# Learning Analytics, Digital Education, and Innovation at U-M

- Launching DEI
- Unizin Update
- Emerging Policy framework for LA

# Part I: Launching Digital Education and Innovation

#### Vision:

To redefine public residential education at a 21st century research university through the creative use of technology and targeted experimentation with digital programs in order to enable engaged, personalized and lifelong learning for the entire Michigan community.

Organized around three strategic pillars

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**Curricular Innovation** 



Leadership in Learning Analytics



Digital
Infrastructure
At Scale



#umdigitaled

#### "Toward Coherence"

Curricular Innovation

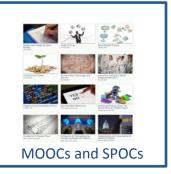




Flipped Courses and Programs



Maker Spaces for Residential Learners



Leadership in Analytics



Personalization and Predictive Analytics Student Explorer

Advising/early warning



Collaboration and Prototyping



Instructional Design and Gamification

Digital
Infrastructure
At Scale



Networks



Learning Management Systems

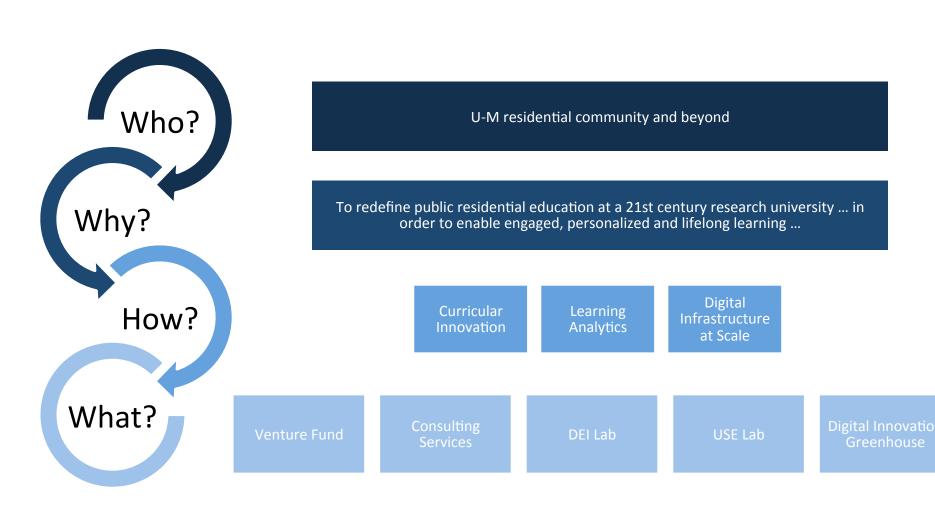


**Digital Libraries** 



**Digital Ecosystems** 

#### **Elevator Pitch**



Seed and Scale

**Partner** 

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We've conceptualized a model that translates our vision to scholarly and practical operations...

#### **Digital Education & Innovation**

| Venture Fund  | Consulting<br>Services  | DEI Lab<br>(DEIL)   | USE Lab   | Digital<br>Innovation<br>Greenhouse   |
|---|---|---|---|---|
| How do we harvest innovation to transform residential learning? | How do we frame, position, enable, accelerate, prototype and guide? | How do we enable curricular innovation and experimentation? | How do we use learning analytics and advance scholarship? | How do we grow digital engagement innovations to enable personalization at scale? |
| Sood and Scalo  | Develop and   | Design and  | Research and  | Cultivate and   |

Experiment

**Analytics** 

Accelerate

# Part II: Unizin Update

# Unizin

A University/Member-Owned Service Aimed at Controlling the Emerging Digital Ecosystem

