as spaces for discussions held between project partners and researchers taking place on a regular basis to ensure agreement on the management of the project timeline, budget, and ethics processes. Craft Forums are the key gathering points with partners, teachers, craftspeople, and others who have stories to tell about crafts and craft production. Four main Forums were established as research pillars for the project with further Forums taking place focussing on evaluation and reflection. Workshops are designated platforms for structured learning activities. Two workshops were held with researchers, teachers, and students from the local School. Additional workshops on the architecture of the website provided specific feedback from the community.

Partner Meetings

Whilst we are not providing specific details for all the Partner Meetings, the first meeting was especially notable in seeking guidance and taking into account the ways in which the Mun-

duruku wanted to identify, collect and document the villages craft stories. The first Partner Meeting took place in October 2021 with more formal meetings held in November 2021 attended by Triggs, Matsunuga, Lewis and Cacique Domingos, with the intent to gain guidance from Cacique Domingos as to how the Forums might be structured to collect stories and gain key insights into the crafts makers and their work. Discussion ensued based on the following set of scoping questions: What areas of craft making are important for the village, who might be involved in the Forums, what is the best way to structure the Forums. Two aspects which focussed on technology were discussed including checking as to what digital equipment already exists in the village, how is it currently used and are there any barriers to these technologies we needed to address. In addition, we clarified with Cacique as to what he thought was the best process through which we could collect images, texts, videos, sounds and support the documentation. It was at this early stage where WhatsApp was identified as the communication technology of choice for documenting the craft stories and production processes.

Subsequent Partner Meetings ensured agreement on key phases and details of the project's decision-making, implementation of inclusive processes for participants, management of financial and research contractual agreements, setting up work plans, and in the later meetings, discussions on funding and next steps. The partners fully acknowledged and respected Cacique Domingo's authority and leadership in the community and Munduruku's decision-making pro-

cesses and cultural protocols from the project's organisation, participation, craft selection to the documentation of the project.

2.5.1 Forum 1: Sharing and shaping expectations

Establishing the connection to the village made this process real in terms of the understanding of the reality lived by this population. Rains and storms are common in the Amazon, making the cycle of life in the forest possible. For our communication, however, it was one of the biggest challenges faced. During that period, heavy rains caused the electricity supply to be interrupted. Sometimes they occurred due to a deficiency in the energy supply line. In other cases, by falling trees interrupting the power supply line. Without electrical power, communication could not be established. Thus, many times we had to postpone our meetings. Despite the challenges faced, the determination of our co-researchers ensured that the Forums took place quite satisfactorily.

Set out in the project's proposal, the intent of Craft Forum 1 built on the guidance offered in the first Partner Meeting to initiate a process of the village's contribution toward sharing and shaping expectations for the project. Forum 1 was attended by partners Triggs, Matsunuga Lewis and Cacique Domingos, with contributions from seven members of the community who disclosed their aspirations for the project and for their community. These included: Edna Munduruku (dollmaker), Darliane Rocha Correa (Teacher, Chemistry and Mathematics), Jane Correa Santos (Teacher, early childhood education), Elciene Farias dos Santos (School

operational support, Cassava Flour), Eldianne Poryng Etê Santos de Sousa (Leader, Munduruku women's movement, Beadwork), Márcio Rocha (Teacher, Farmer, Handicrafts), and Nadia Gomes Lima (Teacher).

Roberto reflects on his expectations for the project: 'For us, in the village, this is first world stuff. The project will improve our lives as teachers, at the school, and the lives of the students are special. I have searched on websites, the internet, on social media, and there is not much information about the Munduruku people available to subserve the research of our students and even of other people. It is the first time I see a project like this, an excellent initiative. If we search for information, even on google, we find very little about the Munduruku people here, in the lower Tapajós, in the Amazon. So the project will really improve things for us, the teachers at the school, and for the village as a whole: especially those of us who, in the future, will study for teaching degrees in history, Portuguese, and our native language. The project will really strengthen these.'

Nadia confirmed the importance of sharing knowledge and learning together. She shared her concerns about the Munduruku language and the materiality of recording. She explains: 'In relation to the Munduruku language: the language will die if it is not recorded. The issue of recording [the Munduruku language] is very important: Professor Aryon [Rodrigues] worked thoroughly on the issue of the Brazilian languages. And there [in his work] we see that many languages have no speakers left, and there are no recordings either. It is a huge loss.'

Forum 1
10 de novembro de 2021

compreendendo o projeto
understanding the project

Nádia — compreendendo o projeto

Nádia explains that it took her a while to fully comprehend what the project is about, "Project? Dona Célia? I could not fully understand. But it is about the creation of a digital library, right? It is [called] 'sharing knowledge' right?"

Célia is also heard in the excerpt, she confirms, in English, "yes, sharing knowledge."

During this Forum, craftspeople shared their insights into the broader context for Munduruku crafts willingly contributing stories of craft practices in the village. For example, Darliane conveyed that most everyone in the village was involved in craft making including children as well as adults. In most cases Indigenous craft knowledge was passed down from generation to generation. Darliane states in her case: 'I learned it from an elderly person.'

This Forum was attended by the teachers and in terms of expectations provided insights into the ways in which the project would benefit the children in the village and the broader Munduruku community. They brought their own experiences

to the discussion; some were recent residents and brought a comparative perspective to their expectations. Nádia is one of the non-Indigenous residents of the village. Despite being married to Marcio Munduruku, she insists on asserting her position as a teacher and mediator in this research process. Her participation was of fundamental importance to the discussions at the Forum. In addition to her work with the students of Escola Nova Esperança.

Forum 1: Thematic Conclusions

From the information sent by the participants in this Forum 1, on the dynamics of artisanal production, in addition to the Munduruku cultural tradition, we observed the following emerging are outlined in Table 4.

Figure 4 Forum 1 (10 November 2022) documented on the project's Cargo site for the showing and telling of Indigenous craft stories.

THEME	CRAFT MAKER
Context: role of crafts they made and why	Darliane
Relationships: intergenerational process of learning and legacy, gender and cultural identity	Nádia, Roberto, Darliane
Learning Activities: exhibition, performance	Nádia
Natural Materials: Indigenous plants, trees, birds and animals	Darliane
Project Pacing	Cacique Orlando
Improving Lives: Knowledge sharing	Roberto, Nádia

2.5.2 Forum 2: The Stories of Craft

On 29 November 2021, after establishing the connection to the village, the second meeting took place. The intent of Forum 2 was to expand the collection and documentation of craft stories building on the set of conversations that took place in Forum 1. Forum 2 was attended by partners Triggs, Matsunaga Lewis and Cacique Domingos, with contributions from crafts people who told their stories and showed how craft items were produced. The crafts which were the focus of this Forum 2 included: baskets, weavings, native language, and hammocks.

Jane explains: 'For me, as daughter of Cacique Domingos, it is very important today, the moment that we will put it [crafts] to the children, so they don't ever lose our culture, always teaching, generation by generation, to keep our culture alive. This is what I think of crafts.'

This position was explained further by Dona Edna, the elder in the community where she explains: 'Yes, I make the little dolls. I have other ones at home,

in Bragança, nicely finished [prontinha] with the little Indigenous skirts, and the Indigenous necklaces.' Dona Edna explains to us: 'why I make them? Because it reminds me of my mother. She used to make them.'

Eldiane shares with those on the call: 'I am part of the Munduruku people, I am currently the president of the village's association and coordinator of the women's group. One of the things I also do is crafts. I paint, among other things. But at this moment I will speak about the beaded bracelets I make. I brought a sample with me: here they are, I make them using miçangas [beads].'

Forum 2: Thematic Conclusions

This Forum provided a rich mix of documentation and oral recordings which provided craft makers insights into what crafts they made and why, the strong intergenerational process of learning and legacy, an introduction to the materials used in production and the natural materials employed in making. The crafts which were the focus of this Forum 2 included: dolls, beaded bracelets, feather art and headdresses, language, song, and necklaces.

Table 4 Themes presented by participants during Forum 2.


expectativas para o projeto
expectations for the project

Roberto says he is grateful the village has been chosen for this project "it is gratifying, because [through the project] we will have more access, and our students, to information [...]. It is great because our children, an grandchildren, will know how to use all of this technology and it will, surely, always get better."

▶ Roberto — expectativas

Roberto reflects on his expectations for the project:

"For us, in the village, this is first world stuff. The project will improve our lives as teachers, at the school, and the lives of the students in special. I have searched on websites, the internet, on social media, and there is not much information about the Munduruku people available to subserve the research of our students and even of other people. It is the first time I see a project like this, an excellent initiative. If we search for information, even on google, we find very little about the Munduruku people here, in the lower Tapajós, in the Amazon. So the project will really improve things for us, the teachers at the school, and for the village as a whole: specially those of us who, in the future, will study for teaching degrees in history, Portuguese, and our native language. The project will really strengthen these."



Roberto

Figure 5 (left) Forum 1 (10 November 2022) documented on the project's Cargo site for the showing and telling of Indigenous craft stories.

Figure 6 (right) Darliane in the village during Forum 1.

Table 5 Topics presented by participants during Forum 3.

