

Mukurtu CMS: Differential Access for the Ethical Stewardship of Cultural and Digital Heritage

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Good Afternoon, I'm Kelley Shanahan, the Services Manager for Mukurtu at the Center for Digital Archaeology. I've been invited here today to talk a little bit about Mukurtu CMS, The free, mobile, and open source platform built with indigenous communities to manage and share digital cultural heritage.

And of course, we cannot talk about the sharing of cultural heritage, either digital or physical without talking about notions of ethics and stewardship, and how technology actually can respond to daily practice and curational ethics without having to compromise or exclude differential sharing practices.

Also this is a WORKSHOP, so I'll try to keep my presentation to a minimum so that we can actually dive into the CMS together.



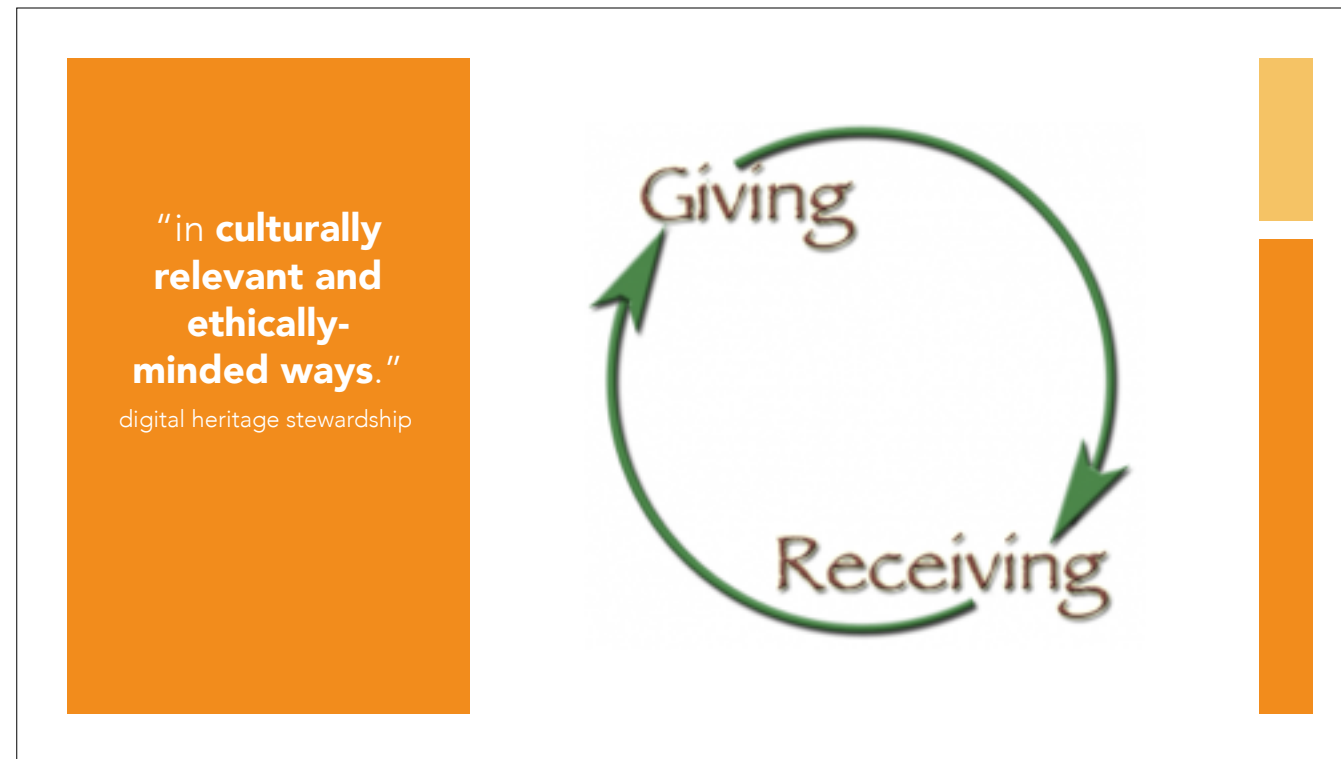
in the United States, and Canada, as well as in most settler nations, curation of **physical** cultural heritage is part of a **POLITICAL ACT** - involving digital return and that **PROMOTES a process that VALUES** social systems and cultural protocols concerning the handling of human remains and sacred objects

curation of **DIGITAL cultural heritage**, then, is a process of curating digital materials that **TAKES SERIOUSLY** the already-existing ethical [next]

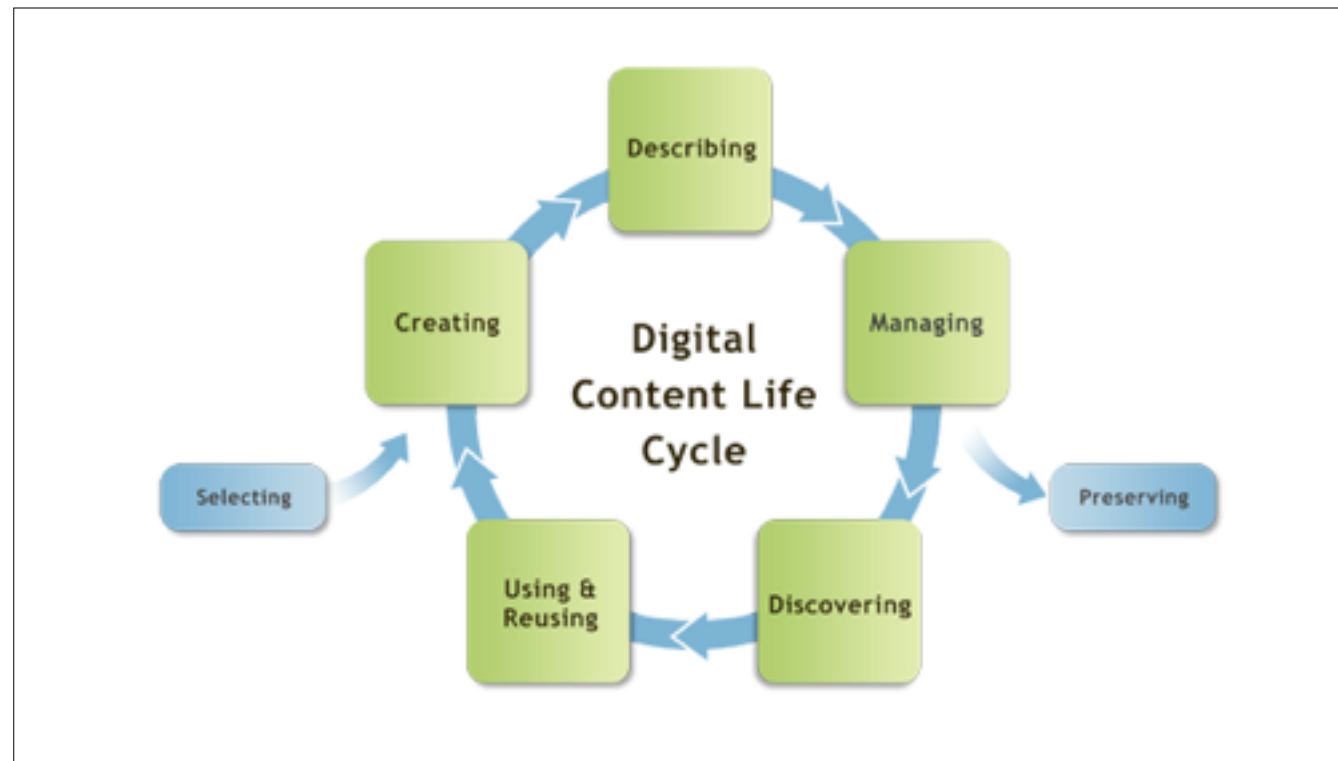


systems of knowledge circulation and sociality within indigenous communities and understands that for many indigenous communities there are varied and dynamic protocols around viewing, touching, and interacting with belongings...that **engender practices of stewardship that obligate people to relations of care.** These practices are sometimes lost collections management and forgotten in digital collections management.

so while digital collections management is one form of digital curation another is **digital heritage stewardship** >

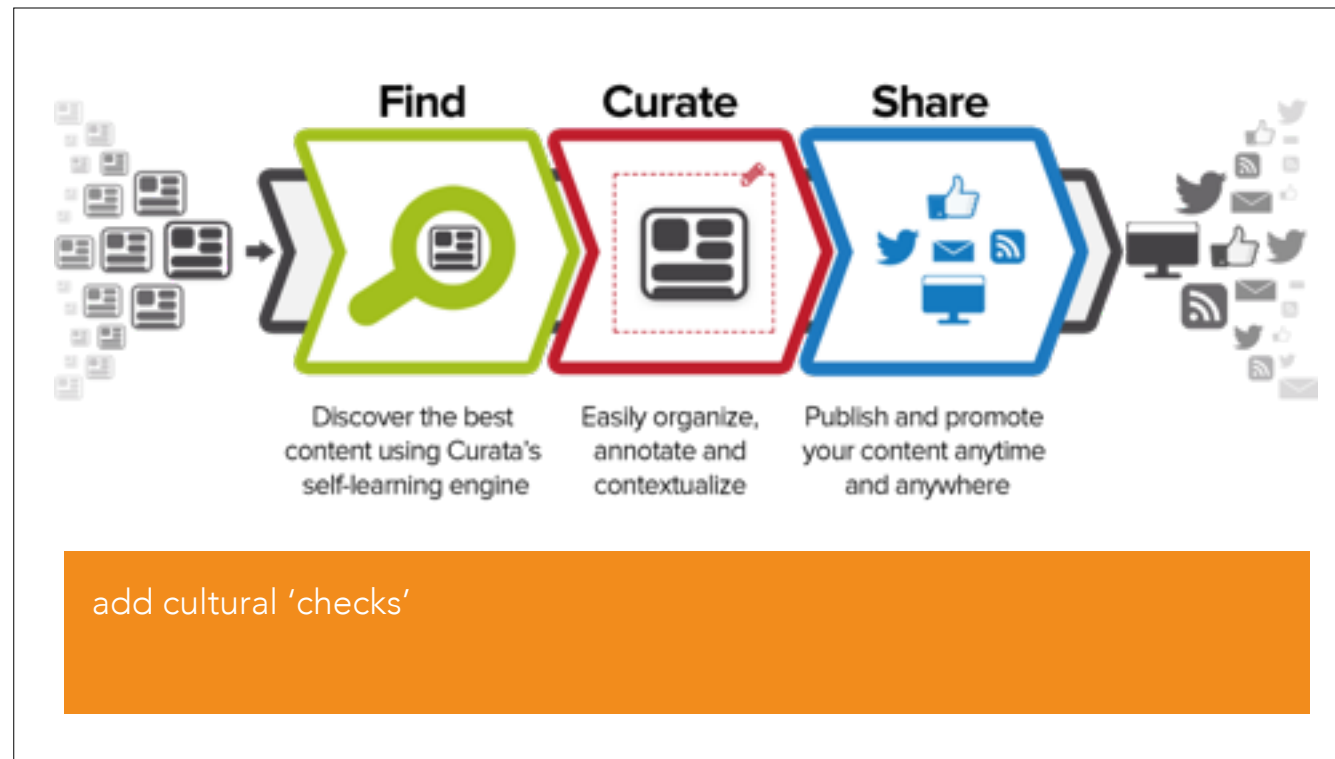


that is, the care and stewarding of belongings based in **reciprocal curation** — **a set of practices that redefine and interrupt the standard workflow** >>



of the digital content lifecycle...where content seems devoid of context or culture...

or the more popular version that expands the notion of collection and curation...



to include social media and a more public context...

in either of these cases I am suggesting that we add in **what I call "cultural checks"** to the digital lifecycle>> at every step...

so first, "finding" or "discovery" should not be guided by a **search paradigm that disregards the colonial histories of collection or uphold notions of access that privilege the public domain...**



It takes a bit of historical amnesia to forget that the **public domain has never been a very welcoming place for indigenous peoples** whose cultural materials found their way into both public and private collections by dubious and often violent means.