#### Content

- Writing
- Audio/Video/Photo
- Problem sets
- Talks
- Simulations
- Data

## **Applications**

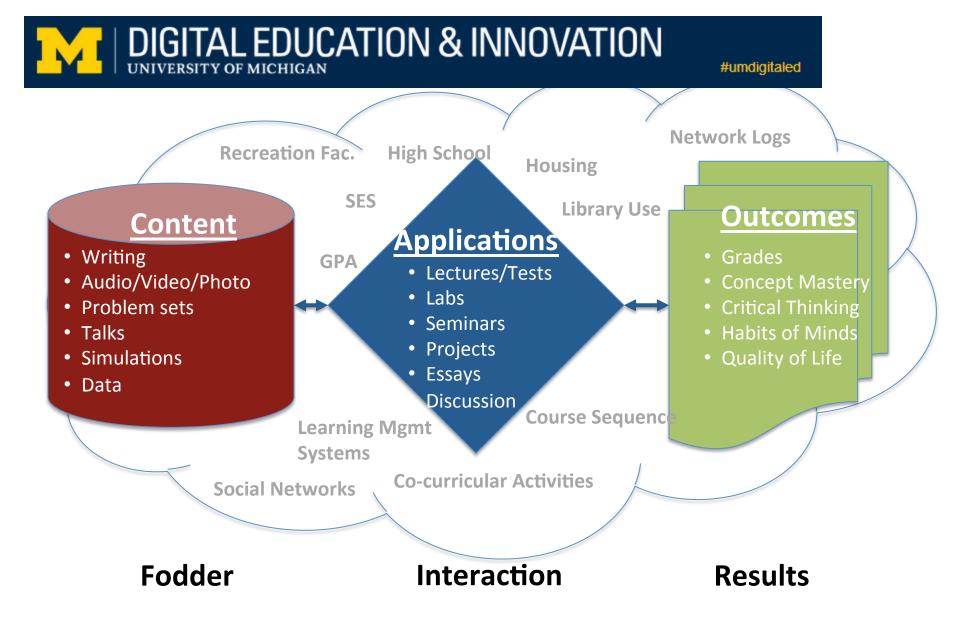
- Lectures/Tests
- Labs
- Seminars
- Projects
- Essays
  - Discussion

#### **Outcomes**

- Grades
- Concept Mastery
- Critical Thinking
- Habits of Minds
- Quality of Life

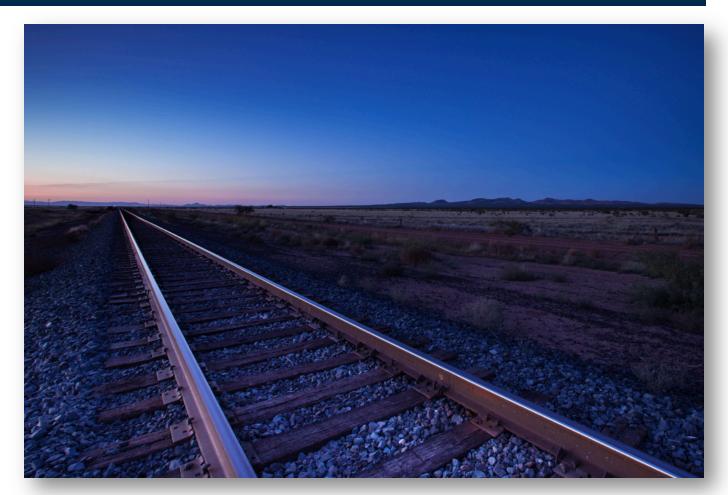
Fodder Interaction Results

Teaching/Learning Ecosystem in the Traditional Physical Environment



Teaching/Learning Ecosystem in a Digitally Mediated World

# DIGITAL EDUCATION & INNOVATION



Increasingly, digital ecosystems are infrastructure—more like common gauge rails than differentiating features of a university.