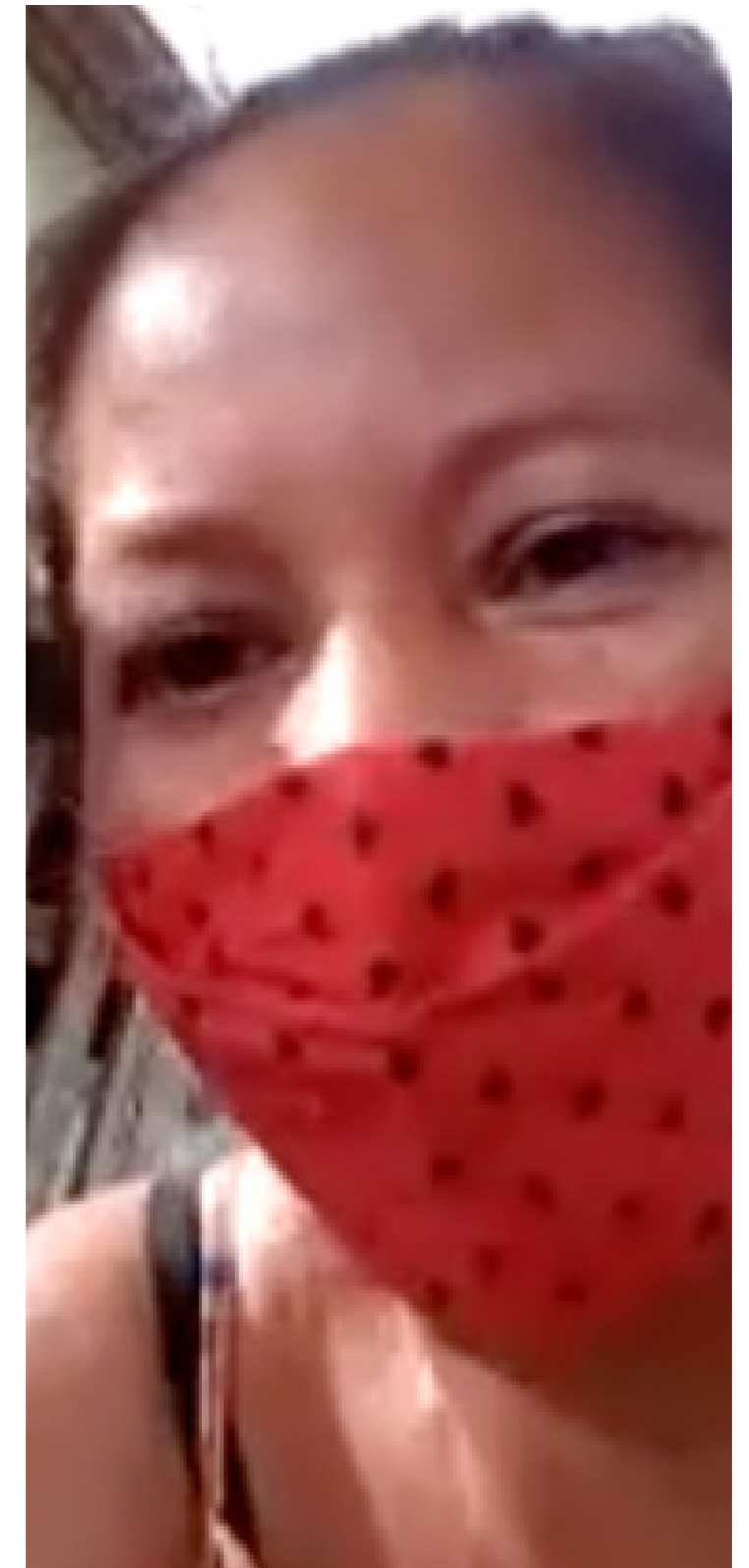
THEME	CRAFT MAKERS
Context: role of crafts they made and why	Jane, Eldiane, Márcio, Nádia
Relationships: intergenerational process of learning and legacy, gender and cultural identity	Dona Edna, Nádia, Jane
Production: batch processes (e.g., fibre, dyeing, water softening, etc.)	Dona Edna
Natural Materials: Indigenous plants, trees, birds and animals	Dona Edna, Márcio
Purchased Materials: manufactured/bought in Santarem	Dona Edna, Eidiane
Representation: mysticism, symbols, use of imagery/painting	Eidiane, Márcio, Nádia
Production Tools	Eidiane

2.5.3 Forum 3: The Stories of Craft and Their Importance

On December 14, 2021, Forum 3 was held. The intent of Forum 3 was to continue collecting stories as told by their makers. The headdress, necklace, Carimbó and basketry were the focus of the 'show and tell' session.

Forum 3 was attended by partners Triggs, Matsunaga, Lewis and Cacique Domingos, with contributions from crafts people who told their stories and showed how craft items were produced. Cacique Domingos, Eldiane, Darleide, Eldiane, Darliane, Nádia, Márcio, Roberto and Jane participated in the meeting. The crafts which were the focus of this Forum 3 included: feather art and headdresses, necklaces, wooden model boats and turtles, wooden spoon, bow and arrows, beaded earrings, carimbó and arumã basketry.

Cacique Domingos spoke about his artisanal production, his objects, especially about the creation and importance of the headdress. He also spoke about the bow and arrow used for the Indigenous tradition, protection of the Indigenous people, and for fishing. Cacique Domingos explains that the headdress is used by the Munduruku people and other Indigenous peoples for identification purposes. Each person wears a different headdress, 'we, the Munduruku, wear it this way, with Arara feathers: these feathers are a direction.' He explains that the headdress is also used to identify the leadership. Cacique Domingos says the headdress is a blessing received from Tupã, '...it is a guide for our spirits of



44 the forest and the river [...]. The feathers are used because they are beautiful, this bird flies very high, flying over the forest. They provide safety and strength to the forest.' He explains the headdress was made by his daughter and his son-in-law, 'they made the headdress together and gifted it to me on my recent birthday.'

As a leader of the group, Cacique Domingos explains that crafts practices today and in the past are 'for the peoples who are born in this culture, we used to make crafts as play [...] today crafts practices are maintained as a means of sustaining the family.'

His unique appearance visible in the frame of the computer screen, with the headdress, body paint and necklace of animal teeth, creates interest for those present on the Google Meet call. The intriguing necklace with animal teeth, at that moment still unknown, would not go unnoticed. When asked about its origin, Cacique says: it was from a jaguar that killed his brother, 'we got angry at her too, and killed her.' The tooth was kept for a long time, he says, waiting for the right time to be used, 'it is something that never ends.' Cacique Domingos explains that he has had the jaguar tooth for about thirty years.

In addition to storytelling knowledge held by the chief, the use of bow and arrow in the village was seen as an important issue. He remarked: 'We, here in the village, we all know how

to make a bow and arrow, because we all have to be prepared, in our houses, and armed with these weapons.' He explains that everyone must have them in their homes, and that they are also used for fishing and hunting. The arrow is a point of reference in terms of defending the village, he says. However, an arrow is of no use without the river 'if we have the arrow, and the bow, but not the river, then it has no importance to us, we need to be on our boats, with our bow and arrow, and we need to have our river in the way we have now: a river that provides food, good water. We, the Munduruku, this is our thinking: to always maintain our river clean, our forest standing, so we can have our bow, our arrow, our river, our boat, this is the importance of the river, because without water there is not a place in the world we can live in.'

Forum 3: Thematic Conclusions

The wealth of knowledge presented by Cacique Domingos leaves no doubt about his importance in the leadership of his people. With plenty of wisdom, sensitivity, and dexterity in conducting the works developed by the Munduruku people, Cacique Domingos seeks to keep alive the tradition of the culture of his ancestors. He can speak for himself and for everybody else in the village about different aspects of their day by day lives. Table 6 shows the majority of themes which were raised in discussion were from Cacique Domingos.

Figure 7
Forum 2
(29 November 2021)
documented on the project's Cargo site for the showing and telling of Indigenous craft stories.

Table 6
Themes* in all three of these Tables 5, 6, 7 as we are doing thematic conclusions.

apresentação e as pulseiras, figuras
introduction and the bracelets, motifs

atches or two or three, it takes ner three days to finish a batch of three, she says.

Dona Edna (left)

Eldiane — apresentação e pulseiras

Eldiane introduces herself, "I am part of the Munduruku people, I am currently the president of the village's association and coordinator of the women's group*. One of the things I also do, is crafts. I paint, among other things. But at this moment I will speak about the beaded bracelets I make. I brought a sample with me: here they are, I make them using *miçangas* [beads]."

Eldiane holds her bracelets up to the camera, "here is the *muriquitã*, this is a crocodile, and this is the indigenous culture, represented by the trunk of the *buriti*."

Following the exchange contained in this excerpt, Eldiane says many people in the village wear this type of bracelet daily. She shows the bracelet she is wearing and Célia follows.

* Eldiane seems to say the name of the group, "grupo de mulheres [...]", which I could not hear.

THEME	CRAFT MAKER
Context: role of crafts they made and why	Cacique Domingos
Relationships: intergenerational process of learning and legacy, gender and cultural identity	Cacique Domingos, Eldiane Munduruku
Natural Materials: Indigenous plants, trees, birds and animals	Cacique Domingos
Natural Environment: river	Cacique Domingos
Representation: mysticism, symbols, use of imagery/painting	Cacique Domingos
Economic imperatives	Cacique Domingos
Craft Customs	Cacique Domingos
Indigenous Rights	Eldiane Munduruku
Learning Activities: exhibition, performance	Eldiane Munduruku

2.5.4 Workshops: Storytelling and Song

Song and music-making formed the basis of an interactive participatory approach led by Matt Lewis between partners, students and teachers in the village school in two online workshops. Workshop 1 (16 March 2022) set to build connections through music in a fun and interactive way and to create a multi-language (Munduruku, Portuguese and English) exchange which also tested out the limitations and potentials of the virtual platforms being employed. The village asked that participants had an opportunity to learn some English which was incorporated into learning songs, whilst Workshop 2 an opportunity to learn some English as part of the workshops and as such participants learnt songs in English, whilst Workshop 2 (18 March 2022) took as its starting point the craft object of the boat. The songs; Row, Row, Your Boat, Rain Rain Go Away and The Water is Wide, all related to the key theme of water which was used as a starting point through which to begin conversations about the importance of the river to the village, craft practice and more broadly to the Indigenous peoples. The Workshop was attended by partners Triggs, Matsunaga, Lewis and Cacique Domingos, with contributions from crafts people who told their stories and showed how craft items were produced. The intrinsic use of multiple digital platforms highlighted the power of digital to connect across continents but also the how Indigenous communities are constantly experience disaffordances (an act to constraint some action) due to infrastructurally inequalities, which mean that internet speed did not support smooth communication over Zoom and Google Meet, or that total power outages meant meetings could not take place at all.



