Leveraging ‘Hidden Collections Africa’

Through Sustainable Infrastructure

Software Heritage Symposium and Summit 2025

UNESCO

Climate Change is Real

Hidden Collections Africa

Engaging younger generations to respond to climate change through advanced software and intergenerational training.

=Generative Sustainability

I am worried about climate change:

On the effects of future generations: 84%
On the effects of society: 79%
On future quality of life: 77%
I have eco-anxiety: 55%
Our actions are not effective: 60%

College of the Sacred Heart Survey, 2024

Hidden Collections Africa

Engage students and young people to capture images of cultural heritage threatened with damage or loss by climate change

Building a new, very large community of response (+10 M)

Design

- Action focused.
- Create a learning environment that builds participation and relationships among users
- Eventually global and scaled to understand and address challenges
- Built to last at least 100 years
- Requires ethical and transparent approaches
- Rigorous scholarship with emphasis on research and transdisciplinarity
- Takes advantage of emergent technologies and communication modalities

How

-MOUs signed with 500+ African cultural institutions

-Capture images with smart phone

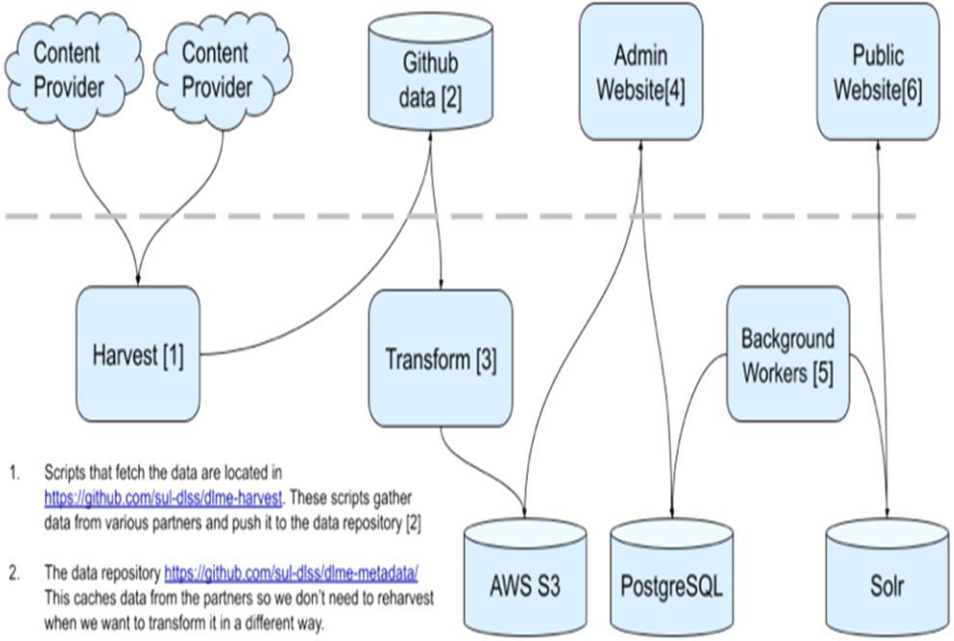
-Images uploaded to platform

-Metadata applied, augmented over time

-Tools and apps designed for effective reuse

-Integrated in teaching and research

-Field Guide available in 25 languages



1. Scripts that fetch the data are located in https://github.com/sul-dlss/dlme-harvest. These scripts gather data from various partners and push it to the data repository [2]
2. The data repository https://github.com/sul-dlss/dlme-metadata/ This caches data from the partners so we don't need to reharvest when we want to transform it in a different way.
3. https://github.com/sul-dlss/dlme-transform stores the traject configurations that describe how to transform the source material into our intermediate representation (IR), reads the harvested data [2] from github and uses these configs to transform the data into the IR. The produced file is pushed into AWS S3.
4. On the admin pages of the website a site administrator can enter a S3 url onto the site which will fetch the document and store each line as a database record.
5. Background workers (using sidekiq) index transformed data into SOLR for access on the public website.
6. When a record is stored, a background job writes a solr document. The website then queries Solr to provide the data in the public interface.
7. The documents appear for the public at https://spotlight.dlmenetwork.org/

Generative Sustainability

Sustainability and infrastructure are social constructions: engagement with well trained young people across generations, integrating resources into teaching, research, and curious inquiry, provides the structure, focus, continuity and long term durability of a project

Not traditional cyber networks and money

Not solving climate change, but creating a living environment that:

- Fosters better understanding of the crisis
- Builds large scale, global communities of purpose and practice
- Connects young people with their culture
- Sustains culture under threat
- Gives voice to those presently unable to contribute
- Facilitates more informed decision-making
- Motivates by encouraging and respecting our shared human nature

A flick of the wrist