By disregarding this historic context the default for **digitization and curation** falls into the same trap, and becomes mired in competing notions of open access and the public good, where accessibility is synonymous with OPEN TO ALL...without regard for cultural, social, and historical contexts.

In this digital world, this idea of openness circulates in popular notions of access to information where Facebook >



declares their mission to be to make the world more “open and connected” — no mention of your privacy concerns or the fact that they own the content you upload...similarly, Google...

**“Google's mission is to organize
the world's information and make it
universally accessible and useful”**

– Google™

mission is to “organize the world’s information and make it universally accessible and useful”...

we may ask how Google decides the best way to organize information, and if universal accessibility is so easily and casually defined...or even desirable?

However, if we go back to this notion of cultural checks i just mentioned we can disrupt this all-too-quick binary between open >



open and shut>> where open is the default and shut must be suspicious....

instead we can look to **cultural nuances and diverse social systems** to see the range of ways that people imagine knowledge circulation and access.

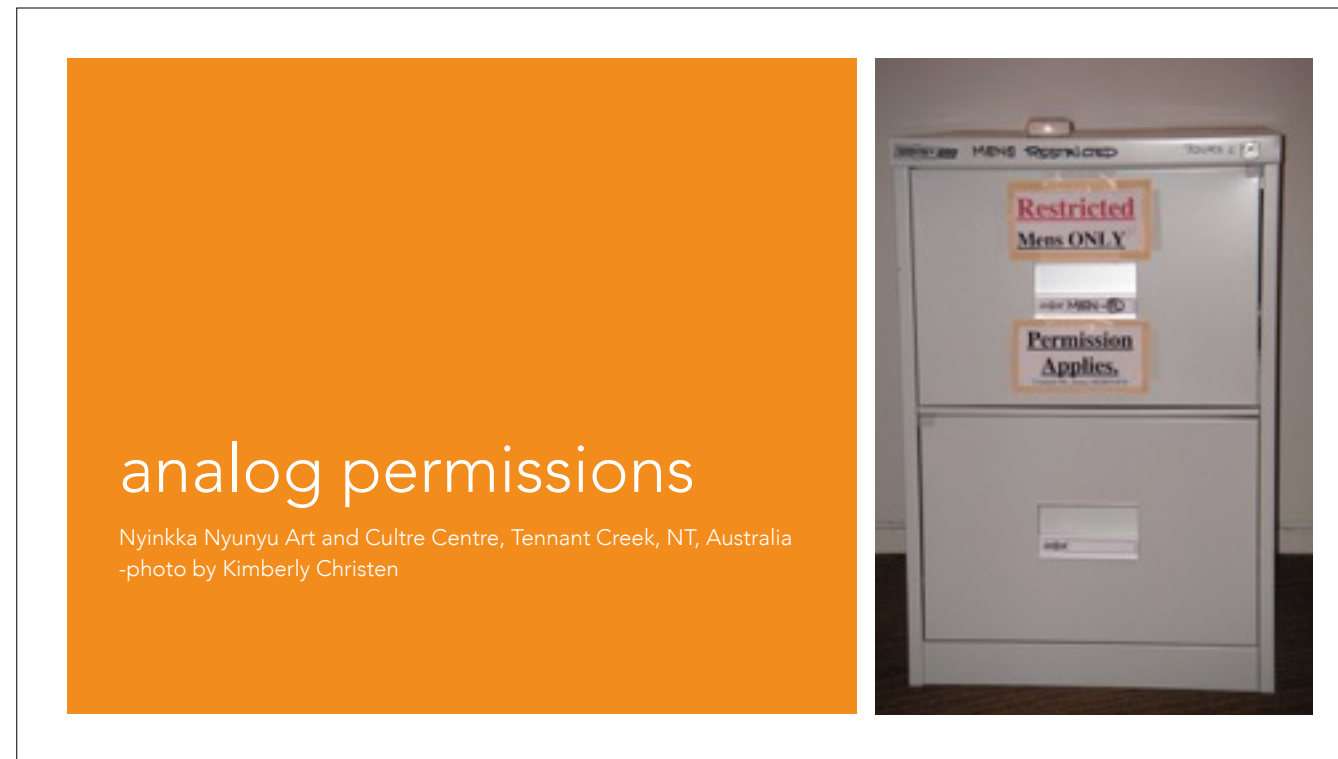
For example, in many indigenous communities NOT



seeing is an act of cultural respect...

in aboriginal Australia it is quite common to see museum displays, library books, signage at cultural centers or archival documents covered up,

this is a tactile cultural check— OR

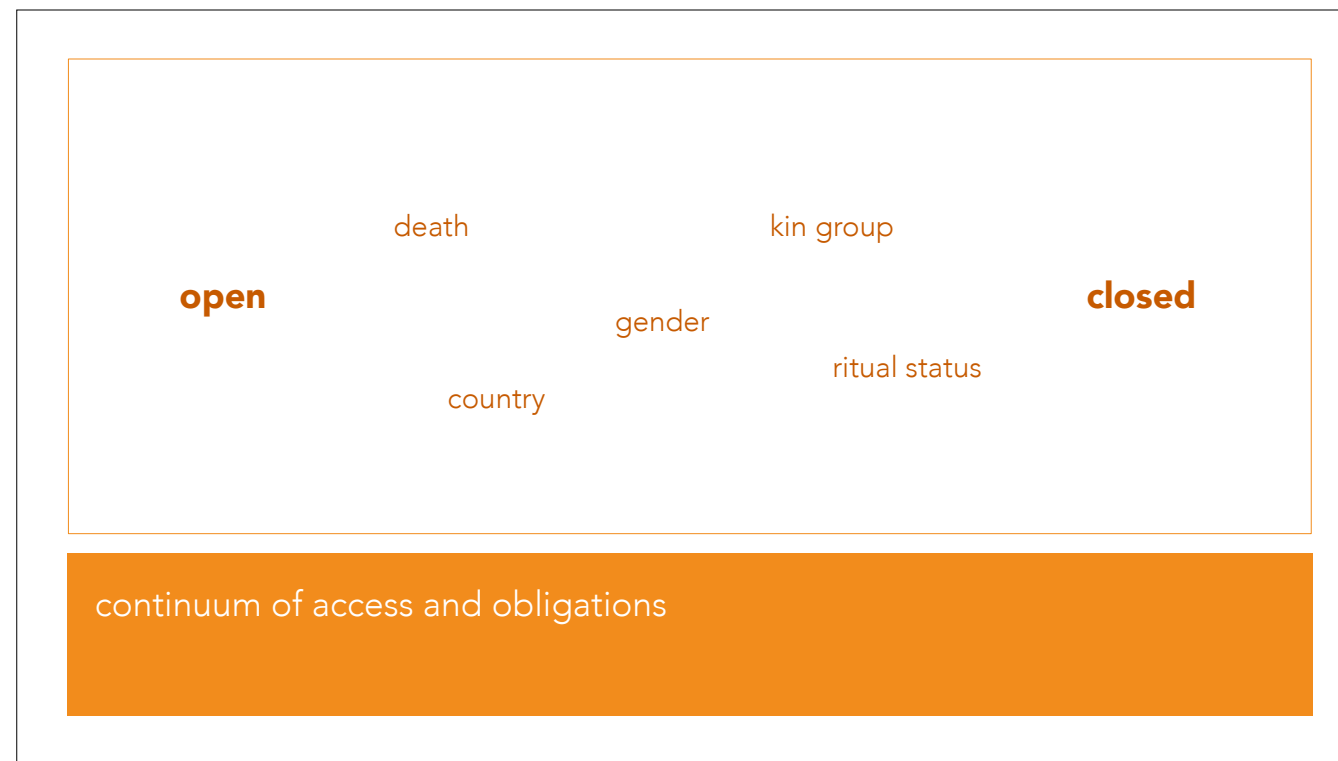


we see here a cultural check—

here we see the file cabinet as an apt symbol for knowledge circulation!