**o artesanato, importância
the crafts, its importance**

▶ Cacique Domingos — Importância do ...

Cacique Domingos talks about crafts practices today and in the past, "for the peoples who are born in this culture, we used to make crafts as play [...] today crafts practices are maintained as a means of sustaining the family."

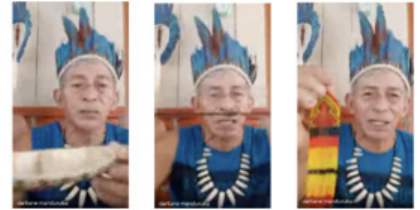
He explains that, whilst crafts play a role in preserving what was once part of an ancestors' culture, crafts are also a source of income, "it is important to us that we make crafts to have at home and to show what the culture was like before, but also because it is a family income here in the village."

Cacique Domingos also speaks of the importance of passing this knowledge down to the younger generations, "to maintain and to remember a living culture, so it is not forgotten and so it is passed on to the ones who come after."

**os artesãos e artesãs
the craftsmem and
craftswomen**

▶ Cacique Domingos — Artesanato na a...

Cacique Domingos talks about the different crafts practiced in the village. His brother, Orlando, works mostly with wood. Orlando makes little wooden model boats one of which Cacique Domingos holds up whilst speaking. Most women make necklaces, he says. Cacique Domingos ends with a video which he speaks to



A group of 19 Indigenous from the village were in the workshop held by Lewis :

1. Izaiara Alves dos Santos
2. Aline Corrêa Oliveira
3. Franciely da Costa Maia
4. Carla Rafaela
5. Kauã Corrêa Oliveira
6. Elciene Farias dos Santos
7. Pâmela Rocha Corrêa
8. Edmilson Dace Munduruku
9. Roberto Pinto Corrêa
10. Yuri Kainã Santos de Sousa
11. Jayane Yori (Eldianne's daughter)
12. Eleise Dace Munduruku
13. Jucinara Corrêa Batista
14. Eldianne Poryng Etê S. de Sousa
15. Darliane Rocha Corrêa
16. Tainá Corrêa Batista
17. Jane Corrêa Santos
18. Nádia Gomes Lima
19. Ibson Alves

Although contingent solutions such as the very successful use of WhatsApp meant the project developed well, inequalities still remain an important question in projects such as this.

The history of necklace making was told by Edimilson Munduruku during a podcast workshop facilitated by Lewis. Edimilson wrote the song related to this history on the school blackboard so all participants could sing it. After the practice, the whole group sang the song using maracá (a rattle) which for the Indigenous people has spiritual power. The Munduruku students and teachers sang the song of the necklace tales, recorded the video and submitted it for inclusion in the Munduruku virtual library.

Workshop Conclusions/Findings
The workshop provided a unique

Figure 8
Cacique Orlando producing his handicraft, 2022.

Figure 9 Cargo site documentation of images and quotes from Cacique Domingos on the importance of crafts explored during Forum 3 (14 December 2021).

48 opportunity for experiencing a process of intercultural communication. As a facilitator, Lewis reflects on the workshop process: ‘...for me working with music and song both cut through but also celebrating the differences in languages, the workshops felt like a genuine exchange of culture through song that was fun where we focussed on communication not semantic meaning. The speed at which the young people picked up the songs and the English we learnt was incredible and the sessions were a space to start exchanges about wider cultural activities without using the kind of direct questioning more formal processes like interviews involve.’

2.5.5 Forum 4 Project Website: Interim Feedback

The intent of Forum 4 (30 March 2022) was to present the project’s interim design of the repository (virtual library) and website as a work in progress and to enable collective reflection and insights from the community. A full transcript of the Forum’s recording was translated into English to aid participation of the partners in final decision-making. The Forum was led by the project’s research associate and web developer, Matheus Almeida.

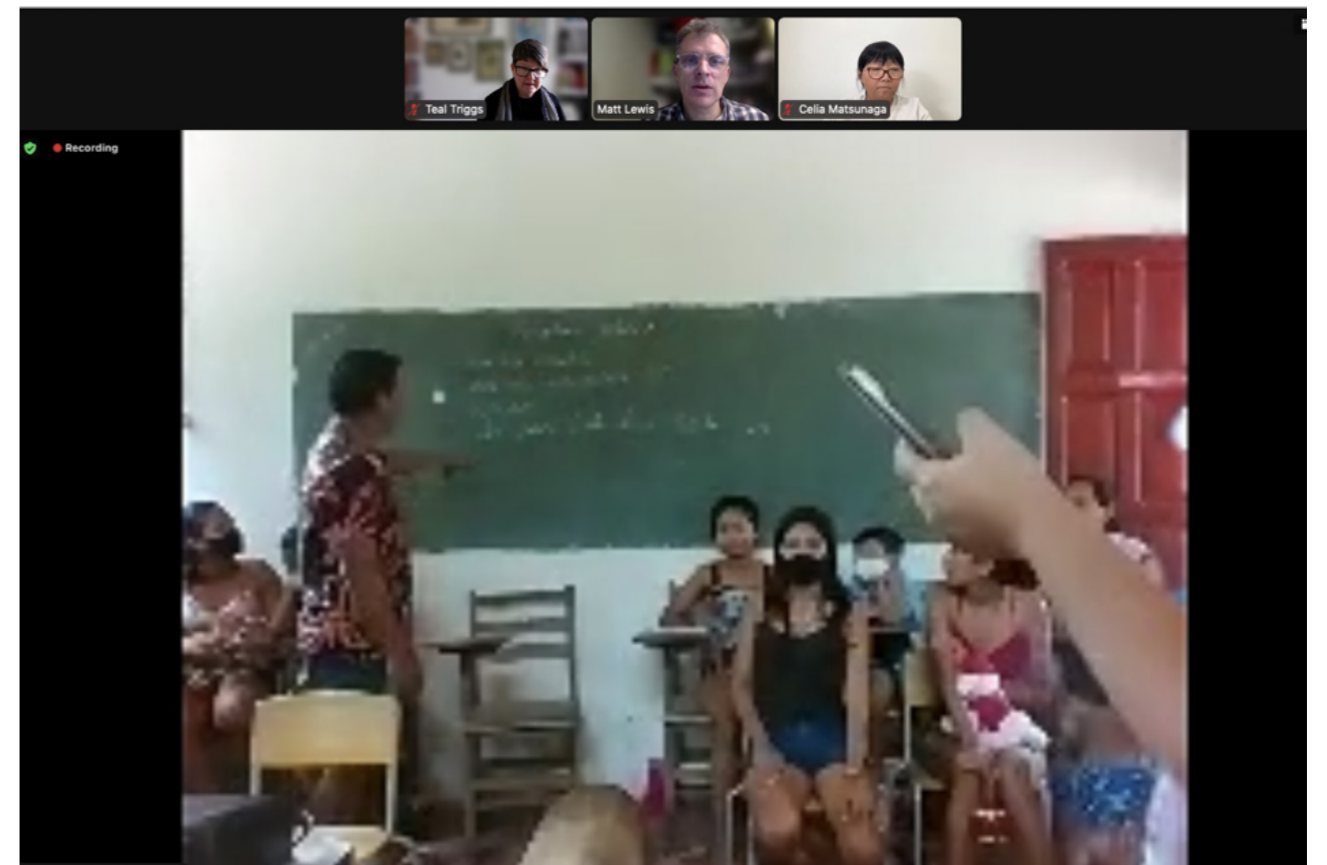
‘For this phase of the project, we might need to prioritise a very simple website that contains all the information about the British Council project (contextual information) and that foregrounds the material produced by the Munduruku of Bragança (photos, videos, audios) in a way that does justice both to the process of production of that material as well as the material itself.’ (Matheus Almeida, 2022)