## The Challenge:

Who will control the emerging digital ecosystem?











courserd



### **Enter Unizin**

A University/Member-Owned Service Aimed at Controlling the Emerging Digital Ecosystem that reflect three principles:

- Digital <u>content</u>, software <u>platforms</u>, and data <u>analytics</u>
   (collectively, "Service") are essential and strategic capabilities
   that enable universities' core mission of education.
- We have a vested interest in staying in control of our data, our students, our content, and our reputation/brand.
- Directing these integrated capabilities as an academy-owned set of loosely coupled services is an important means to protect universities' interests over time. Ownership affords control.

## **Unizin Strategy**

A University/Member-Owned Service Aimed at Controlling the Emerging Digital Ecosystem

#### Strategy:

- Approach technology platform decisions as strategic decision, not just feature set comparisons.
- Approach control of digital ecosystem like we approached control of the network ecosystem (Leverage the lessons/successes we've had from Internet2)
- Favor (demand) loosely coupled ecosystem
- Take advantage of scale and collaboration—aggregate demand and requirements
- Acquire services/technology on favorable terms. Build only where you must. Invest development in pushing standards and creating reference implementations.
- Unizin is about synchronizing capital and demands, not about community development.

## Start with the LMS...



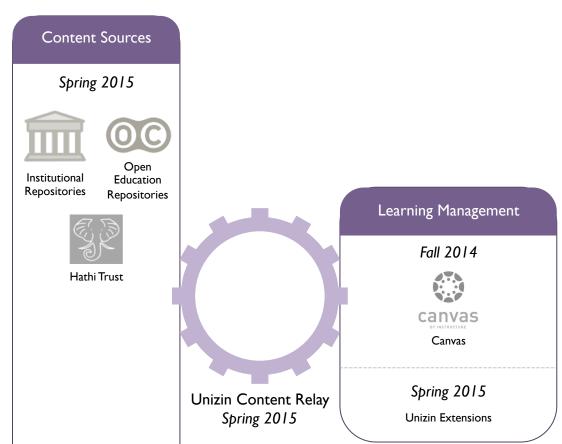
Unizin selected Instructure's Canvas LMS as the *first* service. What was attractive about Canvas?

- Largely open-source. Where it isn't, they will provide source code in the event that we part ways.
- Aggressively pushing standards-based approaches to tools and data (e.g., LTI, common cartridge, caliper). If you want LTI apps, they have the first store.
- Currently best in class LMS judging by adoption rates

But Unizin has to be much more than LMS—it's about the digital ecosystem that links content, applications, and data.



