Welcome
to the
2017 IMS Europe Conference

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Enabling the Plug & Play Digital Learning Ecosystem

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@LearningImpact

"If you don't know where you are going, any road will get you there."

Engaging, Data-informed Learning and Instruction

✔ Adaptive learning software

✔ Multiple applications right now

✔ Multiple applications over time

✔ Competency

✔ Course

✔ Academic Program

✔ Lifelong

Tools for Teaching & Learning
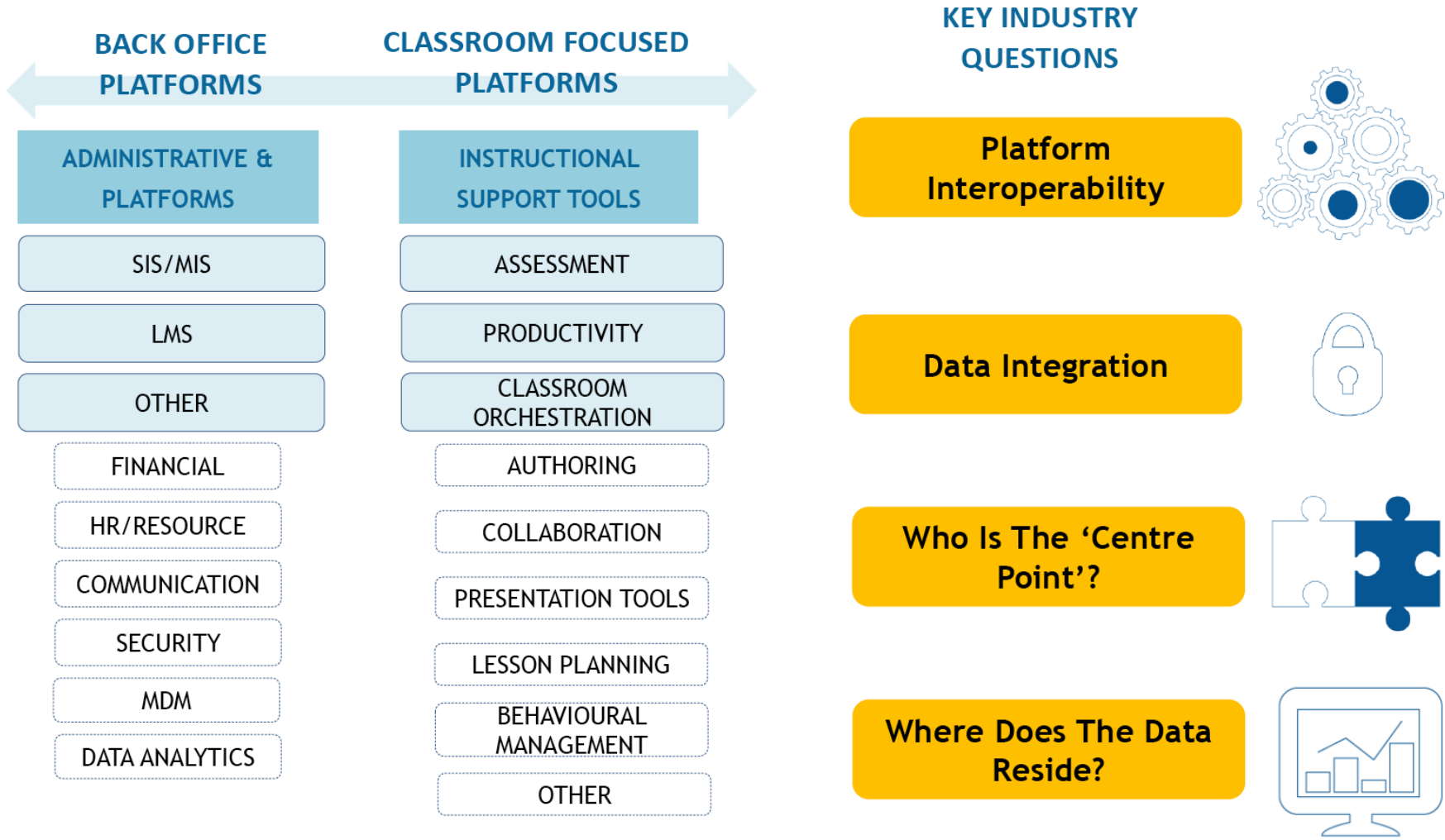
The Ed Tech Market Map

The "Tool Theory" of EdTech

1) Learning requires individual **agency**

2) The goal of education is to **ignite** learning agency

3) Educational technology is a "**tool set**" for teachers and students to aid #1 and #2

4) There will be an ever **expanding** set of EdTech tools – that need to **improve** over time

5) The EdTech community benefits from "an **ecosystem**" that enables **choice**, **usability**, **combination**, **evaluation** and analysis of **usage and efficacy**

Expectations

☑ Greater expectations that technology should improve teaching and learning

☑ Proliferation of innovative digital learning tools – that <u>need to work together</u>