PERMISSION APPLIES > this is a protocol for knowledge access, exchange, and re-use...**restrictions often** have a negative and punitive connotation in these discourses around information or knowledge circulation, but if we look at these permissions as part of complimentary social systems we get a different view...

for the Warumungu community



there is a continuum between **open and closed in relation to knowledge**, that is in Aboriginal English people will say that rituals or places, knowledge or information, may be open or closed, but these are rarely all-or-nothing statements

Instead there is a **continuum** based on several factors including: death, ritual status, one's country, kin group and gender. **These interrelate to determine VARIED types of access**

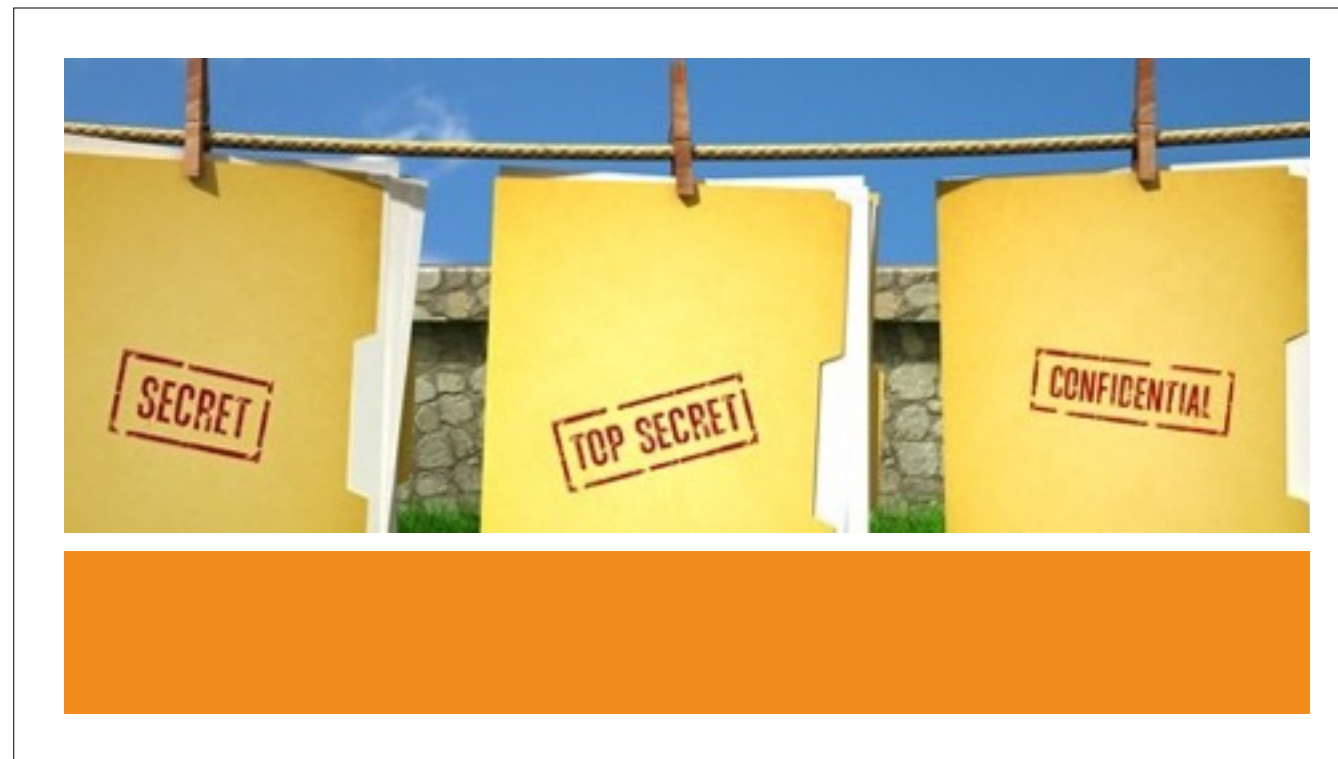
so for example, some songs may only be accessible to and only sung by women of a certain age and initiated in certain ritual knowledge

or a waterhole may be only used and cared for by members of kin groups that share ritual responsibility to maintain the site...and so on...

The point is that there are multiple social and cultural factors that go into the diffusion of knowledge that disrupt the Western paradigm that information [next]



information wants to be free or the associated notion that



practices of secrecy must be a **dubious form of control or an abuse of power...**

in fact, what we can learn from indigenous systems of knowledge **circulation and stewardship** is that knowledge is



always grounded, it is rooted to local places and people even as it travels

when it travels it gathers stories, narratives, histories, and joins people together as they seek to make their worlds more meaningful.

It was upon these notions of differential access, that the first version of Mukurtu CMS was born...

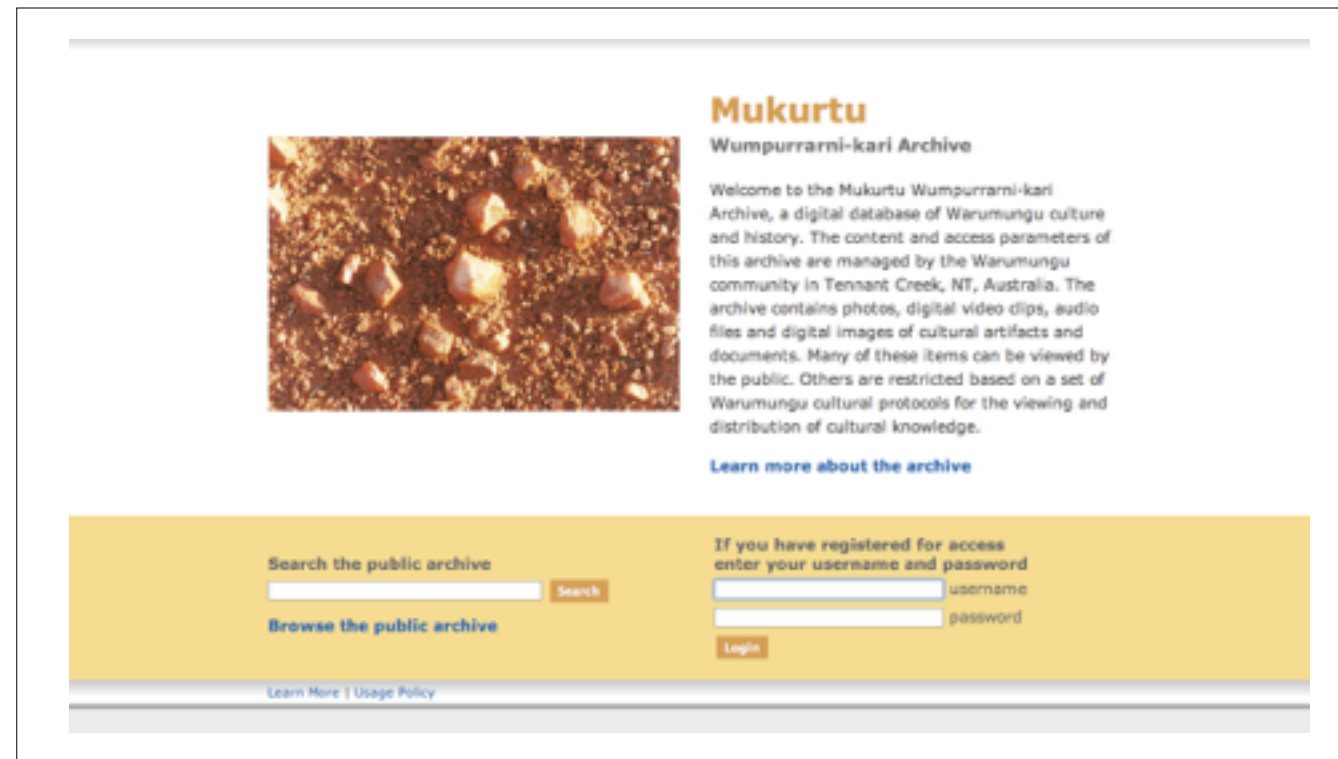


obligations to act

these obligations to act towards people, places and ancestors in the Waramungu community are what drove the need to create a digital filing system that worked for them.

Michael Jampin Jones chose the word Mukurtu, dilly bag, for the archive purposely...the dilly bag <story>

so the mukurtu wumpurrani kari archive



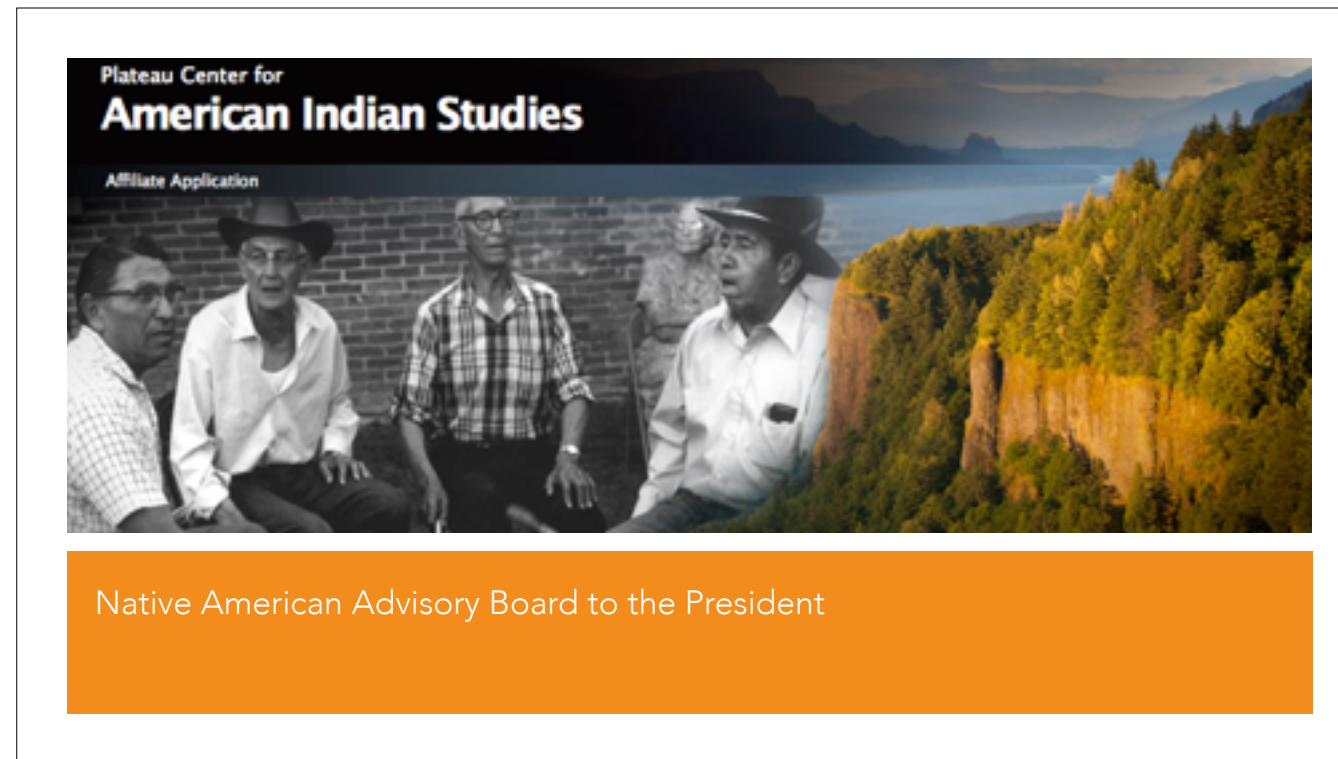
was launched in 2007 after two years of design, consultation, and production—as a stand alone, browser based, community digital archive **based on the Warumugu protocols I already discussed**...in the archive community members defined viewing and access based on their own parameters, country, family, kin, etc...