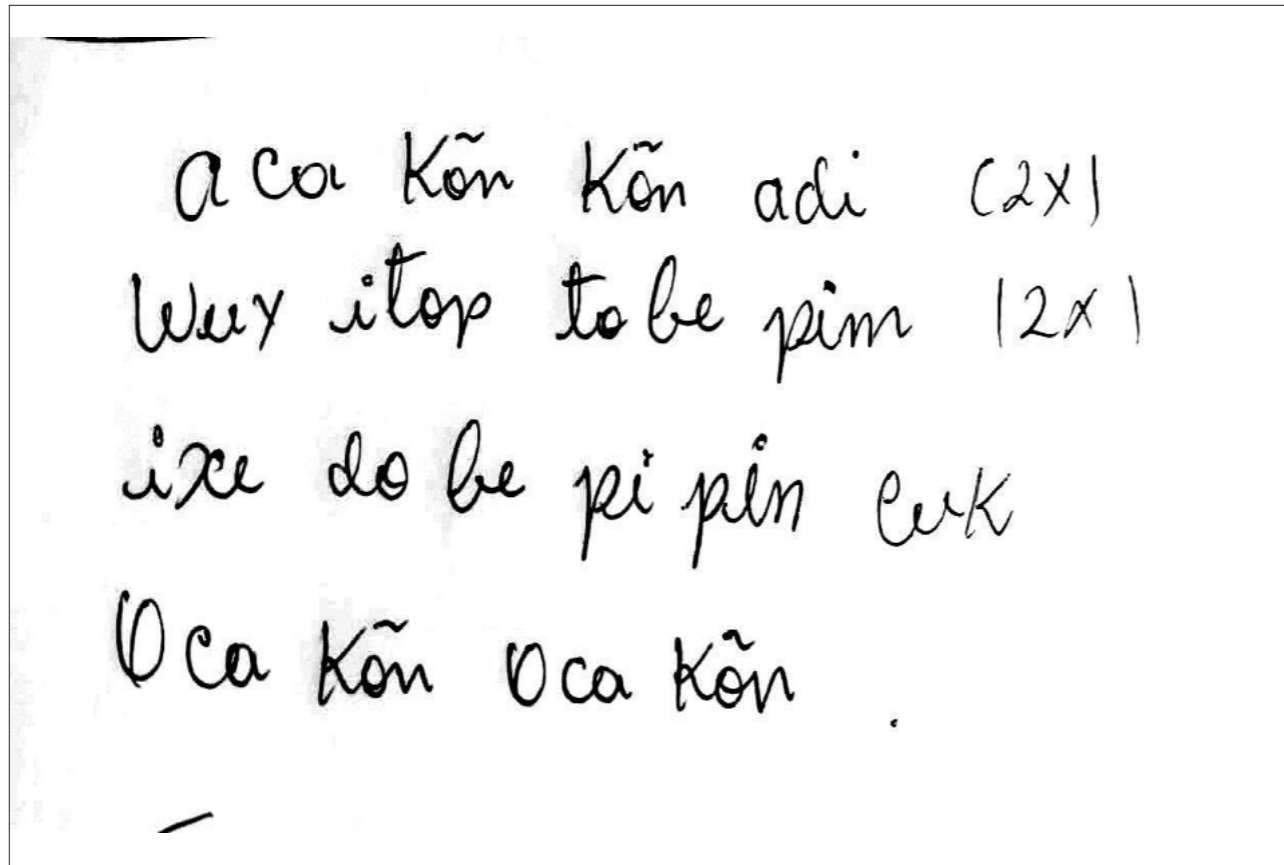
Forum 4 began with introductions and permissions were sought and an invitation for the community to share their expectations for the website. Forum 4 was attended by partners Triggs, Matsunaga Lewis and Cacique Domingos, with contributions from crafts-people who told their stories and showed how craft items were produced.

‘When we thought of having this technology, we thought hard about whether it would work out, as we did not know how to handle these tools. Then we thought, during these workshops, that we are capable, too, of handling them [the tools] with our own hands. And why not create a website to publish the stories, the examples from our ancestors who handed them down to us so we can hand them down again not by means of writing, but through a website, finer, and by means of this technology that comes far.’ - Cacique Domingos Munduruku. ‘...We too have had our moments of struggling with various prejudices: people saying that Indigenous peoples are nothing, that Indigenous peoples have no value. But we are here today showing that that is not the case. Yes, we are capable. And we want to show, and leave for our grandchildren, great grandchildren, and to the whole world, the importance of our culture, our forest, our arts.’ Darliane Rocha Corrêa (Teacher, Chemistry and Mathematics) Participants were invited to respond to the pages of the website shown using screen share. The discussion was followed with a Q&A session to ensure all participants had fed into the process and if any aspect needed revisiting. Though the site was not above criticism in their evaluation of image composition. For example, the way in which a warrior’s necklace was too dark

Figure 10 Workshop 18 (March 2022) Simultaneous conversations taking place online and through WhatsApp to ensure communication on lyrics, translation and meanings is understood.

Figure 11 Workshop 18 March 2022 Significance of the original Munduruku language emerged through the workshop singing activities.





photographically for Edmilson Dace Munduruku's story, came into question. A request to change the image resulted in its representation as a cut-out of the necklace dropping the background out. This led one participant to exclaim the new version: '...looks like the course of a river; it looks like a map too. So, this is the compliment: it looks wonderful! That is a marvellous image of the necklace.' Nadia Gomes Lima (Teacher, Portuguese, English, Art, and Religion, 2022).

The project's aim for the village's autonomy in managing the website moving forward was confirmed and support during the handover period agreed.

The community commitment for the project's repository and website was reiterated throughout the session highlighting the political and educational value it holds for the Munduruku.

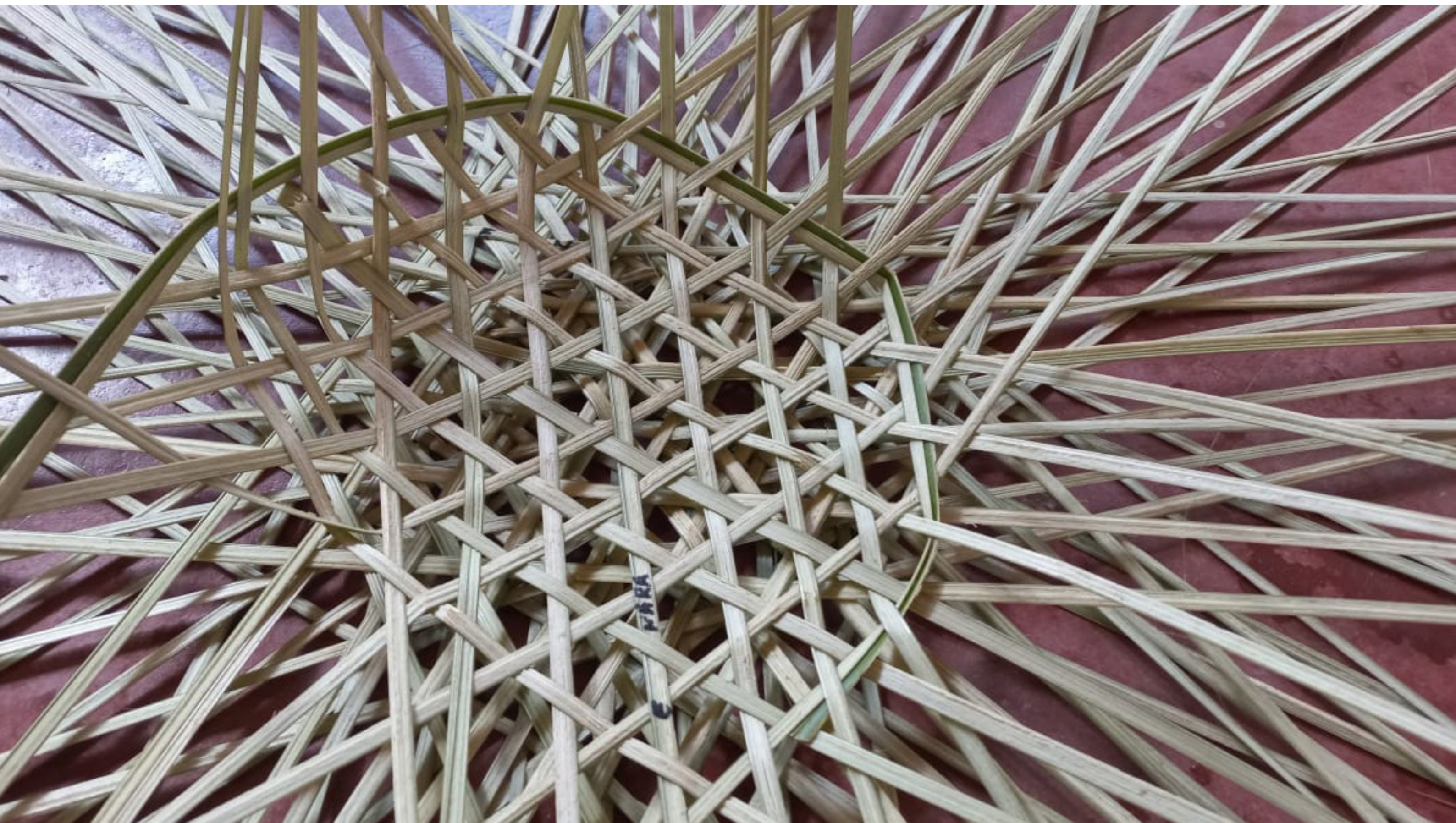
Forum 4: Main Findings

A virtual repository creates an intercultural dialogic space for both Indigenous + non-Indigenous users which reinforce sociocultural identities and the Munduruku artisanal tradition. For the Indigenous village community considering the result of the main website content, they agreed that the Virtual Library and craft repository were beneficial to the community as outlined in Table 7.

Figure 12
Lyrics written in the original Munduruku language explain the Karoba....

Table 7 Evidence on the impact made by the learning process.

MAIN POINTS OF FEEDBACK	SUPPORTING QUOTES
Stressing the importance of the everyday stories and images in establishing the value of Munduruku crafts and their legacy.	Cacique Domingos summarises: 'This is my view, it [the website] is of great importance not only to the village itself, but to the non-Indigenous it is also useful, and the Indigenous.'
Showing how communication technologies evidence what the capabilities of Indigenous peoples can be, perhaps in the process overcoming some of the past's stereotypes and misrepresentations	Nádia Gomes Lima expresses that the world is changing: "... people think technology cannot pertain to an Indigenous person. So, this website will break with this type of stereotype, and it will preserve the memory, record the memory, the culture, the ways of doing....Thus, the importance is to break with this stereotype, to show that an Indigenous person can indeed—as well as Indigenous women, and black women, and all who are a target of prejudices—that they can indeed have the same rights as everyone else.'
Establishing a platform for telling their own stories resulting in the amplification of the Munduruku voice.	Nádia Gomes Lima extends this: 'It amplifies, right? The kids already had a photographic gaze, but it amplified their photographic gaze. And the question of the linguistic repertoire in the English language. Those workshops with Professor Matt, the various meetings with Professor Teal. All of that contributes to amplifying our linguistic repertoire in the English language. But the forte, I think, was photography. The issue of image, of recording by means of the image. Recording the culture, and everything, by means of the image.'