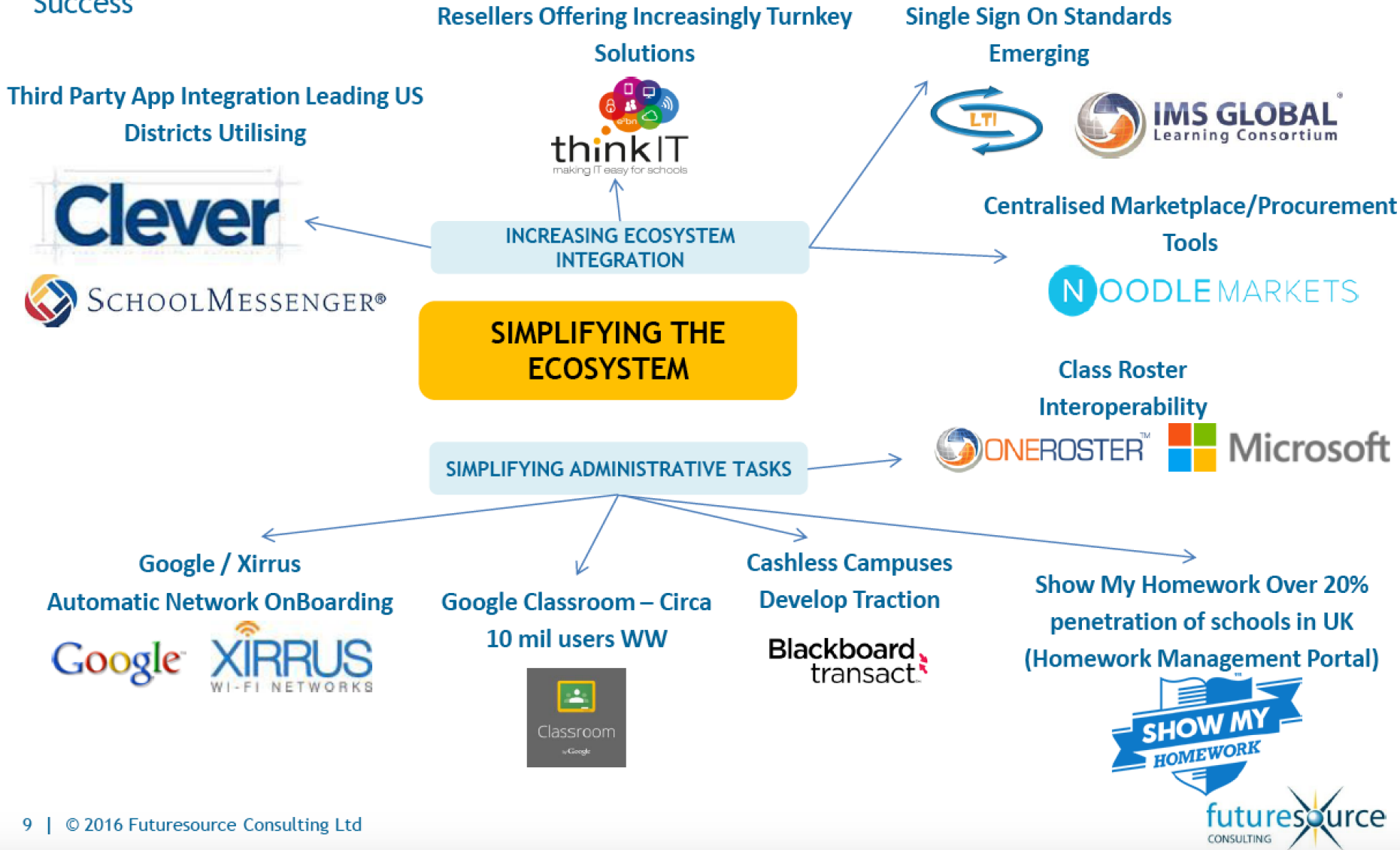☑ Expectation that the ecosystem of tools and cooperation go beyond any single platform

THE EDTECH ECOSYSTEM IS CONSTANTLY EVOLVING

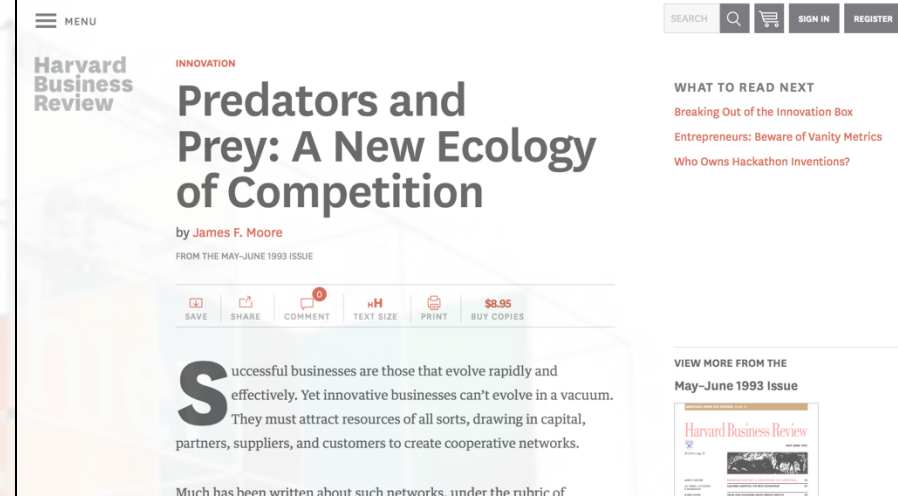## Key Industry Question Remains, How Does The Ecosystem Shake Out?

BACK OFFICE PLATFORMS	CLASSROOM FOCUSED PLATFORMS	KEY INDUSTRY QUESTIONS
ADMINISTRATIVE & PLATFORMS	**INSTRUCTIONAL SUPPORT TOOLS**	**Platform Interoperability**
SIS/MIS	ASSESSMENT	
LMS	PRODUCTIVITY	**Data Integration**
OTHER	CLASSROOM ORCHESTRATION	
FINANCIAL	AUTHORING	
HR/RESOURCE	COLLABORATION	**Who Is The 'Centre Point'?**
COMMUNICATION	PRESENTATION TOOLS	
SECURITY	LESSON PLANNING	
MDM	BEHAVIOURAL MANAGEMENT	**Where Does The Data Reside?**
DATA ANALYTICS	OTHER	

futuresource
CONSULTING

There are Numerous Examples of Providers That Are Helping to Simplify the EcoSystem Having Success

Resellers Offering Increasingly Turnkey Solutions

Single Sign On Standards Emerging

Third Party App Integration Leading US Districts Utilising

INCREASING ECOSYSTEM INTEGRATION

Centralised Marketplace/Procurement Tools

SIMPLIFYING THE ECOSYSTEM

Class Roster Interoperability

SIMPLIFYING ADMINISTRATIVE TASKS

Google / Xirrus
Automatic Network OnBoarding

Google Classroom – Circa 10 mil users WW

Cashless Campuses Develop Traction

Show My Homework Over 20% penetration of schools in UK (Homework Management Portal)

Business Ecosystem
- Dr. James F Moore

A business ecosystem describes the structure and behaviour of <u>a network of high-tech organisations that share a key technological **platform**</u> and the ways individual firms can flourish in such an environment.
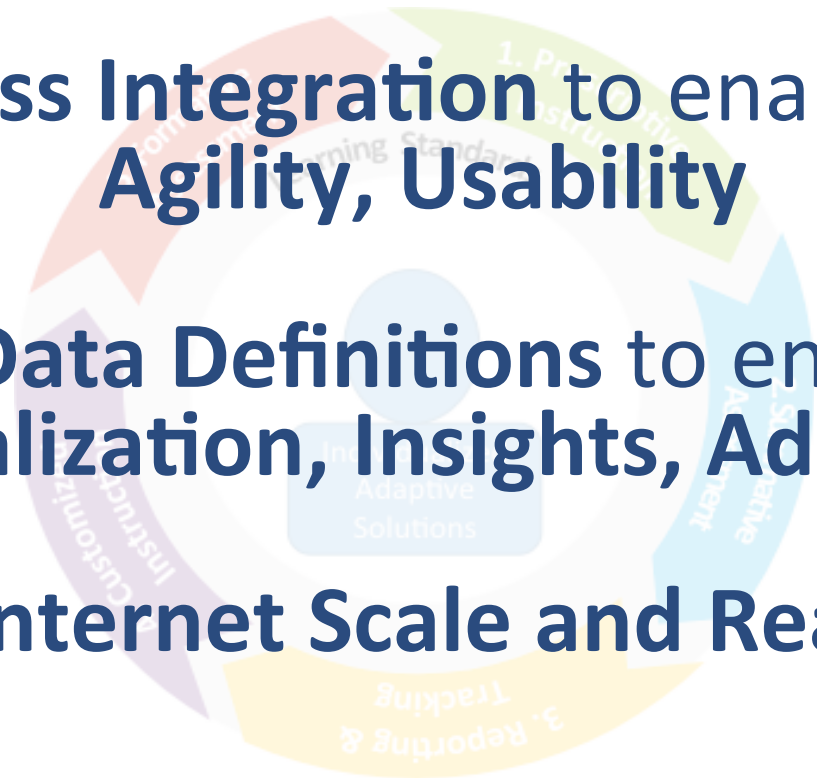
Irrespective of an organisation's individual strength, all actors in a business ecosystem are connected and <u>share the success or failure of the network</u> as a whole.