so when community members log in they get their own mini archive>



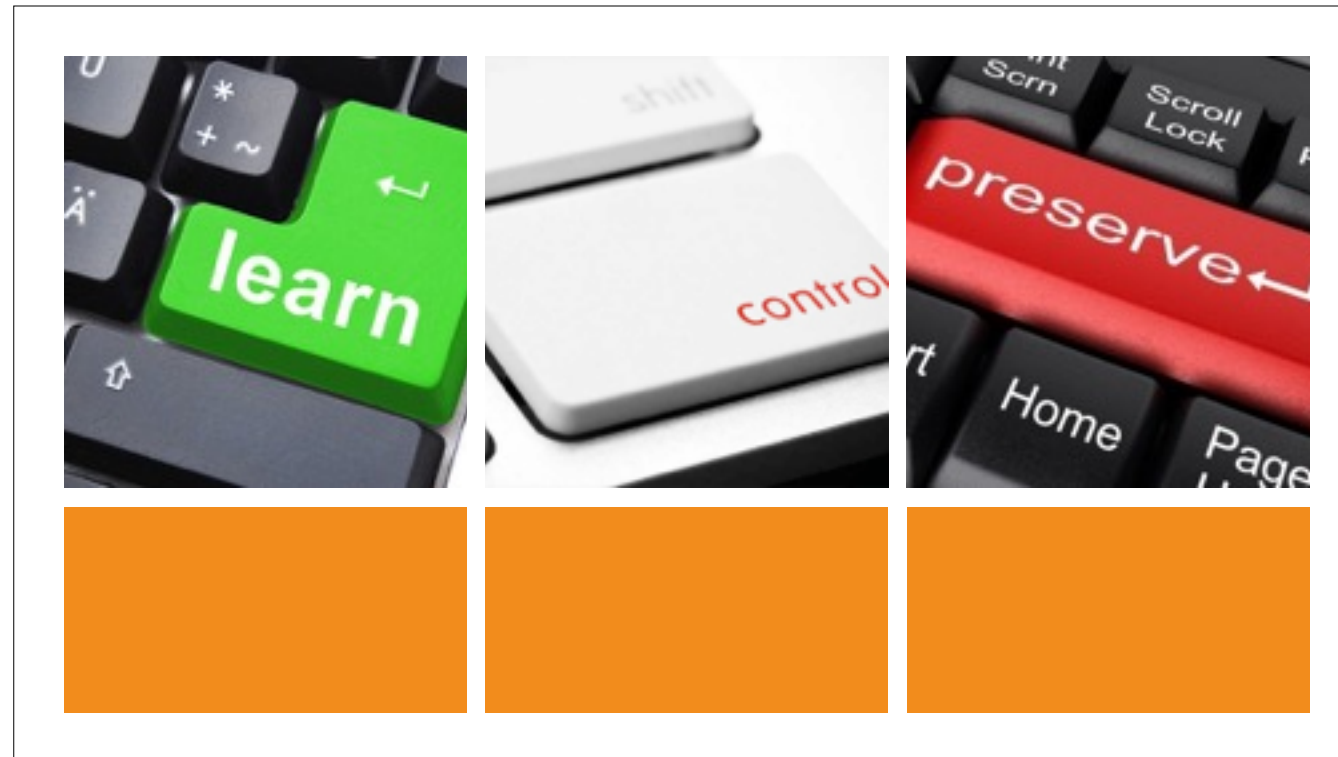
'my family items' <click>— individuals see content that they are responsible for based on their <click>family, kin and country relations

this notion to create a digital archive using indigenous protocols and embedding a new mode of curation and information management **resonated with the Plateau Tribes near WSU**>



in 2009, the Native American Advisory board approached myself and my colleagues at the Plateau Center to help provide access to Plateau materials that were held at WSU in their libraries, archives and special collections.

They wanted access to the materials online for tribal members across the tri-state area, but they wanted something more...



some control over the content, its narration and curation, it's potential for educational use and they wanted it preserved of the long term....

So based upon the technology of cultural protocols and checks, and shifting from one community of the MWKA— to deal with multiple tribes in an online environment and using library and archive materials from large repositories...

WSU started by working together with the tribal representatives to ask:



WHAT they want digitized, WHO THEY wanted to see it, HOW it should be described and WHY it is significant to them.

At every stage of the project from **technical to curatorial decisions** tribal representatives, the wonderful librarians at WSU, and the technical team there worked together to find the best solutions for all aspects of the project.

the front page>



design is a good example:

For the top banner tribal reps choose this image of the Columbia river to denote their connection as Plateau tribes, the river is the one thing that unites them all;

and then their sovereignty is seen in their **individual tribal paths**, each tribe is also represented by their own icon and has their own welcome--some in their own languages and some in English (they decide, add, change, etc)

Next, on the browse page >>



by one of 12 categories chosen by the tribal reps.

This was KEY** although PPWP does also use LOC subject headings, the PRIMARY way of browsing is through the categories chosen by the tribes-- importantly defining their materials in their own terms.

importantly the first step to get content IN is >>



face to face visits...in the MASC at WSU




Before working on Digital Objects, the grant was able to provide face to face interaction with the physical objects, to start a conversation around the collections.

in portal records then we can see this..

The screenshot shows a digital archive record for a photograph titled "3 Yakama Women". The record includes a thumbnail image of three women in traditional regalia, a "Narrative" section with a detailed description, and a "Catalogue Record" section with various metadata fields. A yellow arrow points to the title field in the metadata section.

3 Yakama Women
View Larger Image



Narrative
Last edit by Shawn LemoBull | 15-03-2010, 10:51 am

These three ladies are in a traditional plateau camp during a celebration. The ladies are all wearing buckskin dresses more reserved for dancing and ceremonies. Their dresses are somewhat longer in length so this tells me that they are not Cayuse, Umatilla or Walla Walla. Two of the ladies are not married in this picture, one with the beaded headband the other with the headband and one eagle feather. The lady on the end wearing two feathers in her headband would draw the

Tribal Catalogue Record

Catalogue Record

Title
3 Yakama Women

Creator
L.V. McWhorter

Description
A photo of 3 Yakama women in regalia (1911).

Date
00 1911

Language
English

Source
PC555.1F88

Type
Image

Identifier
3WSUMASC0004

Format
JPEG

Publisher
Washington State University Libraries, Manuscripts, Archives and Special Collections

Rights: for permission to reproduce
Washington State University Libraries, Manuscripts, Archives and Special Collections

this image from WSU's McWhorter collection was chosen by the Yakima reps and as a WSU item our team uploaded the record which has typical metadata—very limited, and frankly could have been worse, but the main description comes from the title "3 Yakima Women"

once we had this digitized it gets sent to the tribal admin



after Yakama curation we now have >>the names of the women, the oral histories about their dresses, and tribal historical context...

this added knowledge creates a dialogue and expands the public record

we new we wanted to take these two examples of the MWK and the PPPW from stand alone projects to a platform >

to help build a platform
that fosters relationships of
respect and trust.

'a safe keeping place'

dilly bag
South Australian Museum



to live up to the idea of the dilly bag as **a safe keeping place** >> where culture doesn't bend to technology but technology bends to the cultural needs

we wanted to produce a platform to allow any community, organization, or institution (however defined) to do what these projects had done without recreating the technical wheel!

so, over the last 4 years we have produced several releases of Mukurtu to take this idea for a platform version of safe keeping place a reality.

first with funding>>



and support from great sponsors and a core team at WSU and CoDA, a fantastic set of dedicated developers>



who have made Mukurtu CMS happen and finally



I want to acknowledge the remarkable people, organizations, and institutions around the world that are providing active testing, volunteerism, and general goodwill toward this grassroots project.

Mukurtu CMS

MOOK-oo-too: the free, mobile and open source platform for managing and sharing digital cultural heritage, built for indigenous communities, archives, libraries and museums.



we launched our 1.0 beta version in Sydney Australia in 2012 and in 2013 we released the 1.5 version, each iteration provided granular levels of access and sharing as we saw in the original MWK version

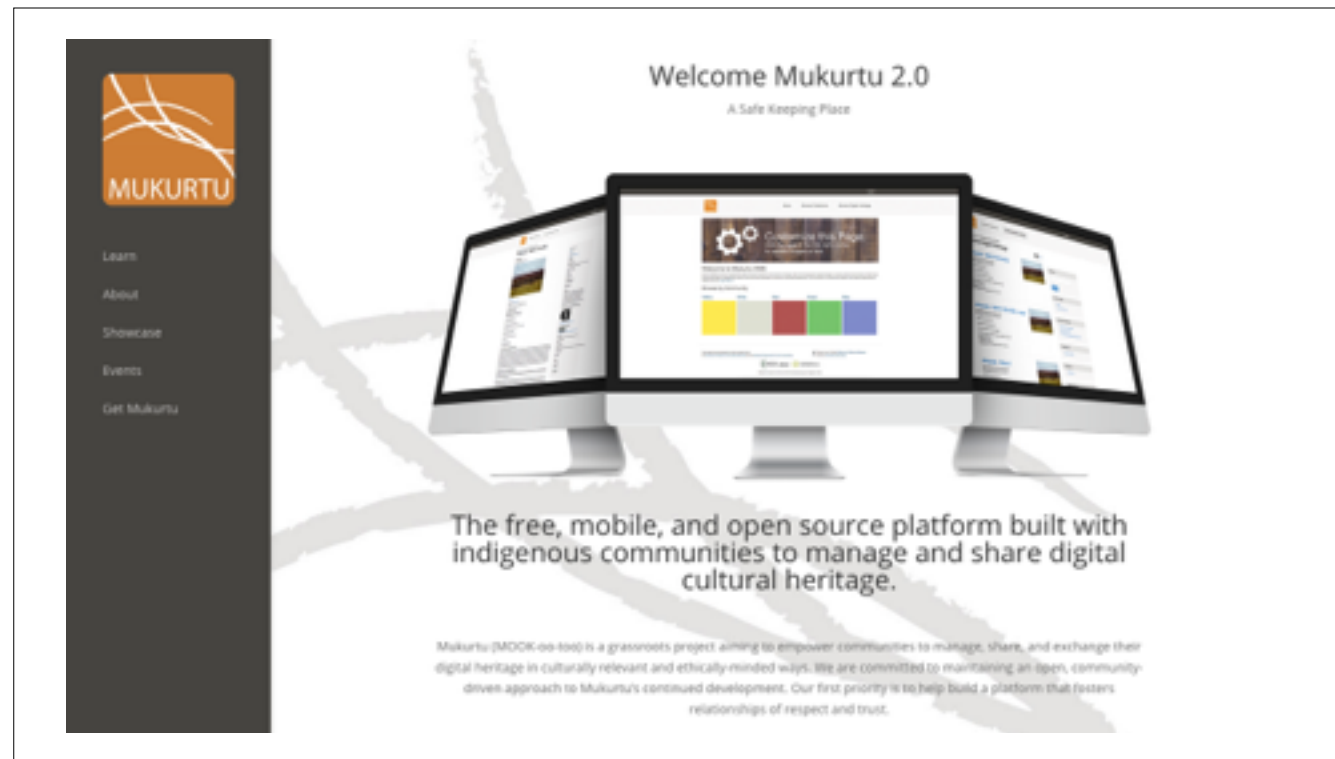
knowing that one >

One size
doesn't fit all.