3

- Preliminary Findings
- 3.1 Ethics and Digital Responsibility
- 3.2 Cooperative communication practices and digital inclusion methods
- 3.3 Translation and Interpretation

3.1 Ethics and Digital Responsibility

Following the meetings, Forums, and workshops, we identified three key areas which we felt underpinned this research: a) ethics and digital responsibility; b) cooperative communication practices and digital inclusion methods, and c) translation and interpretation. Each of these areas are explored in brief describing ways in which the original research question is addressed. A review of critical ethics and communication design practices was central to co-creating relevant methods, processes, and strategies to foster the documentation, dissemination and sustainability of Indigenous cultural knowledge and traditions.

Facilitation of an ongoing conversation between partners in the first instance, was essential to the review of our ethics processes and how they might effectively evolve with the project and respond to the needs of the community. The project required approval from the RCA's Ethics Committee, as the UK contact on the project. This process was supported by the facilitation by the British Council for a consultation session with Monica Bota-Moisin, an Intellectual Property Lawyer, consultant, and founder of Cultural Intellectual Property Rights Initiative. Advice was sought on the project's approach to cultural intellectual property rights related to Indigenous knowledge and cultural sustainability (Traditional knowledge (TK) and Traditional Cultural Expressions (TCEs)).

Early in our project, we acknowledged Brazil's National Commission of Ethics in Research (Resolution No.455, 2012) which highlights the importance of adaptation of ethical rules,

local cultural practices and protocols. (2012:6) Importantly the role of the chief in this process was acknowledged and reflected the ways 'communities recognize the leader's authority' and how decision-making is undertaken by the Munduruku in Bragança.

Communication research processes were essential to addressing such ethical processes including building into the project regular Forums and partner meetings, the use of clear and accessible language, and an ongoing ethical review as the project evolved. The ethics of technology and its use in this project established the use of technologies foregrounded by the community such as mobile communication devices. A key part of this project has focussed on digital responsibility and technological sustainability. In keeping with the practices of the community, the applications WhatsApp and Google Meet (accessed via mobile phones) formed the primary platforms for communication. At the same time this led to asking what is 'lost' in these forms of communication and collection. Although they have allowed us to act expediently, we also need to reflect on what the machines have edited out. Telecommunication has been challenging for the project with the frequency of power outages impacting the Village phones and/or internet connections. Cacique Domingos has been highly responsive in ensuring alternative plans are in place for partner calls and storytelling sessions where possible.

Access to computers, software, and printing, for producing signed consent forms led to a reasonable ad-

arco e flecha, ensino

bow and arrow, how it is taught

▶ Cacique Domingos — Arco e flecha, e... 🎵

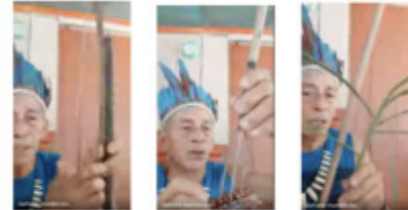
Cacique Domingos says that from the age of six or seven children start shooting with bow and arrow. Children are taught to shoot by the father, mother, or older siblings.

arco e flecha, material

bow and arrow, material

▶ Cacique Domingos — Arco e flecha, ... 🎵

Cacique Domingos speaks in this excerpt about the materials used to make arrows and bows. He says the bows are mostly commonly made of the wood of the *maçaranduba*, a tree, or *paxiuba*, a palm tree. The arrows are taken from a palm tree he calls *flecheira* — from “flecha”, the word for arrow in Portuguese. Cacique Domingos explains that the arrows are taken from this palm tree when they turn red, and used just in their natural form, “the arrow is made of the plant itself, it is a tree that grows arrows. It is a little palm tree in whose tips there are arrows, these arrows are very firm, they might bend but they not break [...] they grow and turn vivid red, and we pick them for our use” Cacique Domingos holds one of these arrows up, with the leaves of the said palm tree. He also shows an arrow with a trident tip made of iron “we are now adding iron to the tip, in this way, for a faster catch, to catch fish, or game. The tip is made of iron now, bone or iron [...] the arrow is very light but very resistant, it grows ready for use.”



justment for implementing a process of orally recorded informed participation consent forms. This facilitated an ongoing review of permission requests at each key stage of the project and opportunities for opting out of recordings and/or participation in the project. This approach informed a process of consent that was integral to the co-curation (between the Munduruku, project partners and the web developer) of the project’s final website and repository.

Verbal recorded consent, close consultation, and agreements with Cacique Domingos, and WhatsApp text confirmations, have been undertaken at all stages of the project. This

contributed to establishing mutual trust and respect between partners as co-researchers. Our reflections on this process formed the basis of a paper on ‘Critical Ethics for Communicating Indigenous Craft Practices presented during the Design History Society Dialogues seminars on Representing Craft/Crafting Representation (3 February 2022).

3.2 Cooperative communication practices and digital inclusion methods

From the outset, we established an ongoing principle of critical review and feedback throughout the project. We took heed of work on Indigenous methodologies from scholars (David-

Figure 13
Cacique Domingos talks about the importance of the artisanal tradition of the Munduruku.

Figure 14 (right)
Cacique Domingos teaching how to use the bow and arrow for fishing or hunting.



58 son 2019, Kovach 2021, Smith 2012) ensuring authenticity 'through continuous feedback with all the research participants.' (Davidson 2021: 9) This meant adapting to approaches that were flexible and where researchers were open to the potential for alternative methodologies and methods. For example, methods which emerged collaboratively, conversationally and through a process of criticality and self-reflexivity. This approach led to establishing the importance of 'voice' in the research and the telling of craft stories through the villager's own words and images. (Modeen 2021) As a Western scholar researching Brazilian fishing communities, (Modeen 2021) foregrounds the importance of working with the community 'to amplify their concerns, as voiced in their own words, rather than to speak for these peoples as outsiders.' (Modeen 2021: 53) Similarly, Busch and Pazarbasi writing about craft and social innovation, have argued: 'A change in praxis might in some sense be a provocation contribution because it identifies ways of amplifying a practical 'voice' in artisan practices so that action and mobilisation lead to further economic social agency and autonomy.' (Busch and Pazarbasi 2018: 66)

A method of digital storytelling emerged which took advantage of existing mobile communication technologies. Smith (2012) offers a discussion of Indigenous methodologies including storytelling and oral histories. She remarks that 'each individual story is powerful' and 'these new stories contribute to a collective story in which every

Indigenous person has a place.' (Smith 2012: 145) The Munduruku community initiated a process of documentation and collecting stories of crafts and their makers using their mobile communication devices. Following each Forum or workshop that took place via Google Meet, members of the community would propose the meeting's craft discussion related images, recordings and videos, post these on WhatsApp to share with the partners and other villagers. Nadia, one of the teachers (Portuguese, English, Art, and Religion) in the village school and active participant reflects:

'Those workshops with Professor Matt, the various meetings with Professor Teal. All of that contributes to amplifying our linguistic repertoire in the English language. Also, the issue of using technology. We had to bring ourselves to turn on the computer, to use the projector, to connect to the internet, to connect the school to the internet. All of that, it was helpful. But the forte, I think, was photography. The issue of image, of recording by means of the image. Recording the culture, and everything, by means of the image.' – Nadia (Teacher, Portuguese, English, Art, and Religion, 2022)

The technological impact on the importance of an aural and visual digital aesthetic for the repository was also noted in the project. The use of online technology had its benefits, but also highlighted what is missed by the absence of a physical engagement with the craft object. As Lewis notes,

'I like the idea that a specific aesthetic language (emerging out of the rich

history of Indigenous crafts making in the village) is deepened by the new hand of the object's current maker. What is missing is the tactile experience of holding the object, when communicating online.' (Lewis in Munduruku, Triggs, Matsunaga, Lewis, 2022).

The undirected videos and images gave rise to the dissemination of Indigenous craft knowledge not only inter-generationally within the community, but through the website and digital repository for sharing beyond the village. Storytelling aligns with Munduruku oral traditions and for Kovach, is both 'method and meaning' and a 'central feature of Indigenous research and knowledge methodologies.' (Kovach in Smith 2012) For us as researchers, deep listening as a method was essential in this process.

3.3 Translation and Interpretation

All but one member of the team speaks Portuguese, though to date, has not presented any challenges specific to the project. Translation takes place 'live' during the meetings/forums, resulting in another kind of intercultural dialogue for exploration.

Visual and verbal languages were recognized as essential to capture in the documentation of craft stories and conversations for two main reasons: Firstly, Portuguese was adopted as the primary language for the project reflecting the importance of communication in local and situated knowledge. At the outset, the role of inclusivity in relation to translation and interpretation in this project was championed. Researchers who were bilingual, provided additional support in 'live' translated summaries for English- and Portuguese-only

speakers. Köksal and Yuruk (2017) argue that 'translation in intercultural communication is fundamental', where the translator is an 'expert, mediator and the bridge between people, cultures, and opinions.' (Köksal and Yuruk 2017: 327) The project benefited from the knowledge of its researchers-as-interpreters holding deeper insights into the project, the community, and the broader Brazilian crafts context.

Cultural meanings about craft were also inferred through different modalities such as voice and intonation, visual cues including gesture, posture, and facial expressions. This is exemplified in Cacique Domingo's 'way of showing' his use of materials and methods to make his arrows and bows. Holding up one of his arrows alongside the leaves of a palm tree, Cacique Domingos shows us whilst explaining:

'The arrow is made of the plant itself; it is a tree that grows arrows. It is a little palm tree in whose tips there are arrows.