The Role of **Technical Standards**:

(a) **Seamless Integration** to enable **Choice, Agility, Usability**

(b) **Data Definitions** to enable **Personalization, Insights, Adaptation**

(c) at **Internet Scale and Real-Time**

IMS Has Had Equal Governance From Leading States, Institutions and Suppliers Around the World Since Its Inception

Over 115 leading HED institutions, 50 school districts, and more than 285 edtech suppliers worldwide, are working together to enable academic transformation by creating an expansive set of interoperable products to support next generation learning.
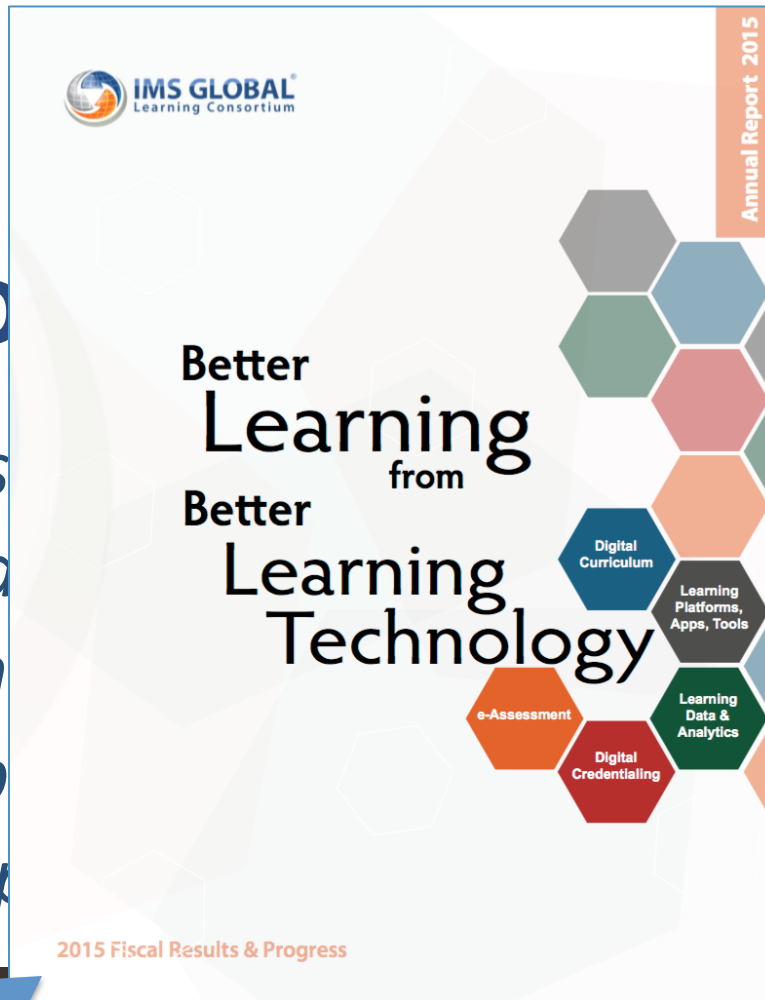
IMS GLOBAL ®
Learning Consortium
Better Learning From Better Learning Technology

IMS Missio[n]

*The mis[sion of]
IMS Global Lea[rning Consortium]
is to advan[ce...]
that can affordab[...]
educational particip[...]*

Better Learning From Better Learning Technology™

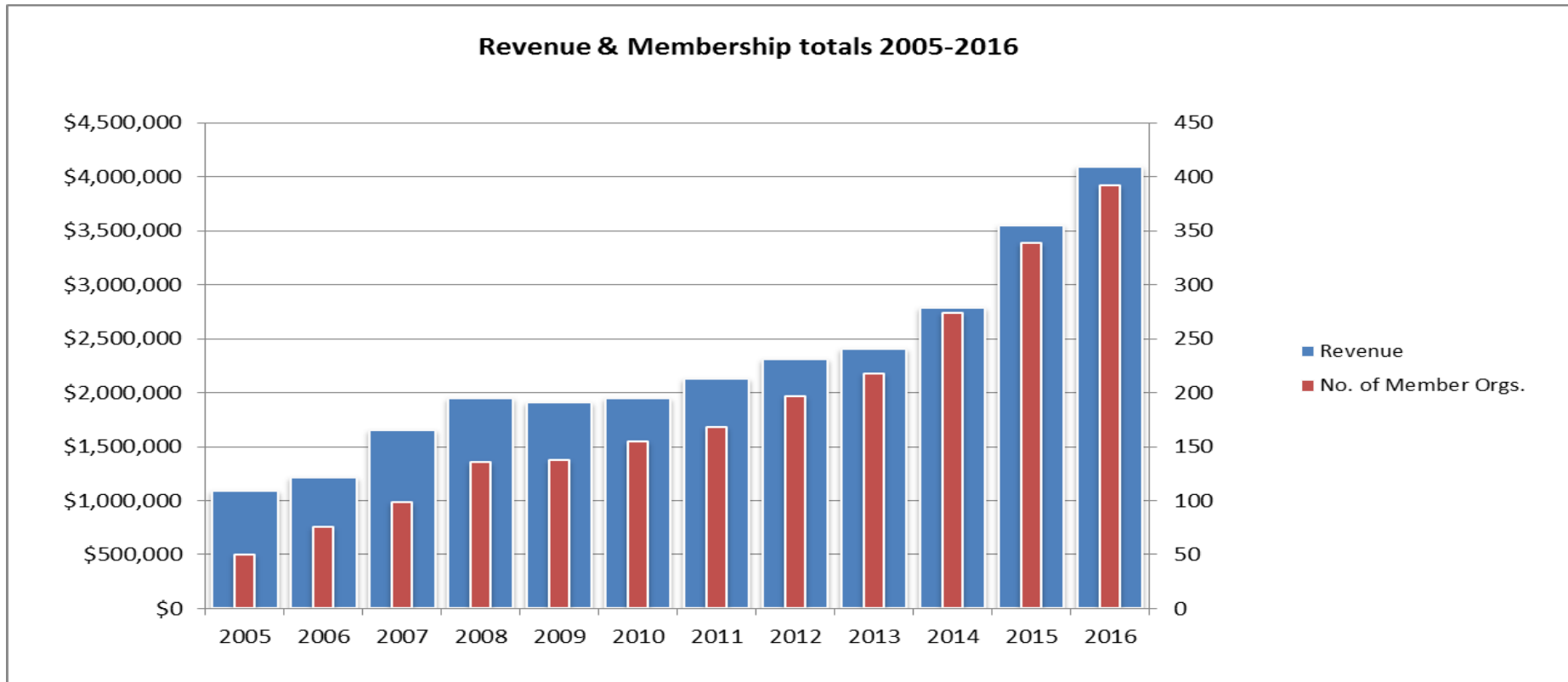Watch 3-Minute Overview | IMS Annual Report | Learning Impact Research Report | Learning Impact Awards | Learning Impact Leadership Institute