size doesn't fit all...we needed the flexibility to be able to accommodate indigenous communities from Oklahoma to the Outback and also non-indigenous institutions from the Smithsonian to Wisconsin Historical society

I am happy to announce that just two months ago we launched Mukurtu



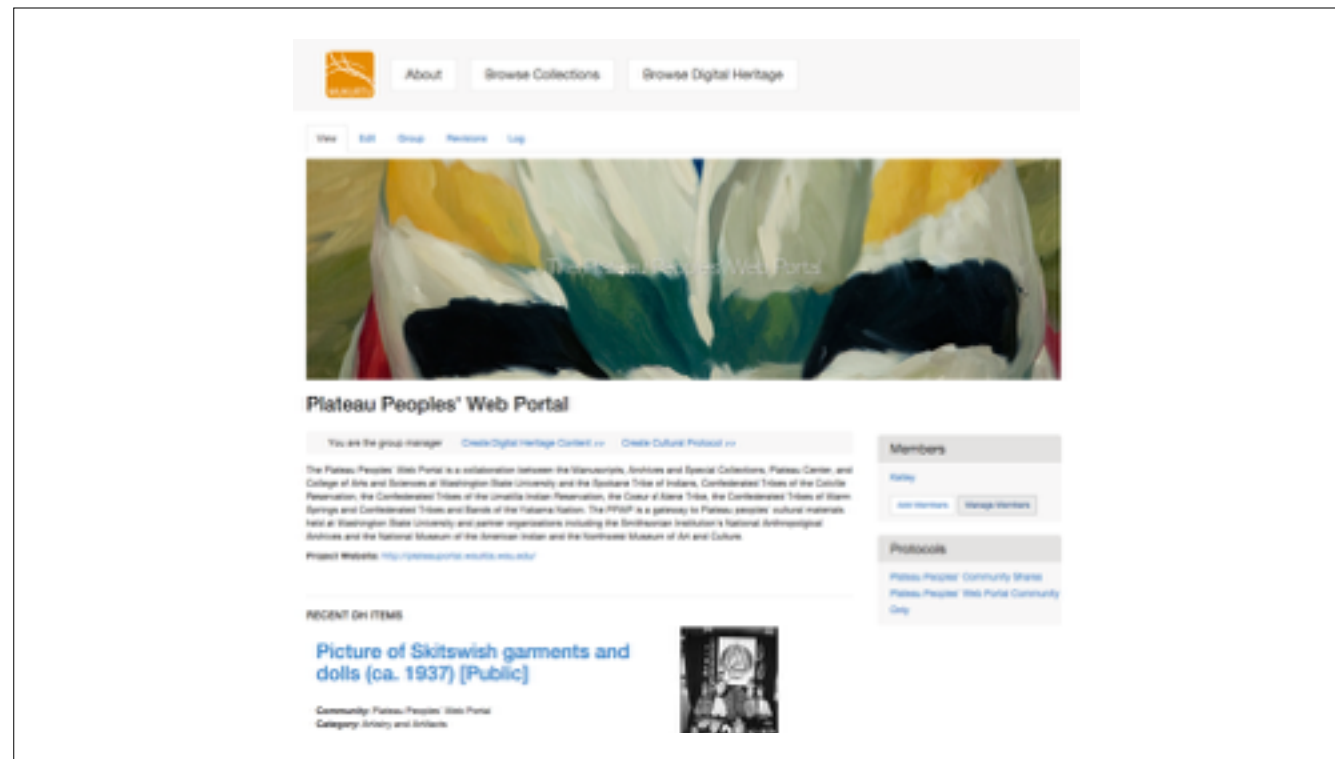
mukurtu 2.0.. here a lovely screenshot of our website.

the biggest stride we've made with the release is that there are now two stable ways to get Mukurtu>



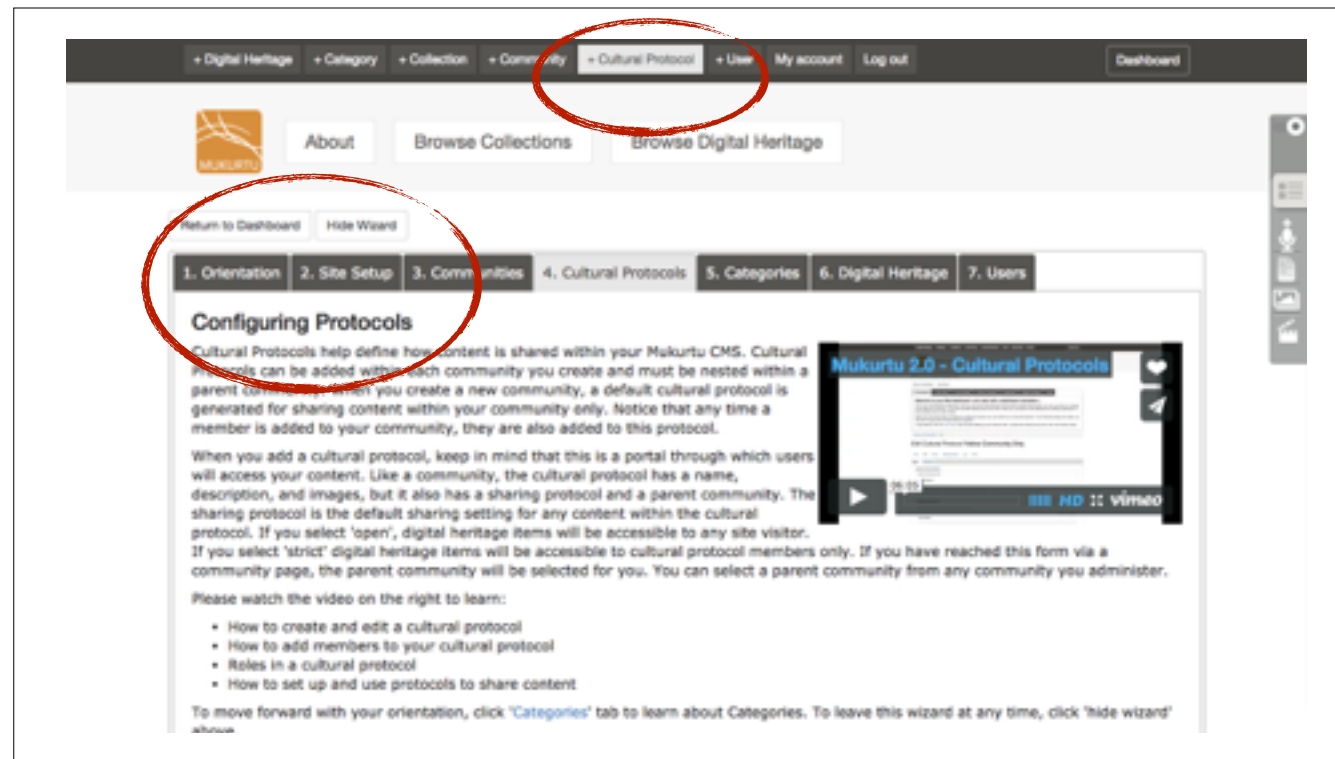
open source on GitHub if you want to download it to your own server and run it locally or a **totally hosted option** on mukurtu.net with a brand new zero-subscription model—no monthly payments, just a one time fee based on your content needs

we have users in our Mukurtu community



any community page (**who**) and easily browse content for just the groups you belong to and see recently added items

but of course the heart and soul of Mukurtu are the cultural protocols >



that allow for granular levels of access and circulation this is what started Mukurtu and what sets us apart —

adding cultural protocols <+> is one of the first things users do when they set up Mukurtu — and we have added, after lots of feedback>> a new help wizard with **tutorials** right in the dashboard to set up the protocols and every other facet within Mukurtu >> (text and video)

once ready, one can add protocols

Form fields and elements:

- Show Wizard
- Add content / Create Cultural Protocol
- Create Cultural Protocol
- Basic
- Cultural Protocol Name *
- Sharing Protocol *
- Open
- Strict
- Parent Community *
- Please select a community to which this cultural protocol belongs.
- Show row weights
- Your groups
- + [input field] [refresh icon]

give it a name— this could be a gender protocol or one based on age or ritual status >> and then each cultural protocol has an associated '**sharing protocol**' >>setting to make them either **Open or Strict**

Protocols answer the question HOW do you want to share your content

you can mix and match these protocols to share your content with different groups and people under certain circumstances. As seen when we create a DH item>

Create Digital Heritage

Mukuru Essentials * Mukuru Core Rights and Permissions Additional Metadata Relations

Title *

Summary

Media Assets

Drop a resource from Scald media library here. Allowed resource formats: Audio, File, Image, Video

