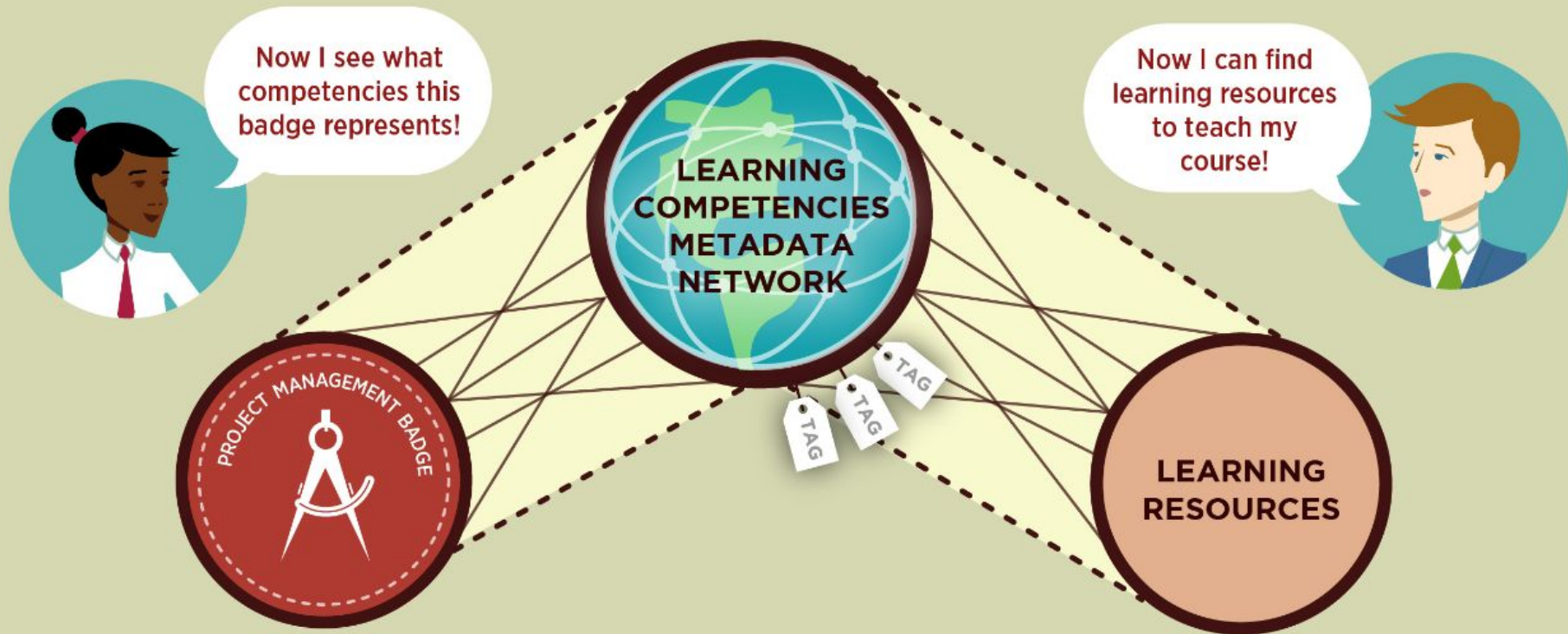# Achievement Assertions and Comprehensive Learner Records

Session Description

This presentation will showcase Georgia Department of Education and the University System of Georgia efforts to work with CBEN, the Credential Engine, and the US Chamber of Commerce's T3 Network to develop a robust, extensible ecosystem to support learner achievement assertions produced as Comprehensive Learner Records.