www.imsglobal.org   @learningimpact

400+ Members and Growing

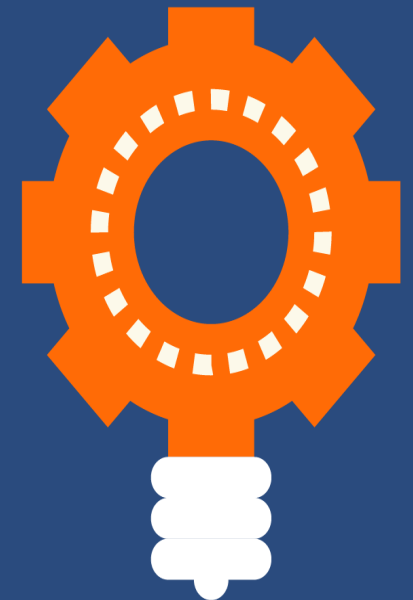**Revenue & Membership totals 2005-2016**

Accelerating Mainstream Adoption
of Innovative Technologies
for **20+ Years**

Conducts and Publishes an Annual Report on Advancements in "Learning Impact" in Conjunction with an Annual Conference and Awards Program

2017
IMS Global Learning Impact Awards

Learning Impact LEADERSHIP INSTITUTE 2017
The Future of EdTech Starts Here

2016
IMS Global Learning Impact Awards

The Future of Ed Tech Starts Here:
Identifying and Understanding Pragmatic Trends in the Application of Technology to Improve Learning Impact

Analysis of the 2016 Learning Impact Award Winners

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Better Learning From Better Learning Technology

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> *Since its inception in 1995, IMS has generally been 3–5 years ahead of identifying education technology trends and accelerating mainstream adoption of innovative solutions thereby offering inspiration and direction for future digital technology planning.*

IMS Assisted in the Invention of Key Categories of EdTech Products Including Learning Management Systems, eAssessment Systems, Modular Digital Content, ePortfolios, Educational Badges and Microcredentials

IMS Europe!

TRIFORK. LEARNING SOLUTIONS

Mc Graw Hill Education

Jisc

GÉANT

D2L

mozilla

CENGAGE Learning

College voor Toetsen en Examens

Google

SURF

its learning

infinitas learning

SANTILLANA

Cornelsen

ORACLE

UOC www.uoc.edu

Microsoft

The Open University

UMEÅ UNIVERSITET

Kennisnet

Blackboard

SENTER FOR IKT I UTDANNINGEN

tao

digitalme

CITO

canvas BY INSTRUCTURE

BPS BILDUNGSPORTAL SACHSEN GMBH — Ein Unternehmen sächsischer Hochschulen —

EUROPEAN UNIVERSITY INFORMATION SYSTEMS

VitalSource

IBM

moodle

PEARSON

UNINETT

@LearningImpact

IMS GLOBAL Learning Consortium
Better Learning From Better Learning Technology

O
UNIVERSITY OF OREGON

UK UNIVERSITY OF KENTUCKY

THE UNIVERSITY OF TEXAS AT AUSTIN

Jisc

B BOISE STATE UNIVERSITY

SURF

CALIFORNIA STATE UNIVERSITY · VOX VERITAS VITA ·

INDIANA UNIVERSITY

The Open University of Japan
Center of ICT and Distance Education

UF UNIVERSITY of FLORIDA

C CAPELLA UNIVERSITY

UOC www.uoc.edu

e EDUCAUSE

Framingham State University

서울시립대학교
UNIVERSITY OF SEOUL

UNIVERSITEIT VAN AMSTERDAM

PENN STATE 1855

KERIS 한국교육학술정보원

UMBC

University of Maryland University College

UC San Diego

UNIVERSITY of WASHINGTON

BRANDMAN University
CHAPMAN UNIVERSITY SYSTEM

STATE UNIVERSITY & COMMUNITY COLLEGE SYSTEM OF TENNESSEE

UNIVERSITY OF TORONTO

PURDUE UNIVERSITY

法政大学 HOSEI UNIVERSITY

UNIVERSITY OF CENTRAL FLORIDA · 1963 ·

UNIVERSITY OF MARY HARDIN-BAYLOR

BILL & MELINDA GATES foundation

WGU WESTERN GOVERNORS UNIVERSITY
ONLINE. ACCELERATED. AFFORDABLE. ACCREDITED.

UMA ULTIMATE MEDICAL ACADEMY

UMBC AN HONORS UNIVERSITY IN MARYLAND

法政大学 HOSEI UNIVERSITY

VirginiaTech Invent the Future

SBCTC WASHINGTON STATE BOARD FOR COMMUNITY & TECHNICAL COLLEGES

MADISON AREA TECHNICAL COLLEGE

UNINETT

KAYWON UNIVERSITY OF ART & DESIGN

UNIVERSITY OF CALIFORNIA

UW Extension University of Wisconsin-Extension

University of Colorado Boulder

LFCC Lord Fairfax Community College

UBC THE UNIVERSITY OF BRITISH COLUMBIA

W

Unizin

M UNIVERSITY OF MICHIGAN

UNIVERSITY OF TORONTO

ASU ARIZONA STATE UNIVERSITY

THE UNIVERSITY of WISCONSIN MADISON

FUNDAÇÃO GETULIO VARGAS

KCTCS

University of Phoenix

APU American Public University

Colorado State University GLOBAL CAMPUS

POLK STATE

KU THE CENTER FOR EDUCATIONAL TESTING & EVALUATION
The University of Kansas

Essential Areas of Impact for EdTech & Standards: K-12, HED, Career

COMMONCARTRIDGE®

QUESTION & TEST INTEROPERABILITY®

LEARNING TOOLS INTEROPERABILITY®
INTEGRATION AT THE SPEED OF NOW

EXTENDED TRANSCRIPT & OPEN BADGES

COMPETENCIES & ACADEMIC STANDARDS EXCHANGE™

ONEROSTER®

CALIPERANALYTICS®

Digital Learning r*E*volution Program

Foundation	Instructional Impact	Advancing Insights & Achievement
Digital on day one of learning (Easy Access)	Personalized learning with integrated progress data in one place	Improved insight into and reporting of student learning experiences

Example: Houston ISD Ecosystem

Learning Content & Apps

IMS Open Standards:

LTI® Thin Common Cartridge® OneRoster™

Launch, Search, Authorize, Results

Roster Sync

LEARNING PLATFORM/ PORTAL/LOR

SCHOOL DISTRICT DATA

We've Gone From <u>This</u> (confusion):
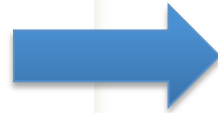
To <u>This</u> (choice, agility, scale, innovation):

What is OneRoster?