Add another item

Communities and Protocols *

Communities and Protocols 1

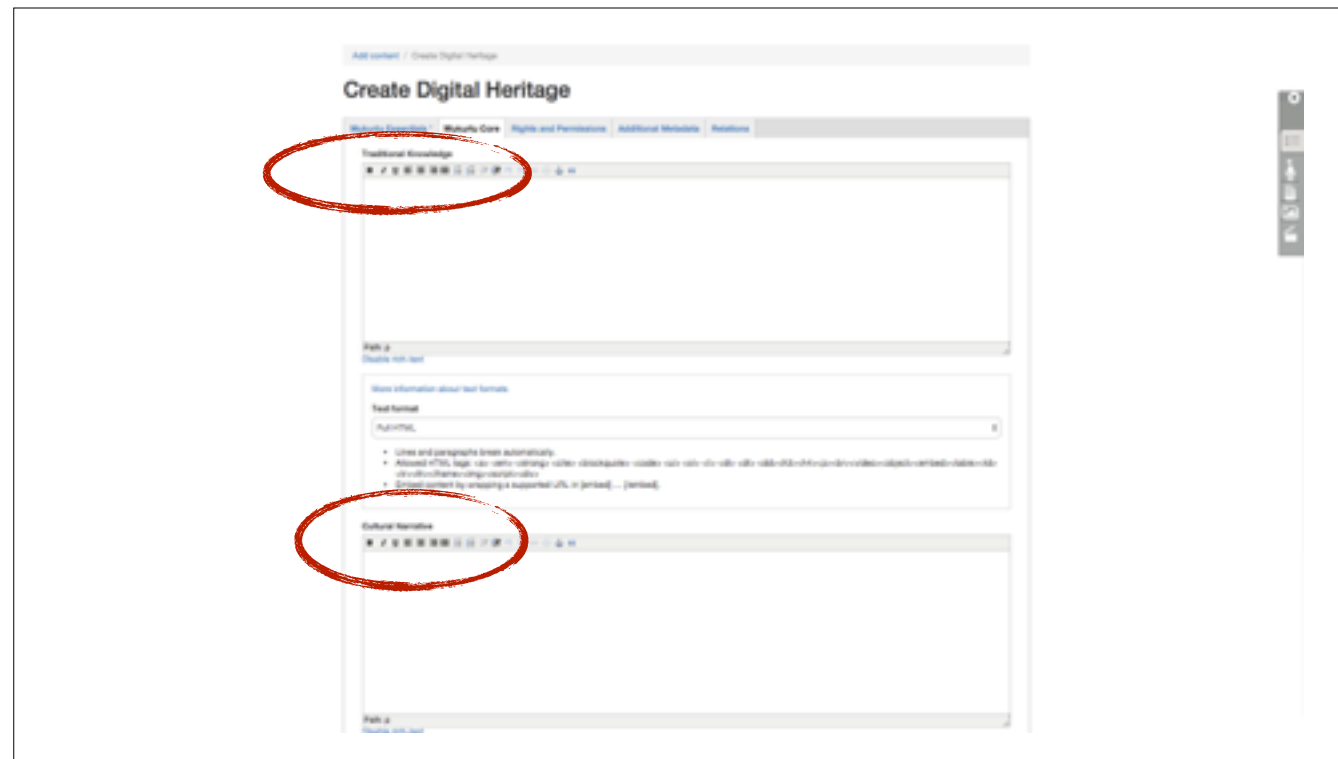
Community

Select a community

Protocol *

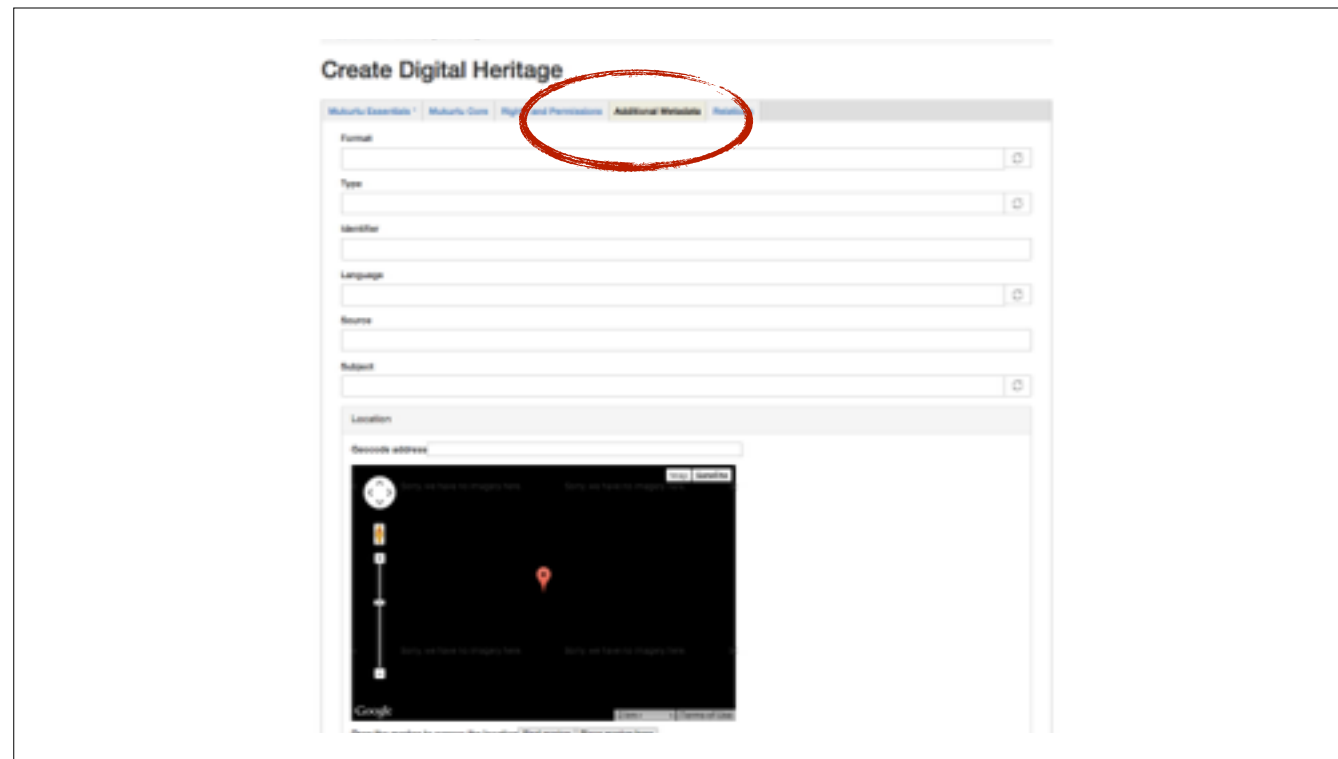
Choose some options

you can see that there are several types of metadata fields: mukuru essential, core, additional metadata...here we go back to that idea of both highlighting the needs of indigenous communities with the **ESSENTIAL metadata** being about cultural protocols, and community and then Mukuru Core >>



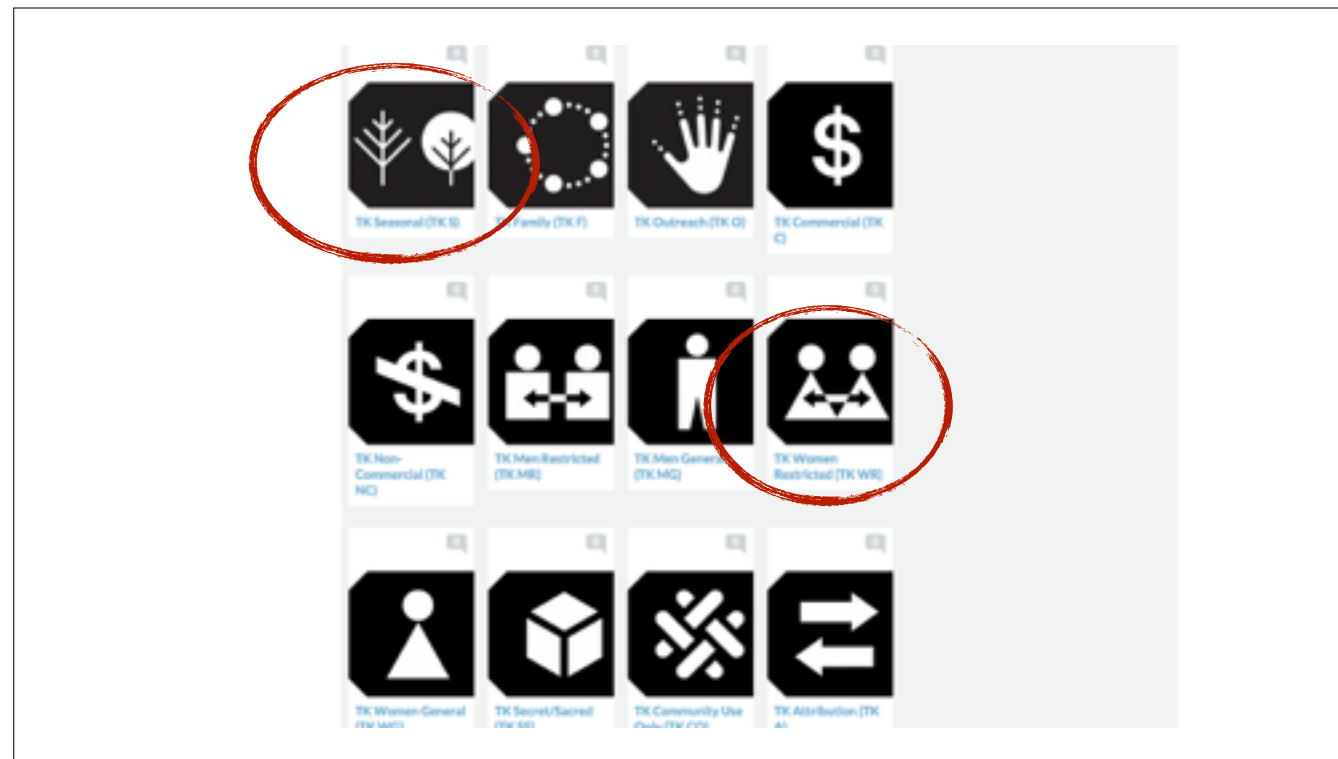
drilling down to more of the layered narrative with >> **traditional knowledge**>> and **cultural narratives**

then the additional metadata >>



based on Dublin Core>> (for you metadata folks out there we can also work with you to create a crosswalk or integrate your own metadata scheme)

we have also added a key component to rights and permissions: Traditional knowledge labels




TK labels specifically serve indigenous communities whose materials are already in the public domain and cannot be licensed.

The TK labels provide **added information** about the content and ask those who interact with the material to follow the protocols generated by the community : for example: seasonal> women only

on the view page then this all comes together...

SUMMARY:
This book is only for the James Index.



[Download](#)
[Image Metadata](#)

DESCRIPTION:
Koalas inhabit the forests of eastern Australia, but there are a few differences between northern and southern subspecies. They range in length from 60-80 cm (2-3 ft), but northern koalas are on the smaller side, weighing 4-6.5 kg (9-14 lb), while southern koalas weigh 7-13 kg (15-29 lb). Southern koalas also have thicker fur to keep them warm in the colder winters.

CULTURAL NARRATIVE:
Koalas also have special adaptations that enable them to feast on eucalyptus leaves. They fully digest, they use their excellent sense of smell to select the best feeding levels. Although there are 400 types of eucalyptus trees, koalas generally limit their diet to two or three favorite kinds. In addition, eucalyptus leaves are highly fibrous and poisonous to other animals. But koalas have bacteria in their stomachs that break down the fiber and toxic oils and allow them to absorb 23% of the nutrients. In order to survive on such a low calorie diet, they conserve energy by moving slowly and sleeping around 20 hours a day.

TRADITIONAL KNOWLEDGE:
When early European settlers first encountered koalas in Australia, they thought the tree-climbing animals were bears or monkeys. Even today people still incorrectly refer to koalas as "koala bears." But koalas are actually marsupials, closer related to wombats and kangaroos.
As marsupials, female koalas have pouches where their young stay until fully developed. Unlike kangaroo pouches, which open towards the top, koala pouches are located towards the bottom of their bodies and open outward. The baby koala, or joey, won't fall out of the pouch because the mother koala uses a strong sphincter muscle to keep the pouch closed.
Koalas have special physical characteristics that complement their tree-dwelling lifestyle. With two opposable digits, their forepaws are well-adapted to grasping branches and picking eucalyptus leaves, their main form of nourishment. Tough, feathered skin on the sides of their feet along with long sharp claws provide traction, and strong thigh muscles aid in climbing. Extra thick fur on their bottoms and a cartilaginous pad at the base of their spines provide cushioning as koalas sit all comfortably on branches for hours. They also have a curved backbone and two lesser pairs of ribs than most mammals (11 instead of 12) creating a curved skeletal structure that fits well into the forks of trees.