Greg Nadeau, Manager, Public Consulting Group

Myk Garn, University System of Georgia

Nate Otto, Director, Badgr Platform, Concentric Sky

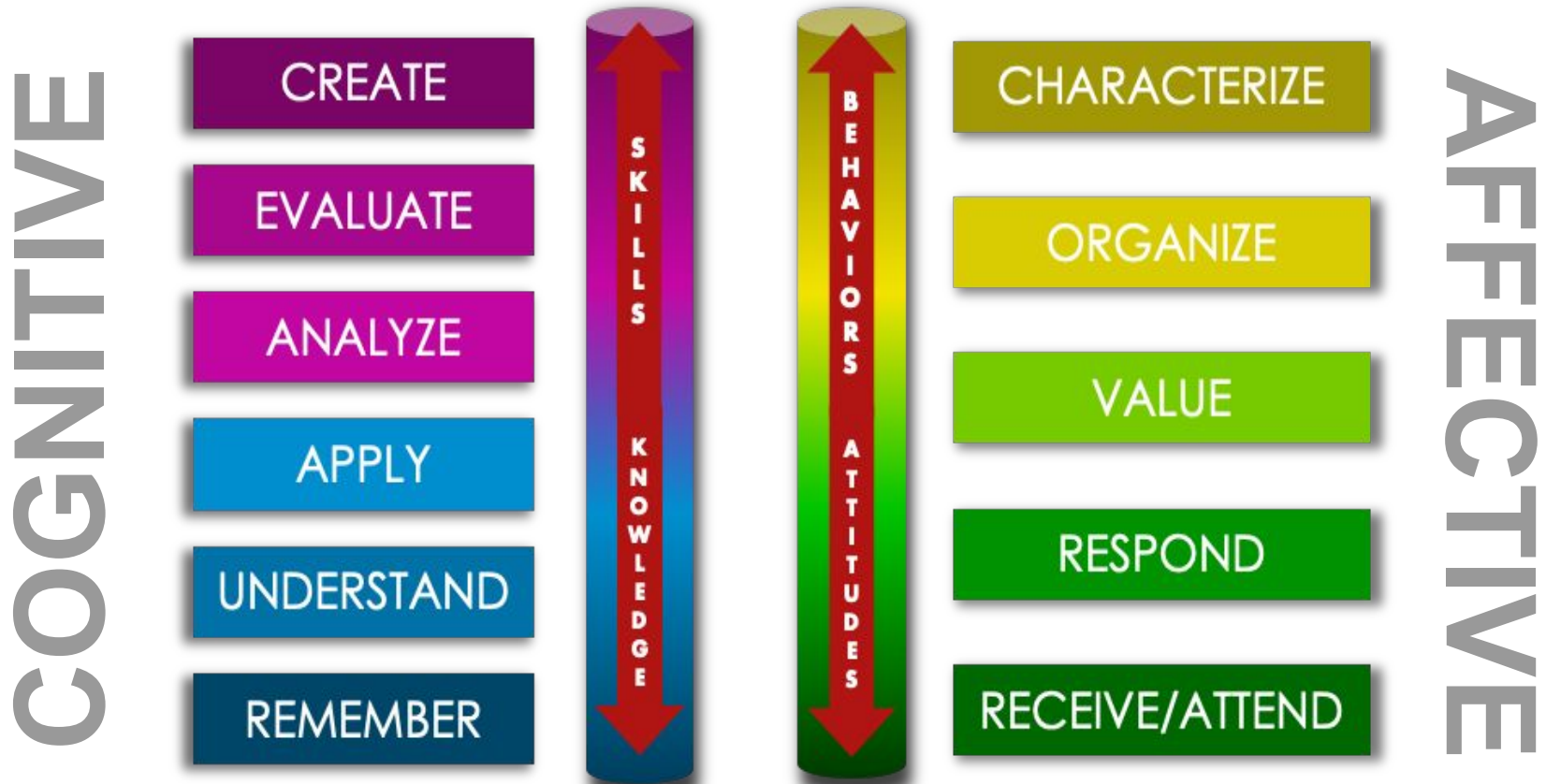# Big Ideas

POSTSECONDARY EDUCATION IS TRANSFORMING

FROM AN ANALOG TO A DIGITAL ENTERPRISE

Academic Nucleotides

COGNITIVE

CREATE
EVALUATE
ANALYZE
APPLY
UNDERSTAND
REMEMBER

SKILLS
KNOWLEDGE

BEHAVIORS
ATTITUDES

CHARACTERIZE
ORGANIZE
VALUE
RESPOND
RECEIVE/ATTEND

AFFECTIVE

BLOOM'S TAXONOMIES

