Growing beyond the static repo

We have the tools and services to create repositories with a few clicks of a mouse.

We have tools to create and import content.

But we have...
Unpleasant, unfriendly experiences

The identity of our repositories are defined by generic visual displays.

In the best case, the default front-end encourages light engagement.
How do we improve this?
Getting there from here

If we are lucky enough to be using a modular system, we can try to install fancy widgets!

Or we have a development team or budget to build out some custom awesomeness.
Enter, the site builder

The modern CMS ecosystem has enabled “non-technical” folks to mix and match functionality through the user interface.

The WordPress community is a remarkable example of this. Anyone should be able to build the web.
Removing barriers

Drupal is unique for a few reasons:

- Modular and open source
- Relatively large developer community
- Strongly established integration patterns (hooks)
- THOUSANDS of open modules
Drupal and Islandora

And if we use Islandora, we’re in luck because it’s Drupaly... right?

Not quite. Most of those great Drupal modules won’t work without some help.
Drupal and Islandora

How Islandora works with Drupal:

- User management
- Theming
- and as a development framework (standards, utility code).

http://semweb.salzburgresearch.at/apps/rdf-gravity/
Content is King

The great advantage (and disadvantage) of Islandora is its use of Fedora Commons as the content repository.

Drupal modules are built reasonably assuming content will live in Drupal.
Helping Drupal

Islandora Sync is a Drupal module that allows for user configurable storage of content from Fedora Commons (fcrepo) in Drupal.

When our content is in Drupal, we can use ALL of the modules!
The Process

The idea had floated around the Islandora community for some time.

UCLA Libraries sought to take advantage of their Drupal expertise and sponsored the initiative, providing use cases and technical requirements.
How does it work?

Islandora for Drupal 7 takes advantage of Drupal’s hook system to allow other modules to alter data structures and respond to events.

Module “X” can change how Islandora behaves without the need to modify any Islandora code.
Take home #1

Build systems to be extensible, before they need to be.

We were lucky that Islandora 7 was built with this in mind. Had it not, the effort to add that extensibility and then start building would have been overwhelming.
How does it work?

When content is created, updated or deleted in Islandora, its use of hooks basically results in,

“Hey, other modules out there, I have this item of content and I’m going to do something to it.”
But what’s the catch?

Drupal and fcrepo don’t share the same content model architecture. They don’t speak the same language.

Drupal comes with a relational database bias, while fcrepo prefers XML records.
Content model architecture, eh?

It gets worse.

Drupal has the notion of entities that consist of a single schema (SQL) for each type.

Fedora Commons objects can have multiple associated schemas and media resources.
Meet in the middle

We can teach Drupal and fcrepo to speak to each other.

Some assumptions about how each is best used allows for configuration shortcuts.
Take home #2

A hybrid set of technical constructs may be needed to bridge the concepts of two systems.

Standards help here, but often don’t bridge divergent base technologies.
The result

Islandora takes care of managing the repository.

Drupal can present the content in a variety of ways, with potentially thousands of open source functionality enhancements.
Open management

Drupal’s large community drives documentation and constant removal of technical hurdles.

Repository users of any role can shape their system.
Future routes

We should recognize the investment that groups have made in open source CMS software.

Allow site builders to work in systems that are comfortable; provide easy preservation and repository best practice integration.
Try it out

Download: https://github.com/Islandora/islandora_sync

UCLA experience:
http://islandora.ca/sites/default/files/IslandoraSync_Islandora_Camp.pdf
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