Community:
James
Profile
Gender: Female

Category:
Animals
Drama Content

KEY:
TRADITIONAL KNOWLEDGE LABELS

LICENSING OPTIONS:
Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0)

SOURCE:
<http://www.animalguides.com/animal-167/koala/>

PUBLISHER:
Koalas Inc.

IDENTIFIER:
K1

SUBJECT:
Koalas
Type:
Photograph

>>cultural protocols, communities and categories that have been defined by the Mukurtu users here are at the top followed by some standard metadata and importantly

>>traditional knowledge labels and then of course

>>cultural narrative and traditional knowledge in addition to a brief description

so this is one way to get content in>> a Mukurtu administrator within the community, but as part of the growth of Mukurtu and in a commitment to our grassroots development **we answered a call from many of our users to produce a mobile app...**

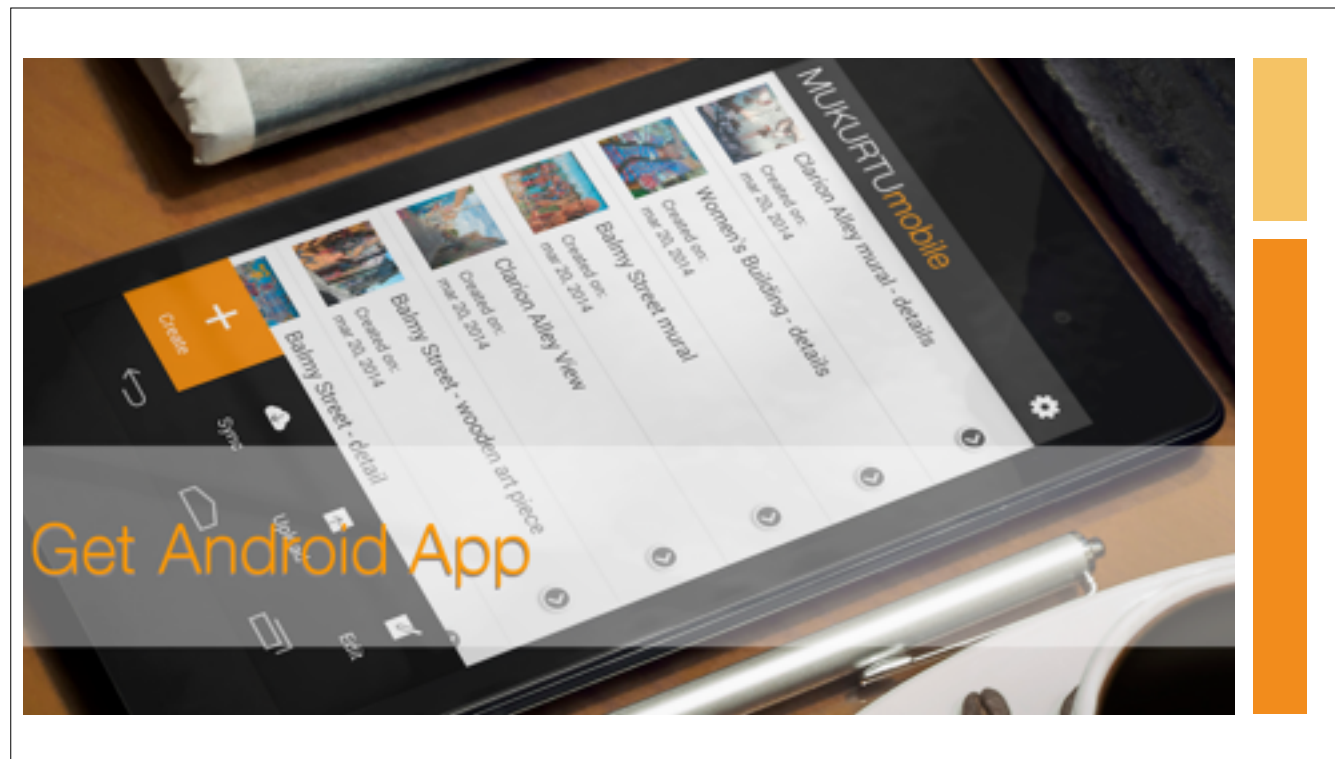


mukurtu mobile launched as a beta version late last year and will be fully integrated with 2.0 in the coming months.

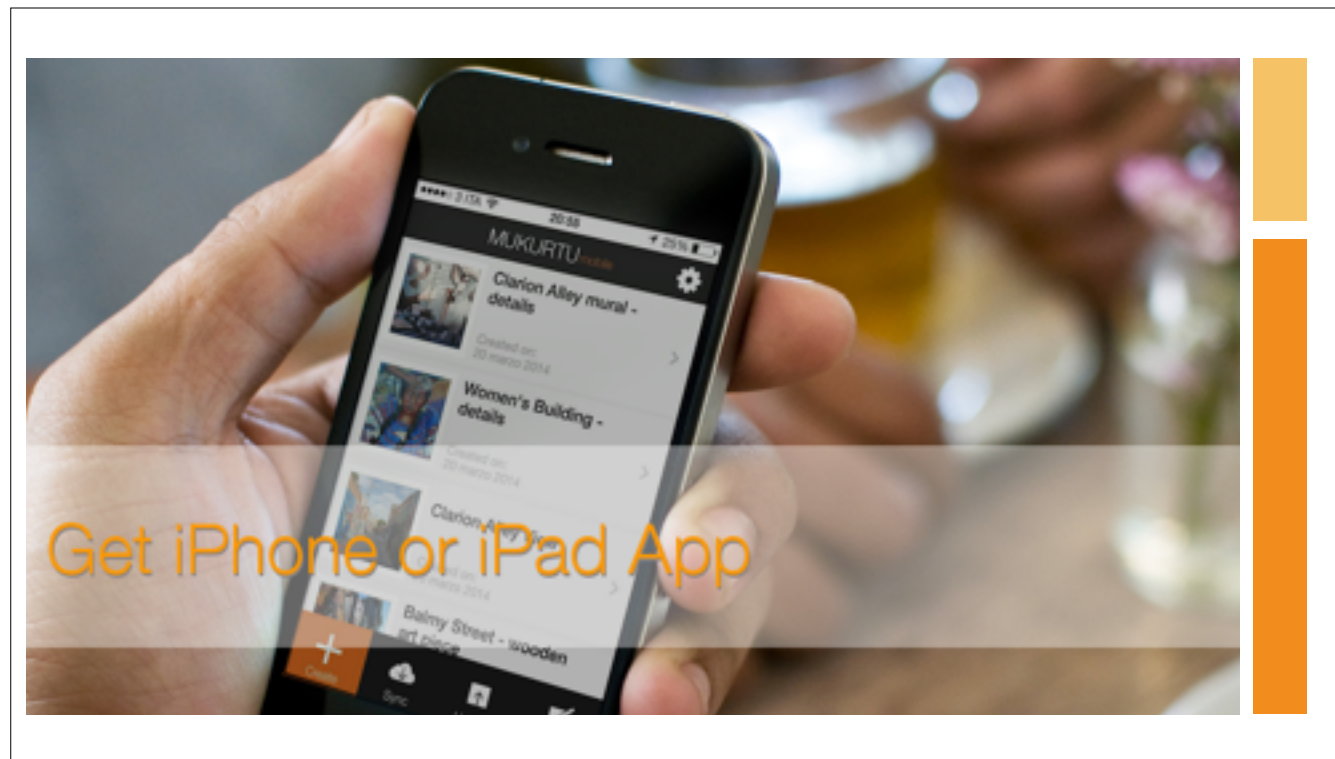
Mobile fits a very specific set of needs we heard over and over:

1. get kids involved
2. communities should be documenting sites (archeological, endangered etc) and telling their own stories
3. we want to maintain cultural protocols with the content so it is safe after it is collected.

with an NEH digital implementation grant we have developed Mukurtu Mobile and it is now available for testing on



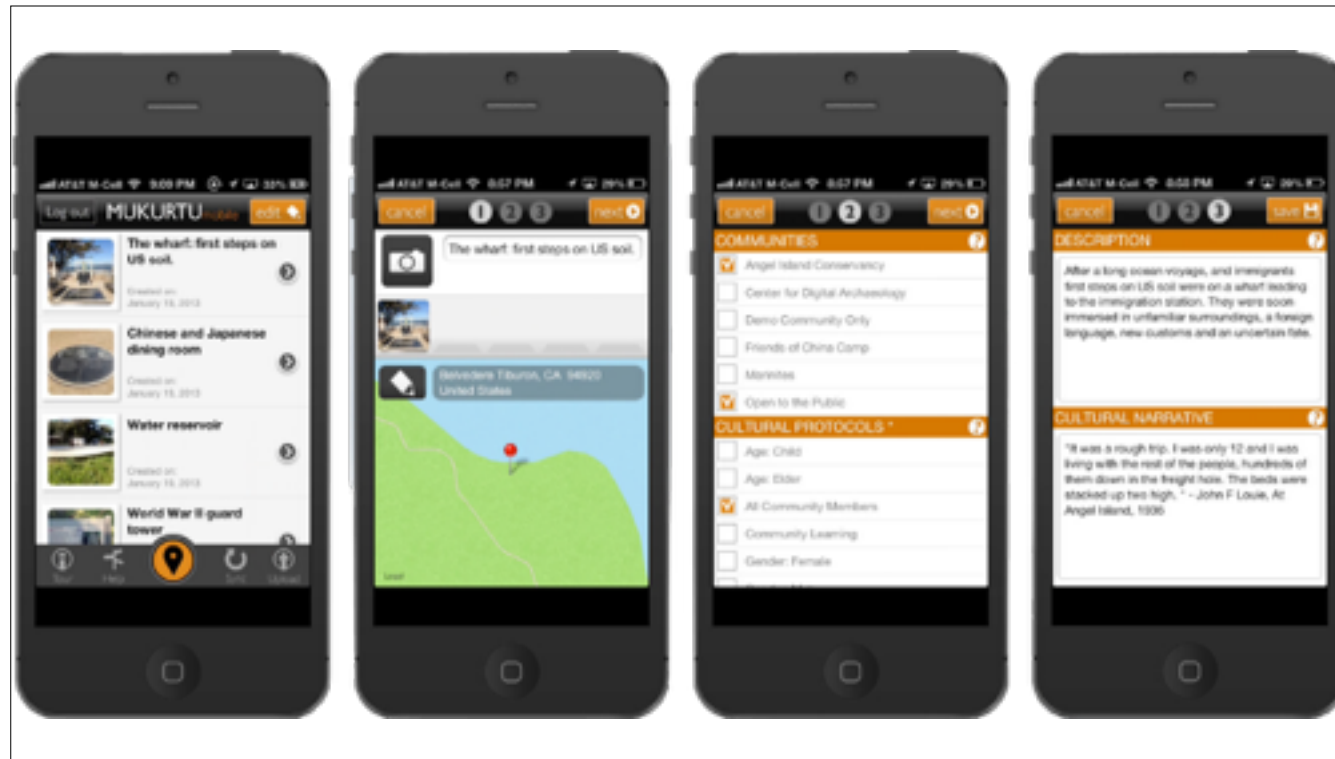
for Android



and iOS

it interacts with a community's Mukurtu Archive

so



the focus of Mukurtu Mobile is **content collection**>

No internet is required to create content and it uses the device's GPS to find the location with pinpoint accuracy.