These arrows are very firm, they might bend but they [do] not break [...] they grow and turn vivid red, and we pick them for our use.'

Secondly, to align with Cacique Domingos' initial call for communication and dissemination to a wider audience, craft stories and conversations were translated into English to expand the potential audience for the final Munduruku Crafts and Stories website. The project's Research Assistant, Dr Tai Cossich (RCA) originally from Brazil, was instrumental in developing a Cargo site for craft images, makers' audio recordings and translating these into English texts.



Dona Edna Munduruku's dolls, 2022.

4

- Reflections and Evaluation
- 4.1 Findings and Outcomes
- 4.2 Project Reflections
- 4.3 Website Methodology
- 4.5 Website development through discuss solutions and concepts
- 4.6 Website Launch

4.1 Findings and Outcomes

This project has established the importance of research into Indigenous craft traditions and processes by taking into account ethically, the different ways of living and ways of understanding the realities of the Amazon and its communities. We know that Anthropologists and Ethnologists have studied Indigenous society, cosmology and culture extensively. As communication design researchers we have focussed on craft and praxis acknowledging the importance of what Kumar reminds us: “Spending time with people in their everyday lives can be eye opening. Use the ethnographer’s approach to live with and learn about behaviors, practices, and motivations that form the context in which people will use the tools, artifacts, messages, and services that you intend to create.” (2013: 91) Equally, we argue the role of working with Indigenous peoples lies in the debate on education for plural societies that seek to redefine the educational process. (Dalmolin 2004: 10) That is, education as an intercultural dialogic space, which preserves the socio-cultural identity of the Indigenous community, the knowledge related to nature, the social and cultural environment. In this sense, the project found insights into ways of knowing, ways of understanding in Indigenous craft practices, through technology used for communication processes. The findings developed a ‘way of doing’ via craft practices and collaborative digital technologies leading to a cooperative approach in fostering other ‘ways of (Indigenous) knowing’.

In scoping for our literature review, we found the methodological principles offered by Archibald, et.al. (2021) in their insightful essay on ‘Decolonizing Research: Indigenous Storywork as Methodology’ and further discussion offered by Davidson (2021) in ‘Following the Song of K’AAD ‘AWW’: Using Indigenous Storywork Principles to Guide Ethical Practices in Research’. The four principles which Archibald, et.al., and Davidson promote as an ethical framework are: respect, responsibility, reverence, and reciprocity. Archibald et.al., explains, ‘In this story research process the researcher must listen to Indigenous Peoples’ stories with respect, develop story relationships in a responsible manner, treat story knowledge with reverence, and strengthen storied impact through reciprocity.’ (Archibald, et.al., 2021: 2)

We found these four principles as Western academics to be useful pillars for framing aspects of our findings and informing back into our research an ethical approach. These were adopted by Davidson (2019) in her research on Canadian communities, and provide useful for benchmarking our project findings, leading to further insights into critical and ethical approaches to Indigenous research as Western academics. We came to the methodology used by these two Indigenous researchers late in our process, but nevertheless have found their writings invaluable in setting out our findings.

	OUR FINDINGS	INDIGENOUS STORYWORK ARCHIBALD AND DAVIDSON (2019)
1	Collective commitment for gaining new insights into ways of knowing, ways of understanding in Indigenous craft practices What is the findings in this - developed a 'way of doing' via craft practices and collaborative digital technologies leading to a cooperative approach in fostering other 'ways of (Indigenous) knowing' We would also argue that a similar framing of our interactions between us as a team of academic researchers casts further insights into working communication practices. For example, the ways each of us brought different skills and perspectives to the conversations held with the Munduruku village participants.	Reverence
2	Critical ethics and communication practices: the importance of taking a critical and self-reflexive approach in terms of ethics, Indigenous knowledge, cultural expectations, and outcomes. 'At its crux, ethical protocol for Indigenous peoples is about relationality, and ethics is about trust.' (Kovach 2021: 127)	Reverence
3	Trust is established through a process of co-researching, conversational and craft practices that is inclusive and considers experiences of both the Munduruku community and partners/ academic researchers. Ethical protocols were drawn from both Indigenous and non-Indigenous communities and established a shared foundation for undertaking these processes.	Reciprocity
4	Technology use prompted us to ask what is 'lost' in these forms of communication and collection? Although they have allowed us to act expediently, we also need to reflect on what the machines have edited out (e.g., embodied knowledge and spatial experiences). The visual bias in online conferencing platforms meant that oral and musical communication was hindered. By defaulting to WhatsApp for exchanging songs we could keep higher fidelity and learn more quickly than through Zoom or Google Meet.	Responsibility
5	A 'working with' process of shaping the proposal 'live' rather than implanting predetermined processes or outcomes whilst ensuring relationships along each stage are treated with respect.	Respect

1	An online digital repository and website featuring craft stories and project documentation from the Munduruku community
2	A co-creation model describing and visualising analogue and digital inclusion methods and processes for the collection, documentation, and dissemination of craft knowledge of Indigenous peoples
3	Symposium presentation 'Critical ethics for communication for Indigenous craft practices', Design History Society (date)
4	Participation in a group exhibition 'Gaining Ground: Learning from global craft practices' held at the Crafts Council, London (13 April – 25 June 2022) with a public discussion featuring the project partners
5	Forthcoming publications: 'Reflection: Building a Library for Munduruku Craft Futures' Making Futures (2022)
6	Final Project Report for online dissemination

4.2 Project Reflections

Reflective dialogue (e.g., Brockbank, McGill and Beech, 2002 and Kovach, 2021) is used as a lens through which to identify and critically evaluate our approaches, outcomes, and mutual learnings. The dialogue begins with a prompt: an impassioned call from Cacique Domingos, who, in preparing for an uncertain future remarked: '...families don't have access to information...we need a project to improve communication...we know the importance of education.' (2016) Discussants then range widely over questions such as what it means to build a library under such circumstances, the ethical implications of working with Indigenous communities, how traditional crafts should be preserved and represented, and the value of the project as research.

Reflection took place at several key points in the project and were evaluated through:

- . Formal recorded sessions in conversation between partners,
- . Reflective dialogues that considered Indigenous and non-Indigenous cultures 'ways of knowing',
- . Presentations at symposia hosted by the Design History Society and the Crafts Council enabled structured means of reflective practices,
- . Website development process through discussing solutions and concepts with all participants and partners,
- . Evaluation of website and final launch event Evaluation of the project documentation including visual, oral and written elements.

The challenges encountered in this project have presented unique opportunities. These have brought to the project new ways for breaking down conventional Western-centric ways of doing, by building on the opportunities offered by unforeseen events and

Table 8 Project Findings mapped onto categories established by Archibald and Davidson (2019).

Table 9 Main project outcomes outlined as of 1 October 2022.

66 evolving interests of the Village inhabitants (Smith 1999; Kimmerer 2013; Watson 2020). The project is meeting key collaborative learning goals, as outlined in the original application (Section 3), for example, to ‘deepen’ through shared learning other ‘ways of knowing’. We drew upon the work of Kovach, for example, by ensuring ‘the stories of both the researcher and the research participants are reflected in the research analysis.’ (Kovach 2021: 26). Equally we were inspired by the work of Goodchild (2021) who writes on ‘the sacred space between Indigenous and non-Indigenous ways of thinking and knowing, to identify pathways for peaceful co-existence of epistemologies.’ (2021: 75)

Duration: The six-month project is ambitious in its intentions and in the way it addresses the challenges of its geographic, cultural, and technological complexities. The project duration, coupled with the important need to seek counsel and accommodate institutional processes, has by default meant a slower, methodological pacing to the project, that was not fully anticipated. Yet, it is the slower pacing of the research collaboration which highlights distinctly different ways of thinking between us, regarding the need for ‘trained’ researchers to re-think their own research processes to maintain Indigenous peoples’ agency in narrating craft processes. (Smith 2012: 127) It is worth emphasising that the resolve of the partners, teachers, and villagers to produce a virtual library is driven by the urgent need to address an ongoing threat to traditional and Indigenous knowledge of peoples in the Amazon. The political urgency in this project has not gone unnoticed.

This work has been undertaken within a Latin American context whilst contributing to discussions that focus on the globalization of the local. As Escobar has observed: ‘...many forms of the local are offered for global consumption, from kinship to crafts, music, and ecotourism.’ He continues to suggest: ‘The point here would be to distinguish those forms of globalization of the local that could become effective political forces in the defence of place and place-based identities, as well as those forms of localization of the global that locals might be able to use to their own advantage.’ (Escobar 2001: 157) Our hope was that the project addressed the key needs of the Munduruku crafts community and our interests as communication researchers.

“I would like to thank you for choosing us to share this moment with you, this moment that will stay in history: the history of the Munduruku people of Bragança. Everything that we will produce, everything that we will make, will be recorded forever. The people who come after us, and in other places, will learn about what we did.”
- Darliane (Teacher, Chemistry and Mathematics, 2022)

4.3 Website Methodology

The website creation process brought together two strands of the project: that which was delivered as core to the funded research, and an accompanying process initiated through the University of Brasília building on established pedagogical practices of working within the Amazon community. Together, these strands were able to support both digital and in-person processes

required for the effective and timely delivery of the virtual library online. The decision to bring these two strands together was endorsed by Cacique Domingos. Our rationale to integrate digital and in-person processes in this phase of the project, acknowledged the ethical complexities of working with Indigenous communities and traditional cultures. The amount of digital material received from the community required careful collaborative practice to ensure agreement at all stages as to how the Munduruku crafts and their makers would be represented on a digital platform. The partners’ involvement was intense in these six months of the project, and it took another three months, outside of the project funding, for the website to finally go live.