Every Learner is Unique
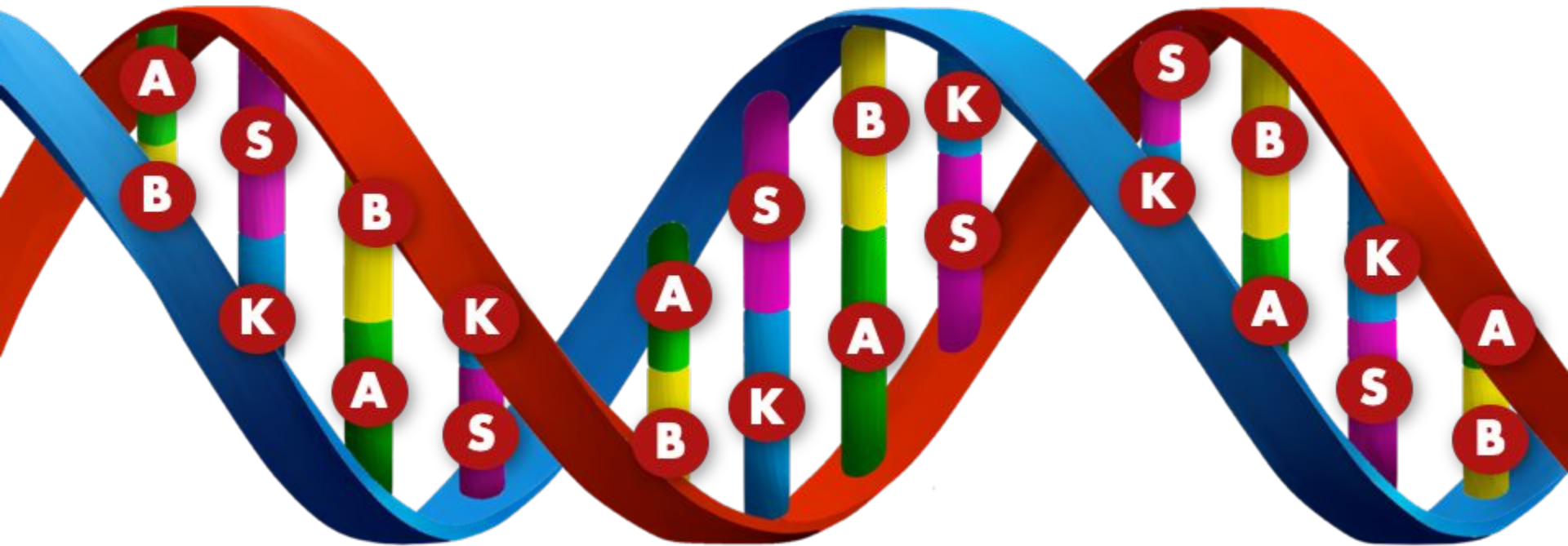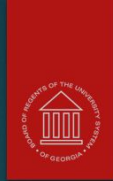
Every Professor is Unique

IMS Integrated Ecosystem

Moving from seperate specs to a single, integrated reference-model and registry service.

One Roster

Users → LMS Tools / Assessment Tools → CLR Achievement Badge → Comprehensive Learner Record → Gradebook & SIS

LTI Resource Search Learning Object ← CASE Competency Statement

Credential Registry

Content Publisher (CMS, LOR, OER)