# Unizin Roadmap through Spring 2015





## Unizin Roadmap through Fall 2015



Spring 2015





Institutional Repositories

Open Education Repositories



Hathi Trust

Fall 2015

**Extend Existing Sources** 



Facultydeveloped Content



Commercial Content **Publishers** 

(hronopolis



Unizin Content Relay Spring 2015

#### Learning Management

Fall 2014



Canvas

Spring 2015

Unizin Extensions



Unizin Analytics Relay Fall 2015

#### Analytics Sources & Tools

Fall 2015



Unizin Shared Data Warehouse



**Databases** 

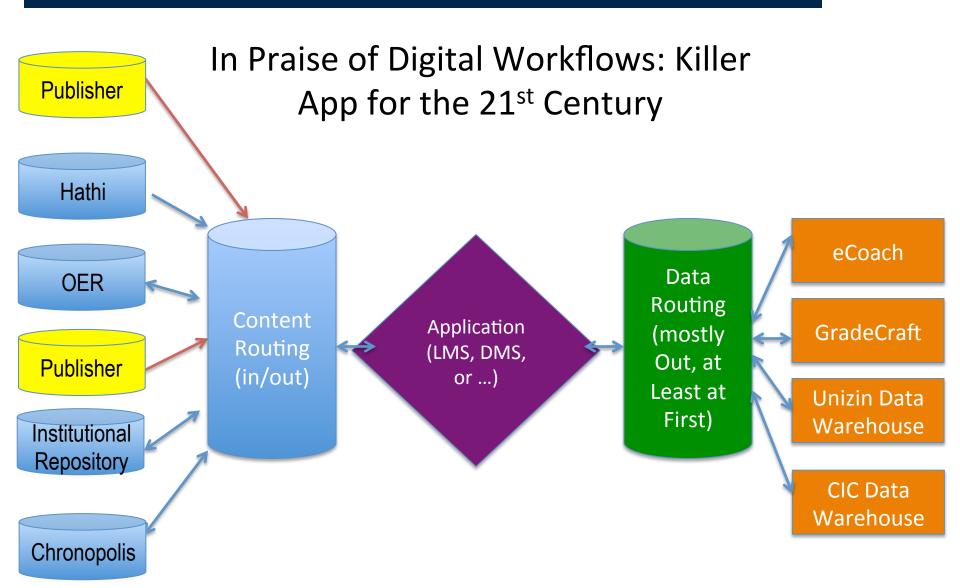
E<sup>2</sup> Coach

GradeCraft



Commercial Analytics Tools

# In Praise of Digital Workflows: Killer App for the 21st Century



Publisher

I want students to have access to eText from publisher