The standard for securely sharing *class rosters* and related data between a student information system (SIS) and any other system, typically a content application or learning management system (LMS)

OneRoster 1.1 Services

Class Roster	Resources	Gradebook Results
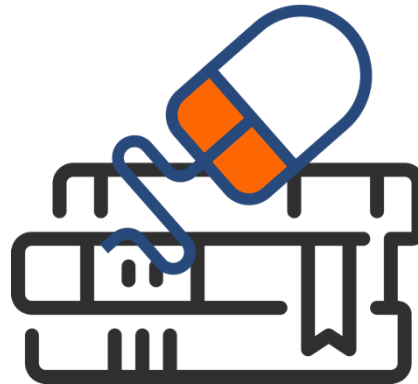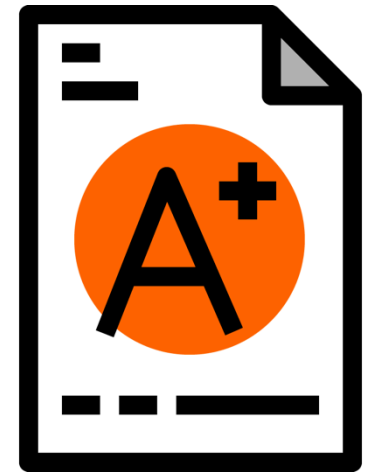
Essential Features of Learning Tools Interoperability® (LTI®)

Connect

Securely connect learning platforms and tools

Launch

LTI

Confirm

Confirm the tool, the user and the context

Learning Platform
Tool Consumer

Exchange

Exchange information in a teaching and learning workflow

Learning Tools
Tool Provider

www.imsglobal.org
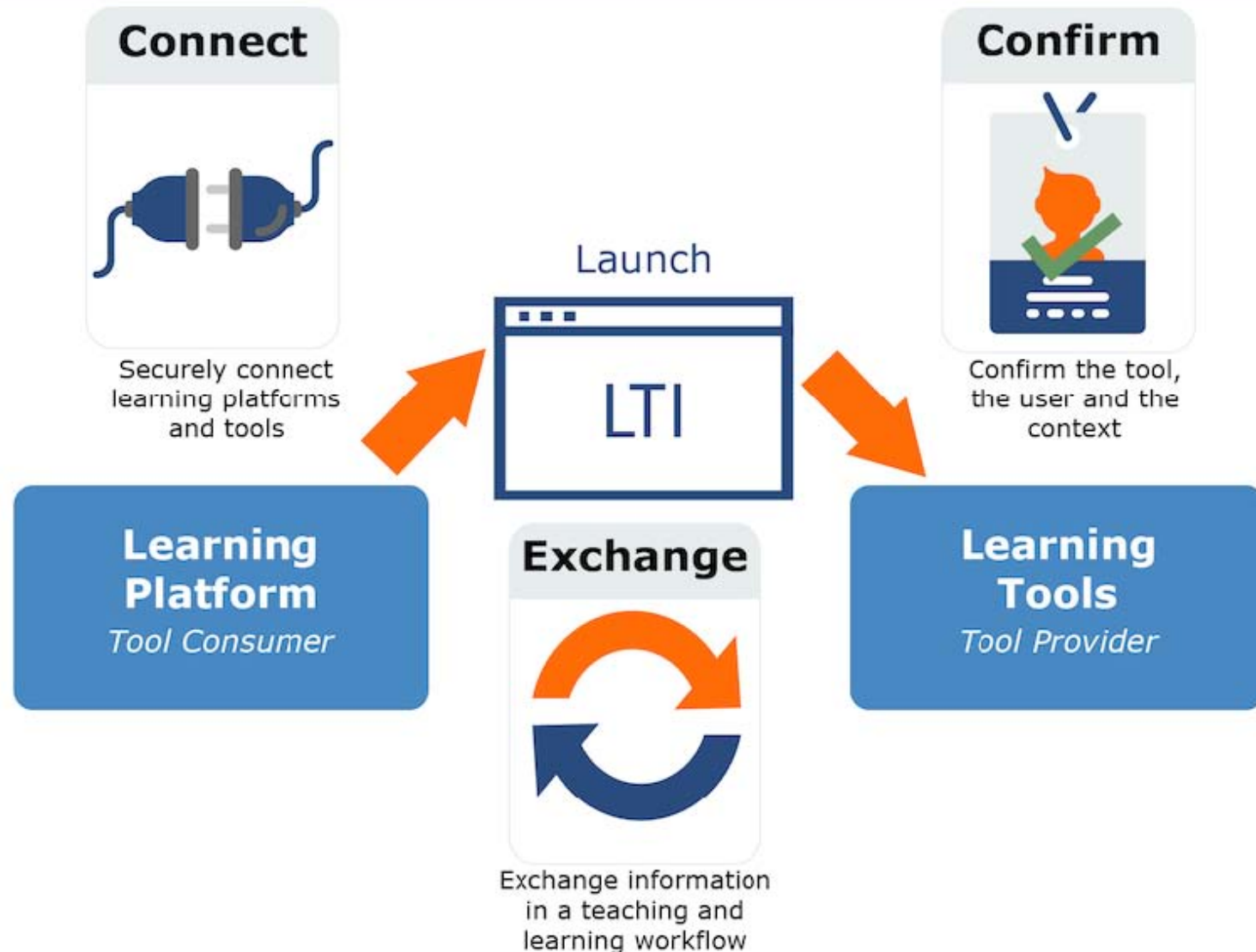
The Impact of LTI

☑ Has reduced integration time and cost by a factor of 100-1000x

☑ Ubiquitous across learning platforms of all types (HED, K12, Competency-based, MOOCs, discipline specific, etc.)

☑ Several hundred certified LTI apps of all types, including digital resources

☑ **Foundation for interoperable edtech data ecosystem (owned by education sector)**

The Next Wave of LTI Adoption is Coming!