Competency Registry
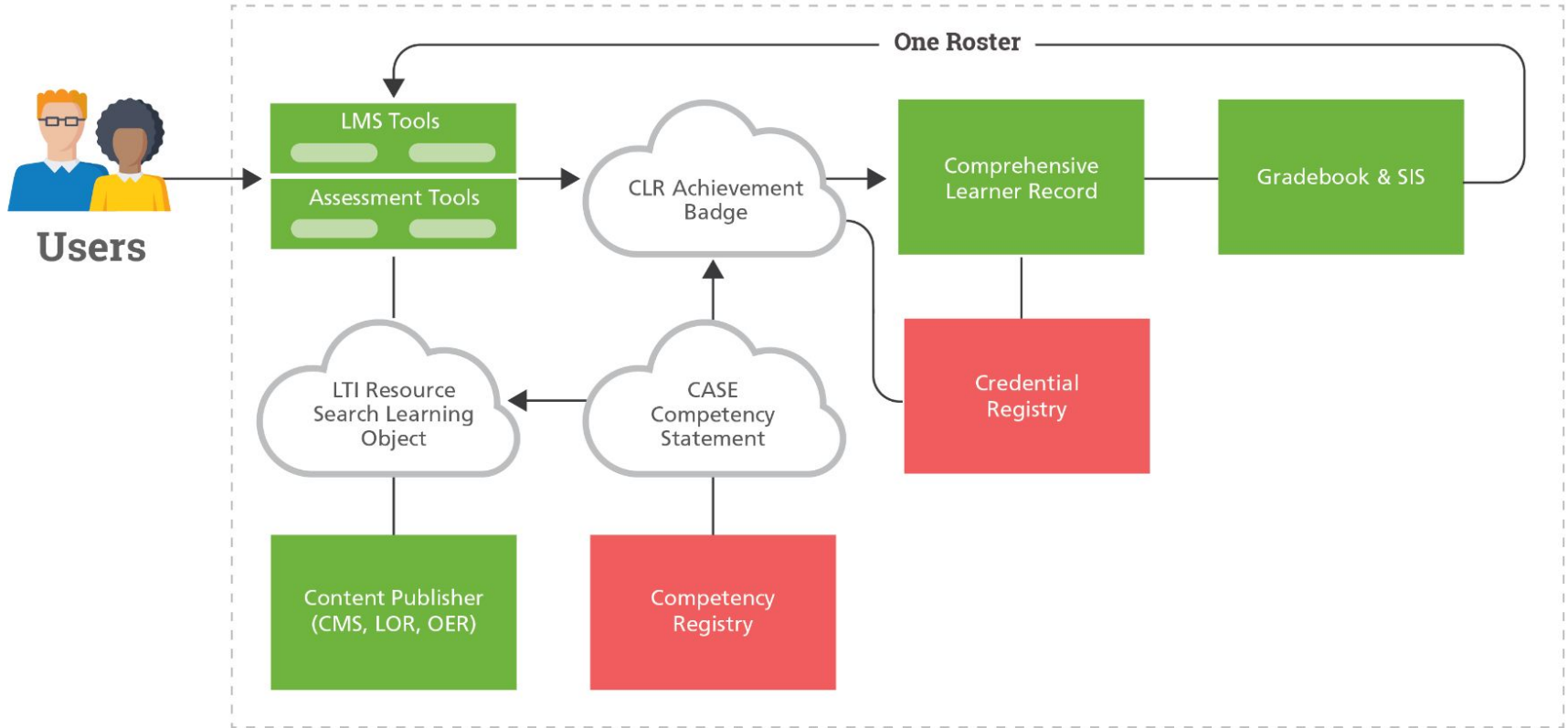
LEGEND | ▮ Apps ▮ Service End Points ▮ Registry Services End User Functions Shared Data

Possible Georgia Scenario

1. GaDOE is publishing its new Computer Science standards as CASE data with isChildof and precedes relationships.

2. Georgia Virtual and E-Core creates a series of full course curriculum, each with its own scope and sequence (isChildof and precedes)

3. Learners will proceed through either traditional course sequences or some other learning pathway, getting Issuers to assert achievement on competencies (branch or leaf CASE statements).

4. CLR should enable learners to manage their validated achievement assertions micro-credentials through their district, the state, or providers, curate and group them, and control access to prospective employers and others.