As previously noted, the range of artisanal production was featured through video clips and audio recordings created collectively by members of the Munduruku community. The spontaneity of this process which had emerged in sharing images and recordings following each Forum or meeting, became part of a research narrative for the website for making visible Munduruku craft practices.

The website was designed by Matheus Almeida on the platform Figma and Webflow. In tandem, the organisational management of documentation was supported by Dr Tai Cossich, on a Cargo site which was host to the raw data: audio recordings, photographs, and videos produced by the village. This intermediary digital resource allowed for a shared and preliminary consideration of how the materials might be categorised or organised

on the website and in the repository. This step also allowed for English translations of texts and quotes to be integrated into the Cargo site aligned with their respective crafts objects and craftspeople. The material collected in the Cargo site informed the categories proposed for the architecture of the website and as a resource helped to determine if the pilot project was adequately representing the diversity of craft voices. (e.g., ranging from traditional songs, dance and the Munduruku language to jewellery, basketry or feathered headdresses.) Along with the implementation, three tutorials were delivered so that community members including those responsible for website administration. These representatives hold access to the database with a view to continue to update the website as new materials are collected for the repository.

The breadth and responsive turnaround time for receiving the documentation on WhatsApp meant the project benefited from a deeper understanding of what the artisans might be able to offer a global crafts community. Cacique Domingos highlighted the need to use what technology might offer for their crafts and as an ‘outlet for production’. This point remained at the forefront throughout the development of the project’s website including raising questions as to the desired audience for the website and to what ultimate end use. Whilst these questions are not yet fully resolved, the project establishes a flexible and sustainable platform to begin to address these questions and other aspects of the village’s needs over time.

The designer Matheus Almeida held a workshop that took place in four parts with participants from University of Brasília: Marisa Maass (Design Department and Post Graduate Program in Design), Mariana Bitencourt, Nathalia Delgado, Letícia Vieira Lima, Bianca Novaes, Flora Egécia, Manuela Abdala, Gustavo da Rosa and Professor Carlos Potiara (University of West Para, Amazon). They are members of the Amazon project: 'Graphic, Poetic and Imaginary Visuality' from the University of Brasília.

The methodology was strict on the idea of bringing concept, ideation, creation of features and testing implementations (design SPRINT), considering Munduruku village reality - day by day life, survival of its inhabitants and material culture. Who they are, what day they think, what they hear, what they feel. The generalist aspect of this approach, however, escaped the central focus of this investigation, that is, the Munduruku handicraft tradition in contrast to the current artisanal production of these people. The design SPRINT developed by the UnB group of researchers served to inform and guide the project discussion on Indigenous education and uses of technology in learning processes.

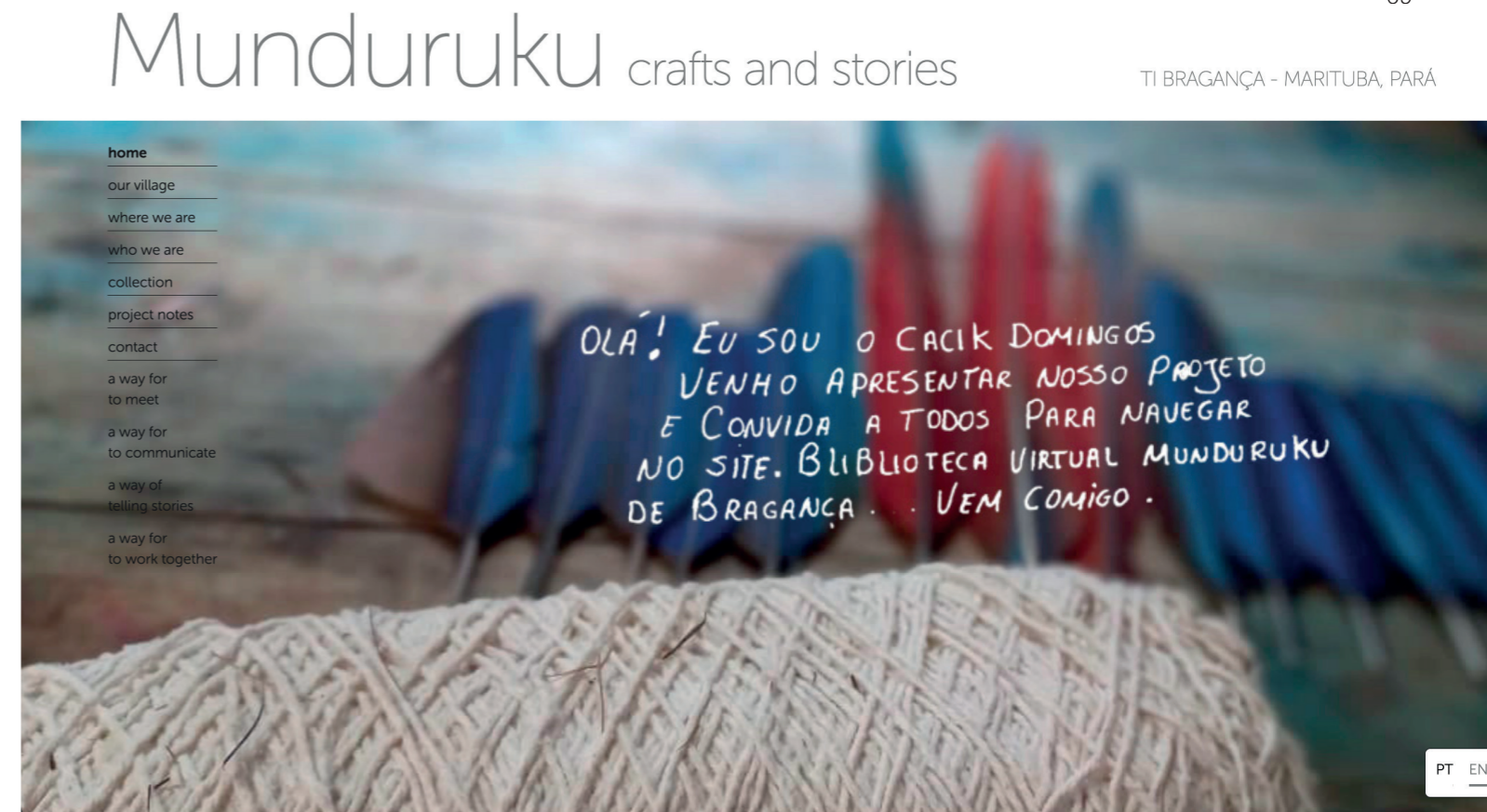
'... I believe this moment is a historical one for us. It is the first time we are talking about our perspectives in face of this website. In various moments we have spoken to Dona Célia about the importance of this website, and today we are materializing this moment, right? For example, from a cultural perspective, we have always said

that we wanted people to appreciate what we do, what we are, so we may never be ashamed. As mentioned by Nádia, we too have had our moments of struggling with various prejudices: people saying that Indigenous peoples are nothing, that Indigenous peoples have no value. But we are here today showing that that is not the case. Yes, we are capable. And we want to show, and leave for our grandchildren, great grandchildren, and to the whole world, the importance of our culture, our forest, our arts. And the teachings [ensinamentos], the means by which we will hand it down to our students as well: integrating it, right? Universal knowledge, as we say, the subject areas, inserted in our culture, showing how it can be done: doing maths, sciences, within our own culture. So, it is very important. I thank God for bringing such special people into our lives, who have the same thinking, of preserving, of fighting for life and the good of all. So, I am very happy, thank you, and [wish] the recovery of Dona Célia too, who is a fundamental piece for us.' - Darliane Munduruku (Teacher, Chemistry and Mathematics), 2022.

4.4 Website Launch

Cacique Domingos emphasised the value of establishing a web presence which allowed for wider communication of the village's craft practices and Indigenous knowledge to audiences outside of the immediate locale. The virtual library gave form to his vision. Following the end of the funded project, Darliane and Nadia suggested a launch event in the village, to present the website to all communities and other neighbouring groups in the Amazon. The intent was to celebrate and to mark the point for handing over the website to the village. Led

Figure 15
Sacred headdress made by Edicley dos Santos.
Photo: Nadia Lima, 2022.



Grupo 5:
Estratégia, tecnologia e Design: WEBSITE

Matheus Almeida (Bolsa)
Gestor de Design e Tecnologia

Design and Tech Manager

Website/galeria virtual/biblioteca digital
Matheus Almeida (PPG Design)
(Coordenação)

Etapas de desenvolvimento da Plataforma
Development stages of the Platform

by Cacique Domingos Munduruku on 4 August 2022, inhabitants of Bragança, Marituba, celebrated the launch of the virtual library website with project partners Professor Teal Triggs and Dr Matt Lewis joining in online. Professor Celia Matsunaga and UnB colleagues, joined the village in-person for this event.

Cacique Domingos began by presenting a celebration ritual in gratitude to God Tupã. Then Cacique Orlando, the first Cacique of the village, thanked partners for that special moment. Darliane, Elciene talked about the importance of being part of the project and Professor Potiara recalled the need to combine the project with the pedagogical project of Escola Nova Esperança. Professor Teal Triggs spoke of the joy of seeing the project end in such a positive way. She reminded the importance

of each member of the community, thanked everyone for having had the opportunity to know and work with the partners. Singing and performances by the Bibiju group (carimbó) were also part of the event. The Dace Munduruku sisters sang the song “gratitude” in their mother tongue.

“Everything in this world has a story, and through each story a world is born, the village was created and has a story and the women’s group which is now so strong, when it was created had nothing and it was a fight.” - Cacique Domingos Munduruku, 2022 It is important to note that this return to a face-to-face physical setting was essential for the completion of the project. On a practical level, technical support was required for the installation of the computing equipment and basic training on the use of digital

Figure 16 Workshop proposed by Matheus Almeida using design SPRINT methodology for developing web projects.