Hathi

OER

**Publisher** 

Institutional Repository

Chronopolis



eCoach

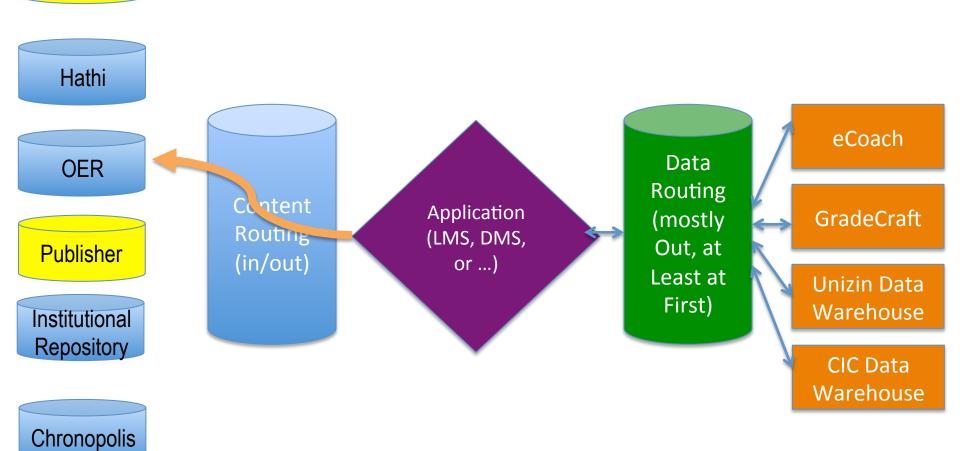
GradeCraft

Unizin Data Warehouse

CIC Data Warehouse

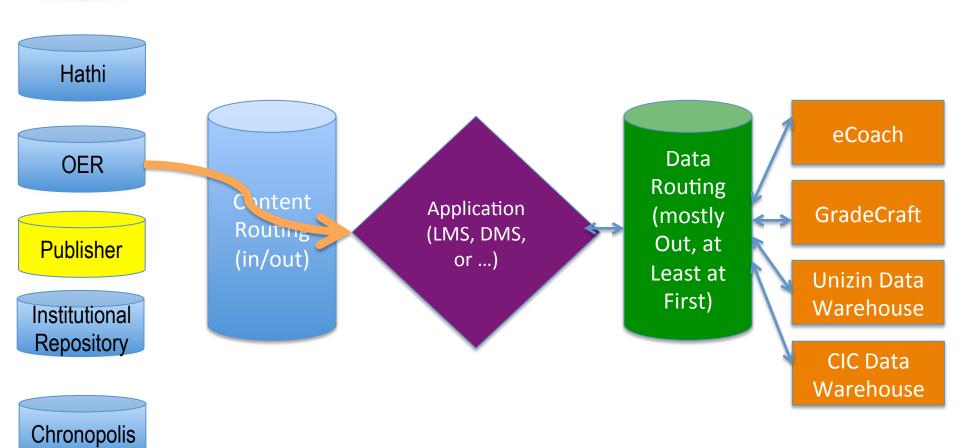


# I want to deposit the simulation I built in Merlot



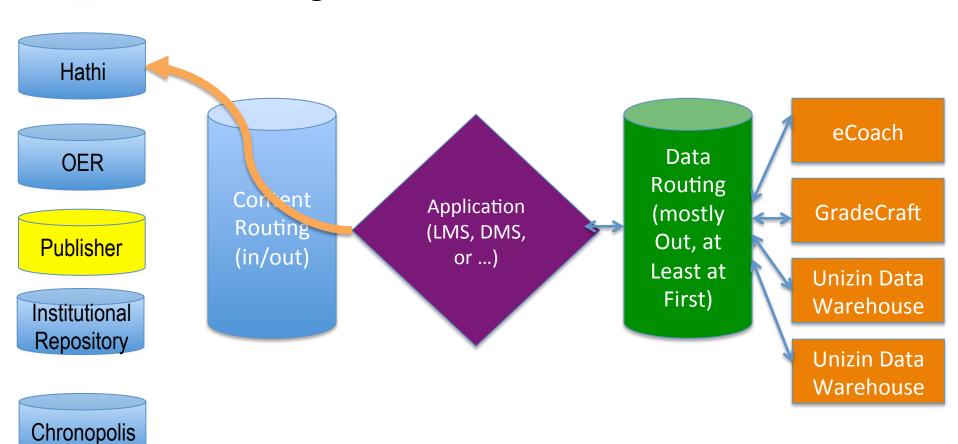


# I want students to use a simulation that's in Merlot



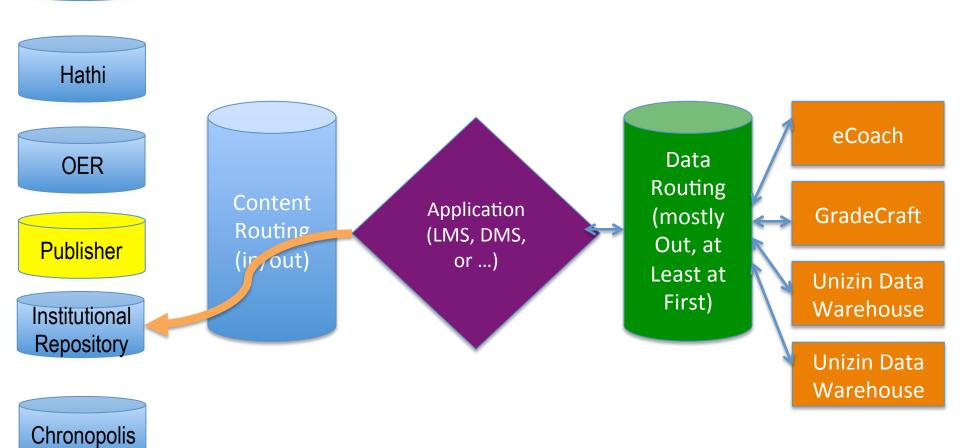


I want to release a study guide under CC license





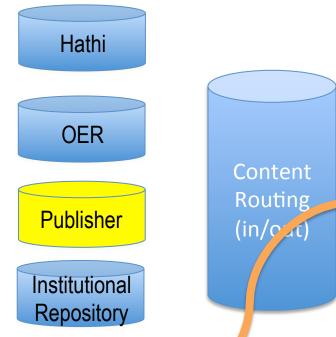
## I want to deposit my thesis in the IR





Chronopolis

I want to deposit data in a data repository for preservation



Application
(LMS, DMS, or ...)

Data
Routing
(mostly
Out, at
Least at
First)

eCoach

GradeCraft

Unizin Data Warehouse

Unizin Data Warehouse