LTI Advantage Builds on LTI
for the Trusted Exchange of Teaching & Learning Activities

Learning Management System

Learning Apps and Tools

NAMES AND ROLE PROVISIONING SERVICES
Enables sending a list of course participants and faculty defined groups to learning tools.

DEEP LINKING
Enables a drag and drop approach to adding content and links to a platform from a learning tool or publisher content.

ASSIGNMENT AND GRADE SERVICES
Enables passing of assignment results from the tool back to the LMS.

Caliper = Learning Analytics Ecosystem
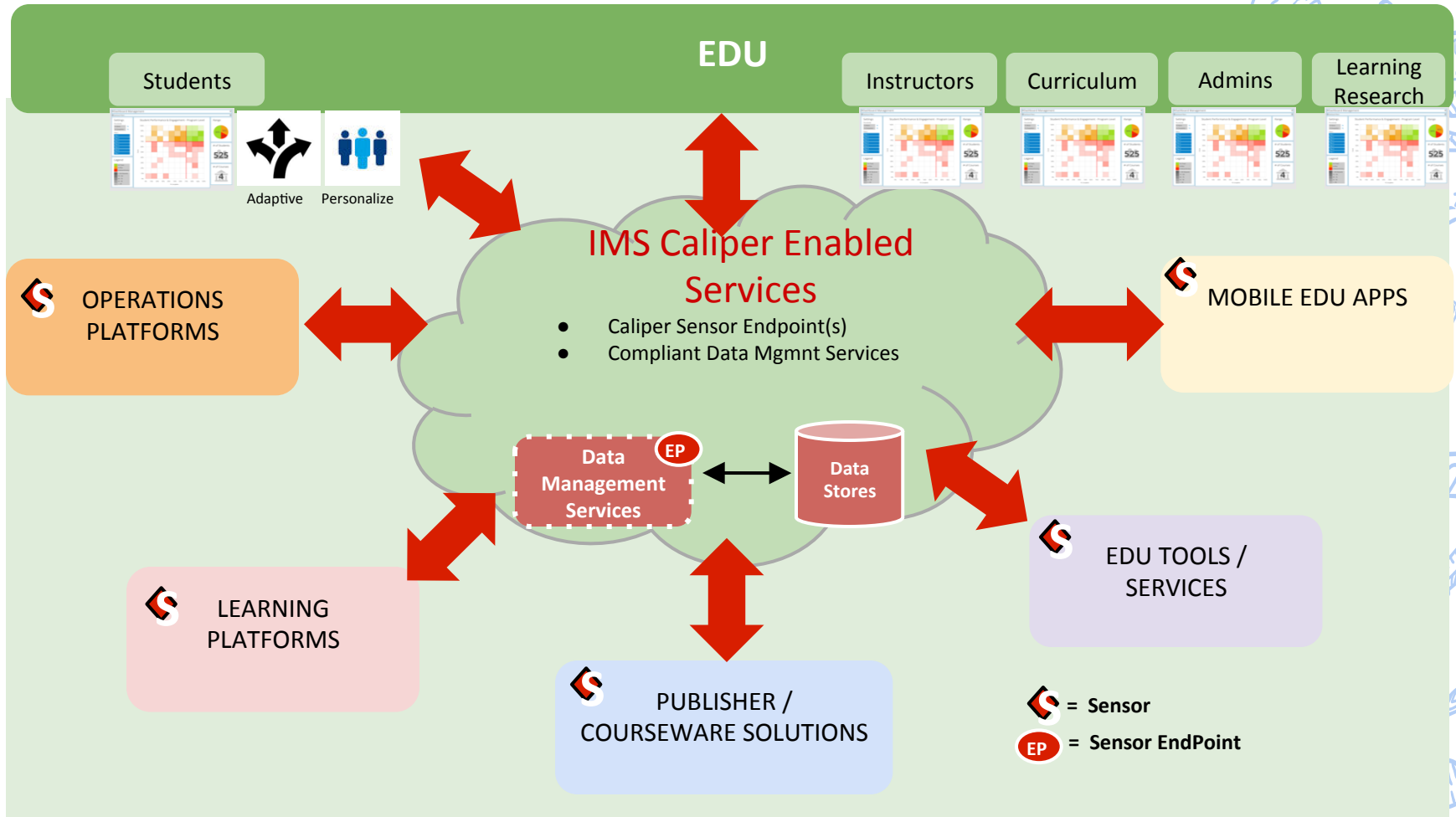
Caliper: Semantic, Context-Rich Data for Learning Analytics
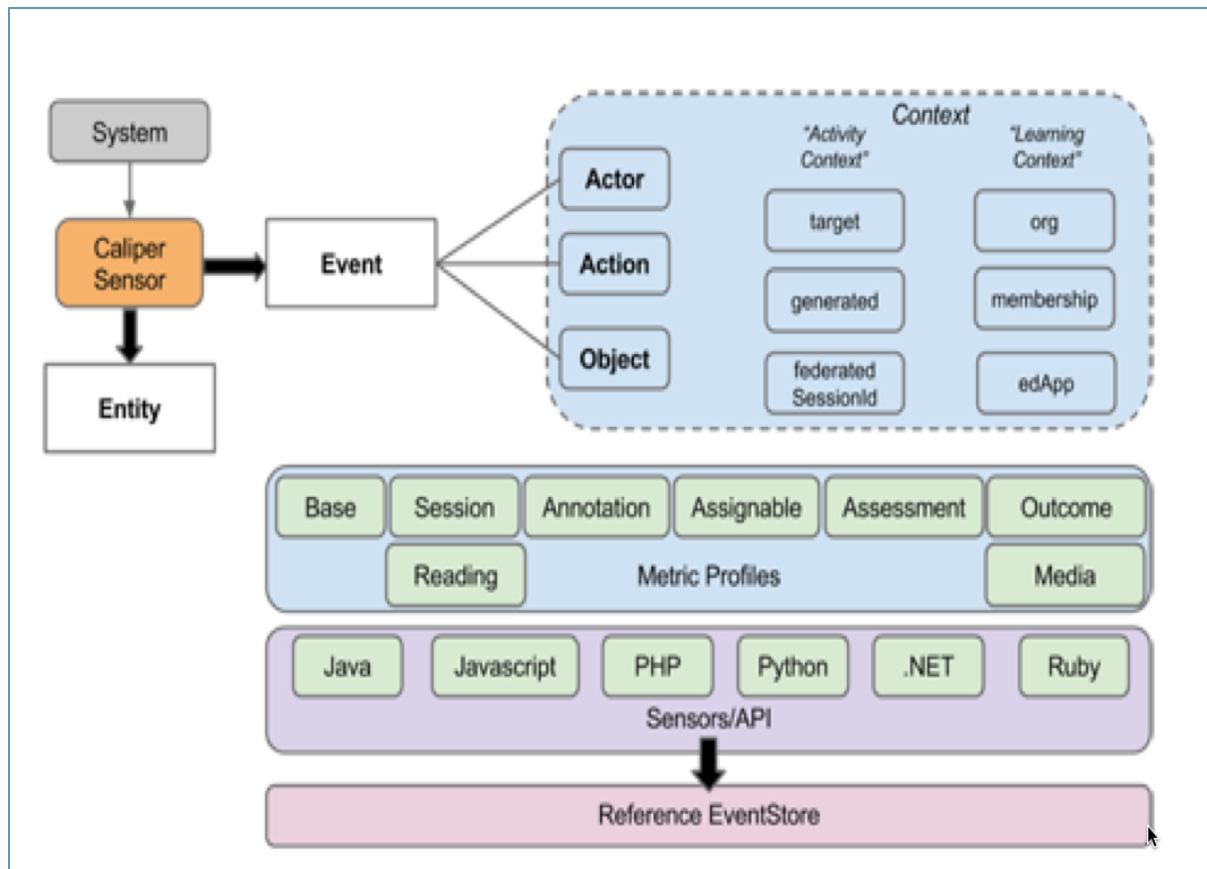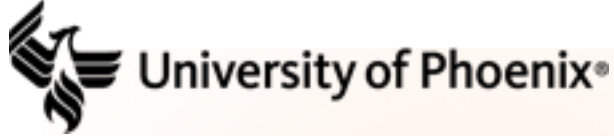
Caliper v1.0 Adoption

