Unlock your digital information. Unleash their potential.

PESC Fall 2018 Data Summit
Enabling Next Generation Education Infrastructure

Dale Allen, PhD - President and Co-Founder
October 18, 2018
Understanding the Business of Higher Ed

87% Customized
50% Before modern technology
Creating the Environment for the Next Generation of Student Success
Point-to-Point Integration
DXtera Integration Approach
DXtera Integration Approach

Student Success Application

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Legacy Student Information System
OSID Specifications Define Functionality
We’ve Defined Thousands of Connectors
“Consumer” and “Provider” Implementations
Protocol Bridge (Network Serialization)
Example: Access Control Adapter
Swappable
Security and Access Control

Student Success Application

Bridge Consumer

Access Control Adapter

Provider

Legacy Information System

Auth Z
Collaboration

Control

Student Success
Members and Partners

- MIT
- Universitat Oberta de Catalunya
- ACT Center for Equity in Learning
- University of Hawai'i System
- Strada Education Network
- Community College system of New Hampshire
- AACRAO
- CTCS
- Georgia State University
- Emsi
- The University of Memphis
- NHCUC
United to Strengthen America’s Pathways Between Education and Employment

Mission-Aligned Affiliates
Technical Assistance

Education & Training

Technology Development
MEMBER-DRIVEN PROJECTS
Member-Driven Technology Projects

- Operational Data Store
- Data Warehouse
- Next Gen Integration Scorecard
- Member Product Integrations
- NG Learning and Assessment
- Data Trust Integration
- Consumption for Credential Engine
## GPS Strategies Represent Levers

### Pathway Relevance

- **Purpose First**
  - All students access Career Coach technology in advising process for purpose-driven decision-making
- **Math Pathways**
  - Math pathways in place at most Colleges, with co-requisites designed from them
  - All programs of study mapped, semester-by-semester
  - Transferable first-semester success courses for all

### Pathway Intentionality

- **Structured Schedules**
  - Seven common focus areas, including with K-12
  - Introducing technology to all Colleges to ensure all students register onto semester-by-semester plans
  - Enabling predictive and block scheduling
  - Enabling measures around plan quality

### Pathway Pace

- **Co-requisites**
  - Co-requisites impact majority of students by Fall 2018
  - 15/30 credits the new normal for full-time
Where we are going with DXtera Integration Approach

- Enables dashboard reporting from myriad tools, including Tableau, Rapid Insight, and Excel
- By bringing together all student-facing systems, can allow for real-time analyses to unearth risk factors and spark rapid student interventions
- New systems needs plug-in through connector-based integration framework
- Data stability and speed through star-schema-based warehouse design
- Ability to federate with external systems
DX ODS and Data Warehouse
Designed to answer questions critical to student success
Project #1: The New LMS

How can we provide support for new learning and teaching methodologies?

How can the LMS communicate with the Academic Management System?

Should we have to evolve our campus or use a commercial one?
Project #2: Datamart

Research in eLearn Centre moving to have an evidence-based translational research model.

Is it possible to create a data model where tools can be interoperable between different universities?
Project #3: Competencies

How can competencies be evaluated as learning objectives?

Can we visualize a degree from a competencies point-of-view?

Is it possible to have this information in common with other universities?
Project #4: Cognitive technologies

Are chatbots an efficient tool of communication?

How communication via chat would change the LMS?

Can tutors be replaced by Intelligent Tutoring Systems?
Next Gen Integration Scorecard
Emerging Affiliates and Technology Projects
Vision

- Shift the Market to enable Plug and Play - Choice-Based
- Targeted collaboration
- Specific problems -> market relevant solutions
- Knowledge transfer
- Global network
- Development and Deployment
Projects to Propel Smart Demand

1. Next Gen Integration Scorecard

1. Learner Owned Record

1. Student Data Mobility

1. Degree Requirements

1. Emerging Projects - DXtera Lab (Sandbox)
Thought Leadership: NGBD Series Schedule

- Israel EdTech Week - Tel Aviv, Israel - September 5, 2018
- EDUCAUSE - Denver, USA - October 30, 2018
- Learntec - Berlin, Germany - January 29 - 31, 2019
- UNESCO Mobile Learning Week - Paris, France - March 3 - 5, 2019
- ASU + GSV - San Diego, USA - April 6 - 8, 2019
- Next Generation By Design Symposium - Barcelona, Spain - May 21-23, 2019 - INVITE ONLY
U.S. Department of Education Challenge
EdRec Team

**BrightHive**
A public benefit corporation that provides services and technology that enable public-private data collaboratives and support multi-stakeholder data ecosystems.

**Concentric Sky**
An award-winning software development firm with a 13 year track record of delivering innovative software solutions to complex problems. Core contributors to a number of open standards at standards bodies including W3C, IEEE, and IMS Global. Makers of Badgr.

**DXtera Institute**
A growing international, nonprofit, member-based consortium of higher education professionals collaborating to remove technology barriers so that institution leaders, faculty, staff and students have efficient access to information needed to transform student outcomes.
Vision for a NGBD Environment

- Decentralized, real-time standards-based data infrastructure
- Combination of micro-credentials, competency frameworks, learning pathways, and blockchains
- Connections between education records, competency development systems, and employment opportunities
- Open solutions & standards community
- Vendor agnostic
EdRec Ecosystem Benefits

- Enabling the student-controlled exchange of digital information
- Facilitating personalized learning, pathway planning, and employment without integration barriers
- Supporting exchange between learning environments, business intelligence and learning analytics
- Controlling access to student educational data only to authorized parties
- Requiring authentication/verification from the appropriate entities
• Utilization of existing standards first, development of new second
• Leverage open service interface definitions, emerging technologies and protocols for trusted, distributed data and identity management
• EdRec Team contribution to a number of open standards - including W3C, IEEE, and IMS Global
• EdRec Team involvement in Open Badges, Open Pathways, CLR, Hyperledger Indy, and Competency Catalyst
Join us October 30 at EDUCAUSE NGBD series to Explore EdRec
Visit DXtera.org
Discussion

Learn more at DXtera.org