Competency Assertions
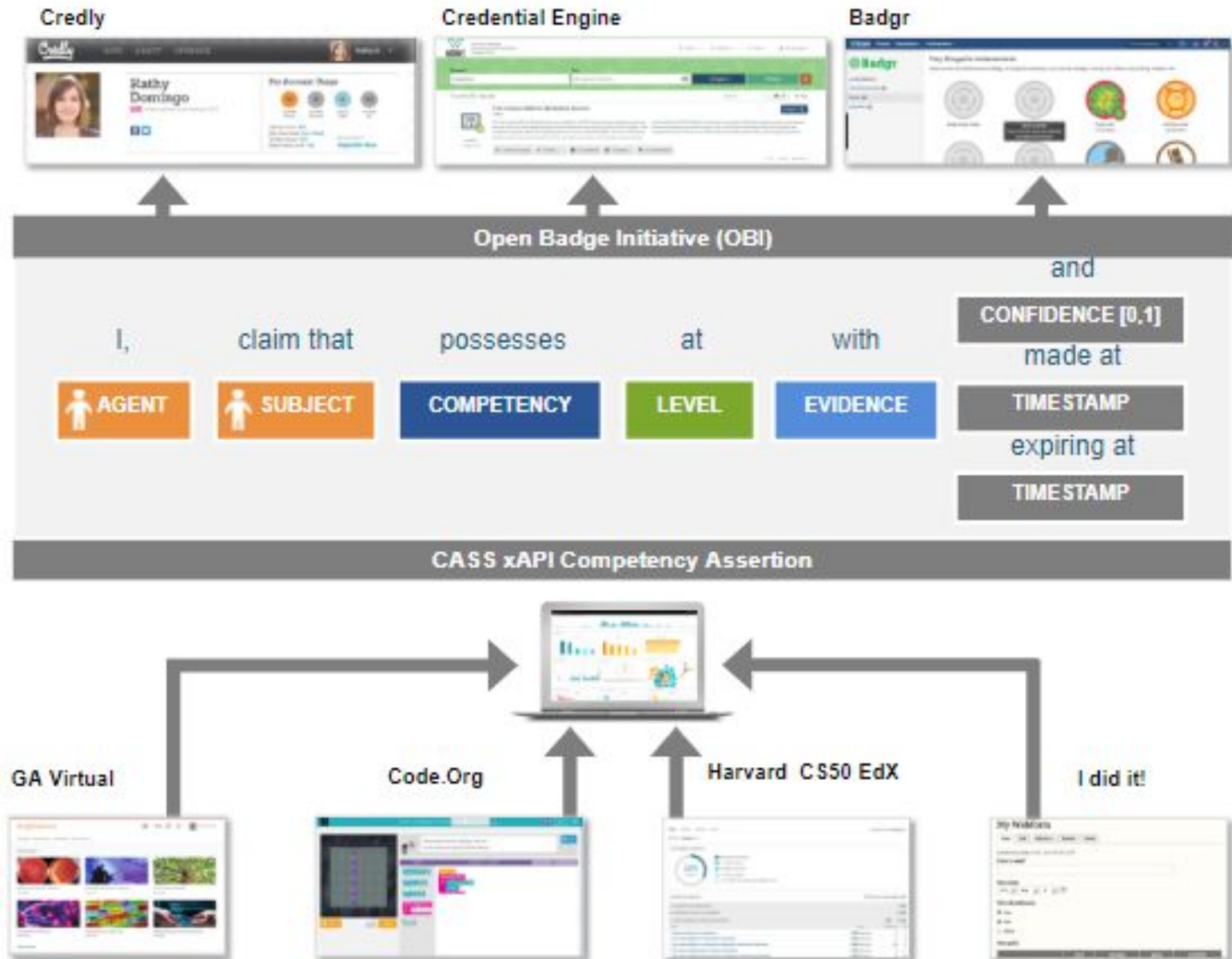
Comprehensive Learner Record Viewer

Madison Williams

Email:	mwilliams@example.org
Phone:	0000000000
Mobile:	0000000000
URL:	http://example.org/mwilliams
Student ID:	123456789
Birth date:	1989-01-01
SourcedId:	0123456789

CBU

URL:	http://example.org/cbu
Address:	123 E St NW, Washington, DC 20004
phone:	0000000000
Issuer Name:	Kennedy Green
Issuer Title:	CAO

✓ Computer Science undergraduate degree - Bachelor of Computer Science
Completed: November 30, 2016 • With honors.

Other Properties

- *Date*: November 30, 2016
- *Level*: Bachelor of Science
- *Area of Study*: Computer Science

✓ Introduction to Computer Science - [CS101]
Grade: A- • November 30, 2016

Other Properties

- *Result*: A

Comprehensive Learner Records

CLR Package	
Publisher	
Learner	
Achievement Record	
Achievement	
Issuer	
Asociation	
Achievement Record	

CLR Package
publisher:Profile
learner:Profile
record: Assertion*
recipient: IdentityObject
achievement: Achievement
issuedOn: string
issuer: Profile
verification: VerificationObject
[Optional]
[level]
[evidence: Evidence]
[narrative: string(Markdown)]
[revoked]
[revocationReason]