The communities and protocols already defined within their Mukurtu site remain, so each person can be contributing pieces of the story to be shared exactly as intended.

So women, men, elders, kids, can all be telling different stories at the same place, or different places, in real time and upload to their Mukurtu instance creating a rich narrative.

To test this we partnered in 2013 with the



Paschal Sherman Indian School on the Colville Reservation in WA state to use Mukurtu Mobile to unite western water science and tribal ecological knowledge.

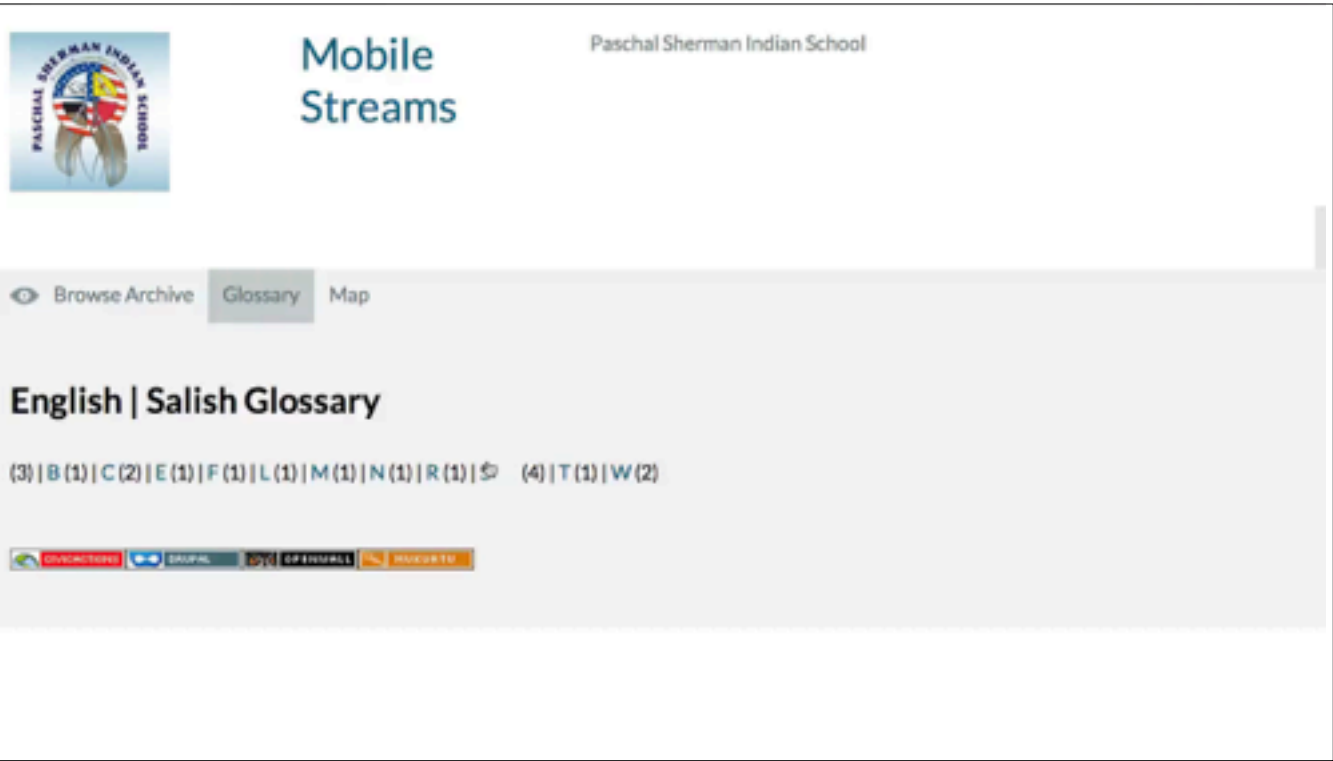
we created the Streams of Knowledge Streams of knowledge mobile app to integrate with and extend mukurtu's collection and display capabilities...

to allow the teachers to add in curriculum and roles to the students so they could work together



to collect, analyze and interpret sets of data >> from elders narratives to water sample statistics they documented the health of Omak Creek that runs through the reservation and behind the school.

we added in a



English-Salish dictionary so students could hear both languages as they work through the streams curriculum.

this demo app grew directly from the mission and values of the school to

To prepare our children to be
the Speakers of our Language,
Guardians of our Culture, and
Leaders of our Future

Paschal Sherman Indian School

Vision Statement



Prepare our children to be Speakers of our Language, Guardians of our Culture and Leaders of our future.

all of these collaborations have Mukurtu



We begin with a visit to the Klamath River in California ... The Karuk Tribe, a federally recognized tribal nation, wants to build a digital library and education program for the community. It's a challenging undertaking for several reasons

Karuk Tribe Nanu'ithivthaaneen Project

Challenges

- More than 80% of the community below California's median income level
- Virtually no Internet or phone service
- Brain-drain as youth leave community for better opportunities
- Soft funded community center at risk of closure

Options

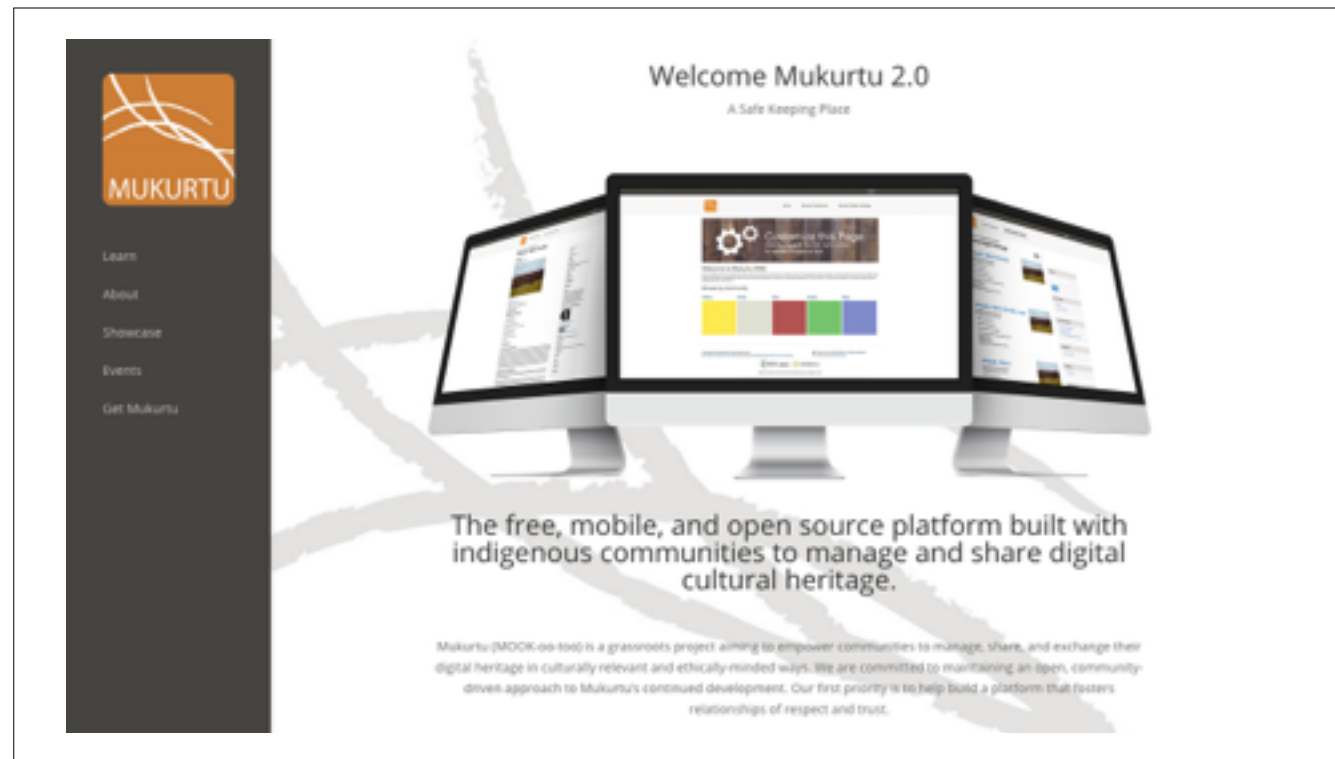
- New grant opportunities - IMLS, NPS
- Archival media training
- WSU Tribal Cohort program



Mobilized Training



one of the most important things we have learned when working with the worldwide Mukurtu CMS community is that face-to-face, person-to-person interaction is the way things get done



as their foundation...

Mukurtu can act as a **bridge between large or small institutions and diverse sets of communities and stakeholders**. Using Mukurtu does not require an institution to give up their own content management systems or standards—

instead **Mukurtu provides an access point** to collections by **making reciprocal curation part of the workflow**—providing content that is meaningfully curated for example:

Te Papa museum in NZ wants to use for just Maori collections>>

Library of Congress AFC wants to test the TK labels for use in some of their Native collections and

the Univ of Oregon is installing it in their libraries for several projects including a Native Language Program...

I would suggest, then, that Mukurtu helps us think



differently about our collections, the collaborations we envision and embark on, the ways knowledge and content are imagined, used, circulated, and curated.

and I am sure there are many uses for Mukurtu that I can't even imagine as institutions begin to use the 2.0 version, submit modules and features for future releases and I hope that Madison is one of those leaders!

thanks!

- A special thanks to Mukurtu Project Director, Kim Christen Withey kim@mukurtu.org and Director of IT, Michael Ashley michael@mukurtu.org for allowing me to use these slides, and the communities that allowed us to share these stories.
- kelly@mukurtu.net
- project site: www.mukurtu.org
- demo site: meet.mukurtu.net
- support: support.mukurtu.org, support@mukurtu.org

thanks!