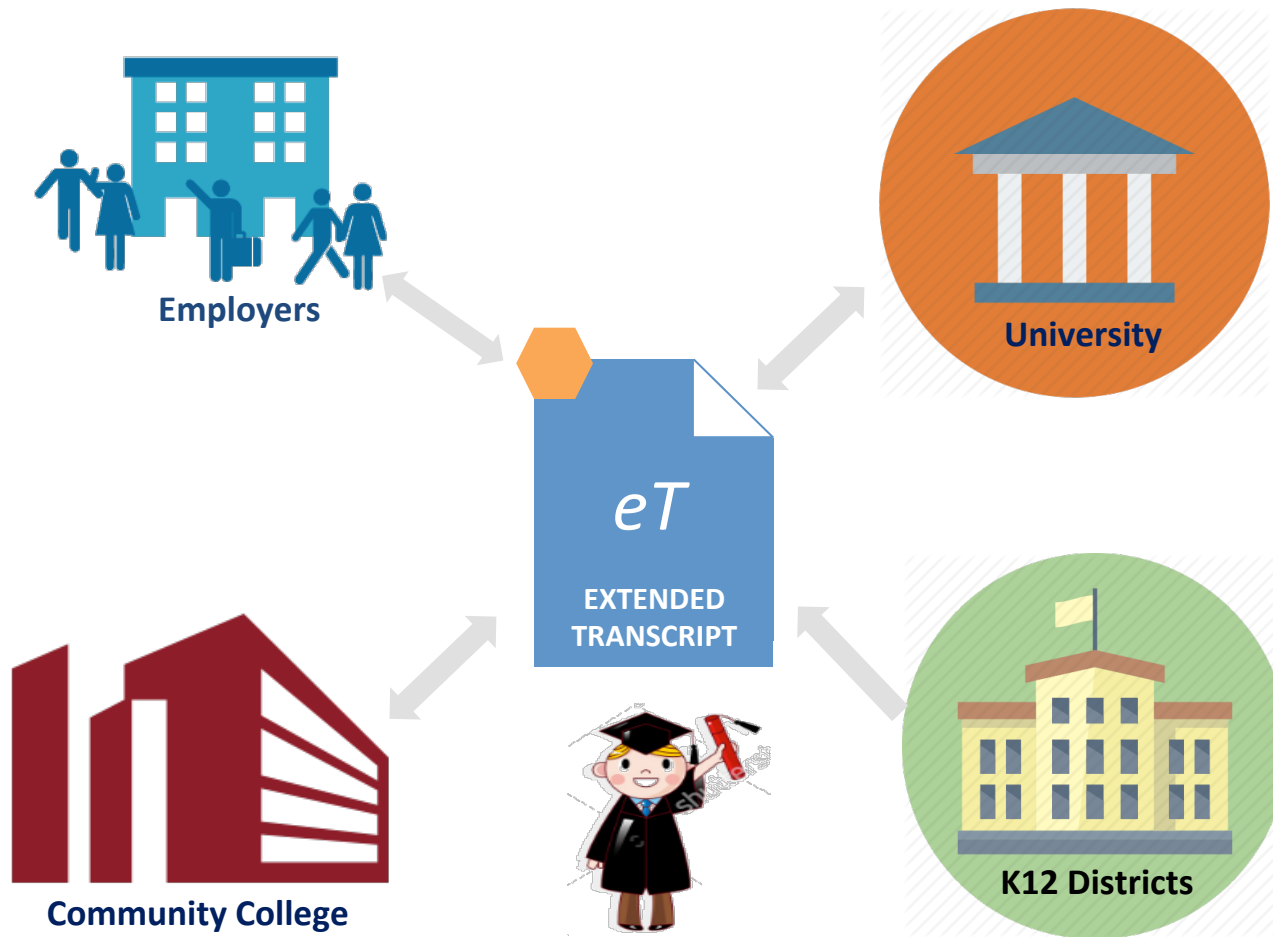# Extended Transcripts

EMPLOYABILITY SKILLS

OPEN BADGES v2

CO-CURRICULAR

COURSES

EXPERIENTIAL and PRIOR LEARNING

COMPETENCIES

eT Extended Transcripts
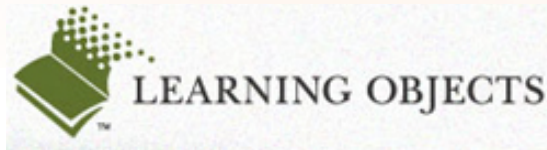
DEGREES, CERTIFICATES, CERTIFICATION and LICENSURES
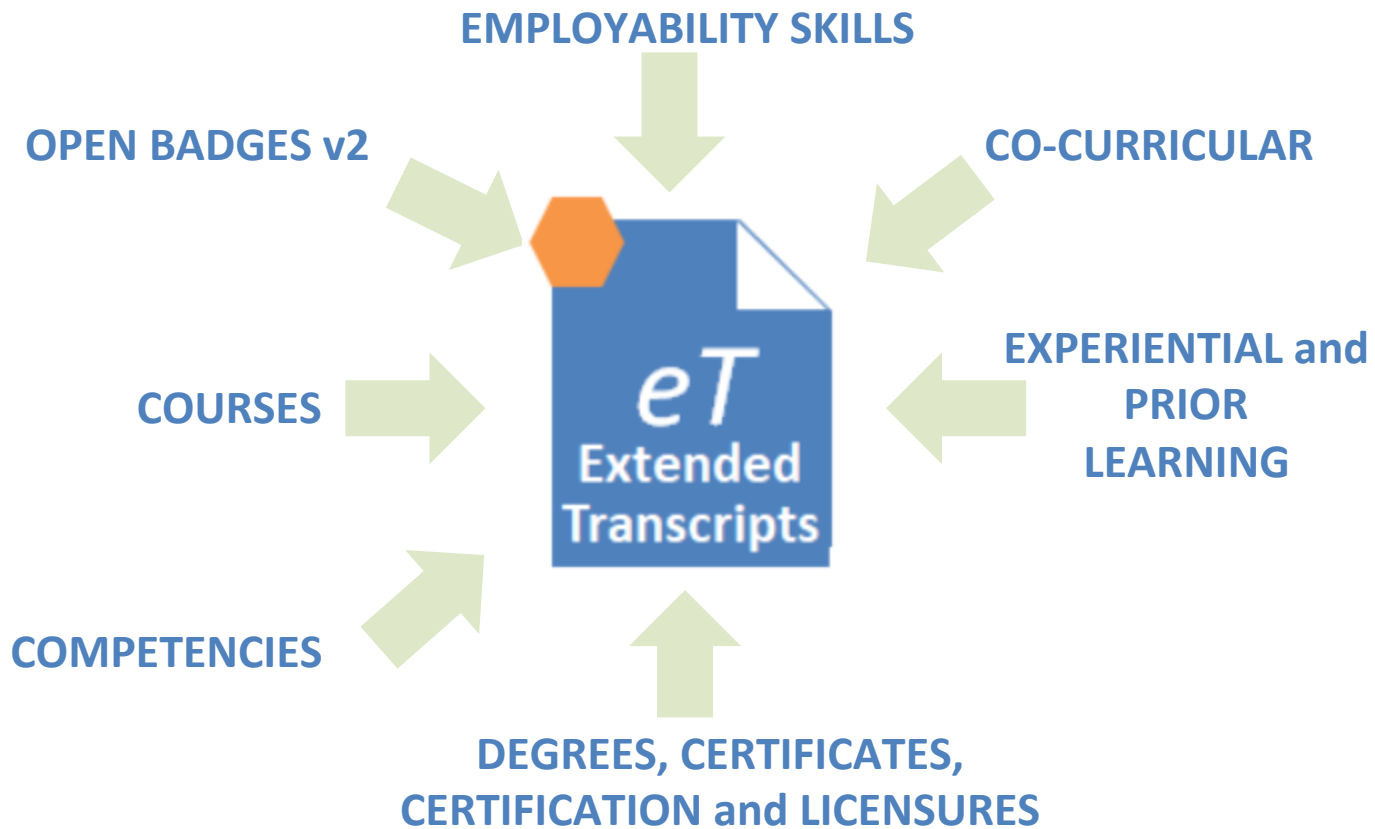
Scope of the eT Standard
Formal, informal and employer-centered learning

Employers

University

eT

EXTENDED TRANSCRIPT

Community College

K12 Districts

IMS Ecosystem:

Search by Supplier

Enter product name

Search by Registration Number

Items Per Page

9

☐ Compare Against Baseline ❓

COMPARE PRODUCTS

Refine by

Apply **Reset**

IMS Standards ⌄

Product Category ⌄

Audience ⌄

IMS GLOBAL
CERTIFIED
Current Registrations:
imscert.org

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eSync Training

Adobe Connect LMS LTI Integration
eSyncTraining

Product:
Adobe Connect LMS LTI By ESyncTraining V1.7.6
LTI V1.0 Certified

Agilix Labs, Inc.

Product:
Agilix Learning Services 2010.3
LTI V1.0 Certified
CC V1.0 Certified

Agilix Labs, Inc.

Product:
Agilix Learning Services 2012.1
LTI V1.1 Certified

Australian Institute of Higher Education

Product:
AIH Learning Portal V1.1
LTI V1.0 Certified

American University in the Emirates

AUE

Product:
Akademia V1.1
LTI V1.0 Certified
LTI V1.1 Certified

McGraw-Hill Education

ALEKS®

Product:
ALEKS 2012.3.26
LTI V1.1 Certified

McGraw-Hill Education

ALEKS®

Product:
ALEKS 2012.2.7
LTI V1.0 Certified

Blackboard, Inc.

Bb
Blackboard

Product:
ANGEL V8.0 SP8
CC V1.2 Certified

Apex Learning

Apex Learning

Product:
Apex Learning LTI V1.0
LTI V1.0 Certified

Higher Education (HED) Playbook:
Resources to Help Institutions Transition to a Fully Integrated Digital Ecosystem to Support Next Generation Learning

The HED Playbook is an easy-to-use reference and resource center for academic and IT leaders who are implementing a digital transformation strategy to support personalized learning to improve outcomes. Created by IMS Global member institutions, these resources are designed to help institutions of all sizes shorten the learning curve around the adoption of IMS interoperability standards to create a plug and play integrated teaching and learning ecosystem.