Figure 17 Website pages (www.mundurukudebraganca.org): village people and artifact collection.

village people

- Edna Munduruku Village elder
- Chief Domingos Munduruku Village Chief
- Chief Orlando Munduruku Chief Orlando was the first chief of the Munduruku village of Bragança
- Eldianne Poryng Eté Santos de Sousa leader of the Munduruku women's movement
- Odeniz Saw Munduruku artisan village resident
- Márcio Rocha prof. english and portuguese
- Rodimar Vieira de Sousa villager
- Pâmela student from Nova Esperança School
- Larissa
- Luana
- Edicley
- Juliana

collection

- Bibiyu (girls)
- traditional bra
- necklace
- dolls
- boto, boat and owl
- earrings and necklaces
- cocar
- bow and arrow
- Earrings
- Sieve
- Ring
- Arumã Baskets



devices that had been funded by the project. The essential components of computers, peripherals, tablets, cell phones, photographic equipment were installed and tested. After assembly, it transpired that the two computers did not work properly and had to be sent back to the suppliers in exchange for new machines. The support offered by the UnB team meant the project could be completed as originally agreed technically and in enhancing a skills-based learning experience within the community.

The British Council's scheme 'Crafting Futures Digital Collaboration' set out to respond to restrictions imposed on global travel due to Covid-19 and rising concerns about the sustainability of face-to-face collaborations. The project came to an end as the immediate threat of Covid-19 was diminishing. One aim of the scheme was to consider alternative ways of working virtually and its sustainability. This was successfully achieved. Yet, the return to in-person contact at the end of this project reinforced the importance of the digital in conjunction with physical learning.

The activities allowed for levels of embedded learning in the creative use of digital technology, this, as described was always part of a broader collaborative work, the interactions achieved through digital platforms we believe responded excellently to the post-pandemic condition both highlighting the inequalities that exist globally and also connecting in a wonderful way.

In-Person Travel

The launch date was initially set for July 9, 2022 and it was planned that Professor Celia Matsunaga and her colleagues would attend in-person. Though the feasibility of doing so was hampered by the month's rise in ticket prices to fly to Santarém and to complete the journey by water transport. By August, travel prices dropped drastically which meant access to the launch event became more feasible and affordable for individual members of University of Brasília's Amazon project: Gustavo da Rosa, Professor Carlos Potiara from the Federal University of Pará (UFPA) and Professor Celia Matsunaga. The event was rescheduled to 4th August 2022. The displacement to the Munduruku village was made by road transport, along the BR 163, an important route for the flow of grain production in the country. After more than four hours through villages and communities within the Tapajós National Forest (Flona), we arrived at our destination. We were received with the usual joy and affection. Cacique Domingos had been waiting for us to discuss the long-awaited event to launch the site. We were welcomed into his house, in a special maloca for visitors.

Figure 18 In the first image, Cacique Domingos launched the event in the village. In the second, Professor Teal Triggs and Dr Matt Lewis are connected through a Zoom platform; in the third, project participants prepare for the community presentation.

Figure 19 Launch of the website in the Munduruku village of Bragança, 2022.

5

- Measures of Success
- 5.1 Measures of Success
- 5.2 Project Challenges for Future Consideration
- 5.3 Dissemination
- 5.4 Next Steps

5.1 Measures of Success

The project's overarching success was measured in three main ways:

	MEASURES OF SUCCESS	HOW IS SUCCESS MEASURED?
1	Framed by the community objectives informing an iterative and reflective process throughout the project's duration.	<p>Reflective dialogues (recorded) evaluated through thematic analysis.</p> <p>Feedback (Forums 1-4) on each stage documented on accessible multimodal and community appropriate mobile phone technology – WhatsApp</p> <p>Workshop Documentation (recordings, photographs), Villagers/craftspeople stories (recorded)</p>
2	Focus on a meta-layer of shared learning primarily reflected in the partnership.	<p>Feedback from Website Forum 4 undertaken with village and partners</p> <p>Partners collective reflective practice (recorded) and transcribed for an article 'Reflection: Building a Library for Munduruku Craft Futures' (Forthcoming) Making Futures Journal (2022)</p>
3	Managing the project to completion	<p>Launch of the 'Munduruku: Crafts and Stories' website https://en.mundurukudebraganca.org</p> <p>Completion of the project report</p>

5.2 Project Challenges for Future Consideration

This was an ambitious and complex project. Coupled with a short timeframe for delivery, infrastructural limitations, and the complexities of remote, networked working, the process required careful consideration to ensure we were able to deliver unique and meaningful outcomes. We experienced an unexpected number of environmental interruptions in the use of mobile and internet communication networks often the result of adverse weather conditions. To address this we added subsequent points for reassessment in the timetable to collectively manage the project toward a successful completion.

As co-researchers, we amassed a great deal of rich material. Yet, there is still much to be done. This project has shown us the range of possibilities and urgent need for documenting and describing Munduruku handicrafts. The repository (virtual library) is online, and this forms an important contribution to Brazilian Indigenous culture, especially with its focus on material culture. This project and its subsequent report has the potential to become a reference and case example for other ethnic groups in the country. The success of this initiative has been (and will continue to be) objectively evaluated, through interviews with members, leaders of the village and

Table 10 Indicators of the project's overarching success.

76 with the project partners, currently in evidence from our video recordings and through published academic articles.

We envisaged that as a result of the quantity and quality of the database that emerged from the interaction between partners and local actors, connecting with other communities, will offer new project opportunities; e.g., Munduruku de Bragança, Marituba and Taquara are the three villages in this territory.

5.3 Dissemination

As part of the British Council and its partnership with the Crafts Council, this project has benefited from the opportunities affiliated with the scheme. For example, our involvement in the Crafts Council's curated 'Gaining Ground' exhibition and inclusion in Making Futures Journal. Coupled with the project's final report and planned subsequent articles for academic journals, we offer an important contribution to new models of cooperative and ethical practices.

The following modes of dissemination online and print publishing platforms are outlined in Table 11.



Figure 20 In the first image the secondary school Nova Esperança. In the second students in class. In the third Bibiju group presentation during the launch of the website. In last Tayná taking photos with mobile phone.

Table 11 Examples of project dissemination as of 30 October 2022.

DISSEMINATION MODE	ACTIVITY
Co-Authored Paper	Teal Triggs, Celia Matsunaga and Matt Lewis (2022) Digital Agency: Critical Ethics for Communicating Indigenous Craft Practices Design History Society Dialogues: Representing Craft/Crafting Representation (17-31 March 2022) Paper presentation: Thursday 3 February 2022 https://www.designhistorysociety.org/events/view/representing-craft-crafting-representation-dhs-dialogues
Co-Authored Paper	Forthcoming: Teal Triggs, Celia Matsunaga and Matt Lewis (2023) 'Critical Ethics for Communicating Indigenous Craft Practices' In Claire O'Mahony (ed) Material Pedagogy: Historical Traces and Environments Journal of Design History Oxford University Press
Co-Authored Paper	Reflection: Building a Library for Munduruku Craft Futures (2023, forthcoming) Cacique Domingos Munduruku, Teal Triggs, Celia Matsunaga, and Matt Lewis. Making Futures Journal, Plymouth College of Art https://makingfutures.pca.ac.uk
Group Exhibition	Crafts Council: 'Gaining Ground: Learning from Global Craft Practices' (13 April – 25 June 2022) Curated by Ligaya Salazar featuring nine collaborative making projects drawn from the British Councils Crafting Futures programme. Website Pilot and Video: 'Building a Library for the Future: Munduruku Craft Practice and Indigenous Knowledge'. https://www.craftscouncil.org.uk/stories/new-exhibition-gaining-ground-showcases-craft-in-harmony-with-nature-says-curator-ligaya-salazar
Talks	Crafts Council: Care, Craft and Ethics: Gaining Ground Closing Party/Making Futures Launch 23 June 2022 Conversation: Building a Library for the Future Teal Triggs in conversation with Celia Matsunaga, Matt Lewis and Cacique Domingos https://www.craftscouncil.org.uk/whats-on/care-craft-and-ethics
Press Mentions	Crafts Council/Stories 'New Exhibition Gaining Ground showcases craft in harmony with nature, says curator Ligaya Salazar' 21 April 2022 https://www.craftscouncil.org.uk/stories/new-exhibition-gaining-ground-showcases-craft-in-harmony-with-nature-says-curator-ligaya-salazar



Figure 17

Figure 17
Darleide
during her braiding
practice in the village.
Baskets from her are
one of the important
productions of her
people.

This we hope leads to a deeper understanding of the processes of Brazilian Indigenous handicrafts, while at the same time suggesting that collaborative learning can be introduced into more inclusive practices. Our research offers a potential contribution to the fields of critical craft studies, design studies, and library studies, as well as ethnographic methods, and to the emerging field of pedagogical and decolonizing studies.

5.4 Next Steps

The project set out to create a crafts-focussed digital virtual library and repository, based on a sustainable process for the utilisation of learning technologies. This work is ongoing, as the site will require updating and reviewing over the next months and years. As this report goes to publication, the village continues to share images and other forms of documentation via WhatsApp with the project partners. Technology has enabled relationships and has fostered our conversations: it has eliminated geographic boundaries and allowed for collaboration across nations. The learning so far has been immeasurable for all who were involved, and has engendered new 'ways of knowing'. The sharing of craft methods and processes has led to new understandings of both Indigenous cultures and of cooperative communication practices and digital inclusion methods, as they might be applied to a localised context. The project has therefore provided a template for future collaborations of this kind.

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