Achievement
type: string IRI [enum AchievementTypes]
name: string
description: string
criteria: Criteria
image: Image
tags: string
alignment:CF Association* under discussion

Association
sourceId string IRI
targetId: string IRI
associationType: enum string

CLR Data Model compatibility with other IMS specifications (IN PROGRESS)

Comprehensive Learner Record:

- **learner** (data subject Profile)

- **publisher** (institution Profile)

- **achievement records** (Assertions)

- **achievements** (learning goals)

- **associations** (relationships between learning goals)

- **future: completion requirements** (what it takes to be measured as complete on an achievement in machine readable way)

Based on:
Open Badges Profile*

Based on:
Open Badges Assertion

Based on:
Open Badges BadgeClass and CASE Competency

Based on:
CASE Associations

Based on:
Open Pathways concept by Concentric Sky

*with adequate consideration of OneRoster "User" and LIS "Student"

Achievement Types

Properties	Example	Basic	Badge	Assessment	Competency	Course	Degree	Certificate	License	Co-Curricular	xtra-Curricula	Employment
id: IRI	(the achievement id - if a	R	R	R	R	R	R	R	R	R	R	R
type: string IRI	Assessment	R	R	R	R	R	R	R	R	R	R	R
name: string	[short for display]	R	R	R	R	R	R	R	R	R	R	R
description: string	[longer statement]	O	O	O	O	O	O	O	O	O	O	O
code: string		O	O	O	O	O	O	O	O	O	O	O
requirement: string	how achievement is earne	O	O	O	O	O	O	O	O	O	O	O
image: Image		O	O	O	O	O	O	O	O	O	O	O
tags: string		O	O	O	O	O	O	O	O	O	O	O
academicLevel	undergrad, grad, K, 1	O	O	O	O	O	O	O	O	O	O	O
generalAreaStudy	math, ELA	O	O	O	O	O	O	O	O	O	O	O
specificAreaStudy	MBA	O	O	O	O	O	O	O	O	O	O	O
startDate	course start, licensense sta	O	O	O	O	O	O	O	R	O	O	O
endDate		O	O	O	O	O	O	O	R	O	O	O
creditsAvailable						O						
role										O	O	R

Summary

1. CLR's structure for achievement records follows the OB format and the two remain compatible with each other.

2. The CLR information model adjusts certain terms in OB for improved clarity for broader use cases:
   a. Badge Class → Achievement (Type)
   b. Assertion → Achievement Assertion Record
   c. Badge Pathway → Achievement Pathways (CASE Associations)

3. CLR effectively makes the Image optional, in recognition of the expectation that each learner will have hundreds or even thousands of Achievement Assertion Records

Discussion Questions

1. Who are the most important consumers of comprehensive learner records?

2. How do we ensure consumers can access this data with the appropriate permission from the learner and institution?

3. How do we ensure consumers can understand this data and match the achievements up against what they are looking for?

Discussion Questions

1. **Who are the most important consumers of comprehensive learner records?**

    a. Employers & Applicant Tracking Systems

    b. Other institutions (graduate education, prior learning assessment & recognition)

    c. Emerging services around employment

2. How do we ensure consumers can access this data with the appropriate permission from the learner and institution?

3. How do we ensure consumers can understand this data and match the achievements up against what they are looking for?

Discussion Questions

1. Who are the most important consumers of comprehensive learner records?

2. **How do we ensure consumers can access this data with the appropriate permission from the learner and institution?**

   a. Client registration and resource owner authorization

   b. Can we leverage other IMS work such as Badge Connect API?

   c. Record Verifiability use cases: Who may verify and who may not verify a record?

   d. How does a consumer verify publisher identity?

3. How do we ensure consumers can understand this data and match the achievements up against what they are looking for?

Discussion Questions

1. Who are the most important consumers of comprehensive learner records?

2. How do we ensure consumers can access this data with the appropriate permission from the learner and institution?

3. **How do we ensure consumers can understand this data and match the achievements up against what they are looking for?**

    a. Simple, precise and adequate Assertions

    b. Curation or selection of relevant records

    c. A precise reference to competency using CASE ID

    d. Achievement level (leverage CASE rubrics)

    e. Confidence level

    f. Enable network effects around framework selection, development and crosswalks.