Innovation Leadership Network

Community members benefit through the **exchange of ideas** and **collaborative work** to accelerate their progress towards an **integrated EdTech ecosystem**.

Learn More →

Getting Started

Case studies, articles, videos and much more to help districts of all sizes begin to transition to a fully integrated digital teaching and learning ecosystem.

Learn More →

Procurement Resources

Ensuring that your educational technology tools are IMS Certified is the best way to establish a plug and play ecosystem. IMS Global has developed RFP language and checklists that districts can use when procuring digital platforms, apps and tools.

Learn More →

Connected Learning Innovation Challenge

Ongoing **app challenges** and resources to establish connected IT architectures and policies.

Learn More →

https://www.imsglobal.org/HED

Final Thoughts

- The growth of the educational technology sector worldwide is dependent on an **efficient ecosystem that enables innovation**

- That ecosystem is **not likely to come** from one vendor or a small number of vendors

- **IMS Global has achieved critical mass** in North America K-12 and HED as a framework for connecting edtech and publisher digital products

- Will IMS standards achieve critical mass in other parts of the world? **Yes, with the right partnerships.**

Upcoming IMS Meetings & Deadlines

- IMS Europe Conference, 29 – 30 Nov 2017, London, England

- Open Badges Summit, 1 Dec 2017, London, England

- February Meeting and Digital Credentials Summit, 26 Feb to 1 Mar 2018, Scottsdale, Arizona

- Learning Impact Leadership Institute, 21-24 May 2018, Baltimore, Maryland
  - Call for Presentations closes November 17 - www.imsglobal.org/lili-2018-call-proposals

- 2018 Learning Impact Awards Nominations, 3 Jan 2018 to 28 Feb 2018

- View all IMS events at www.imsglobal.org/events

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Thank You

Q&A

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