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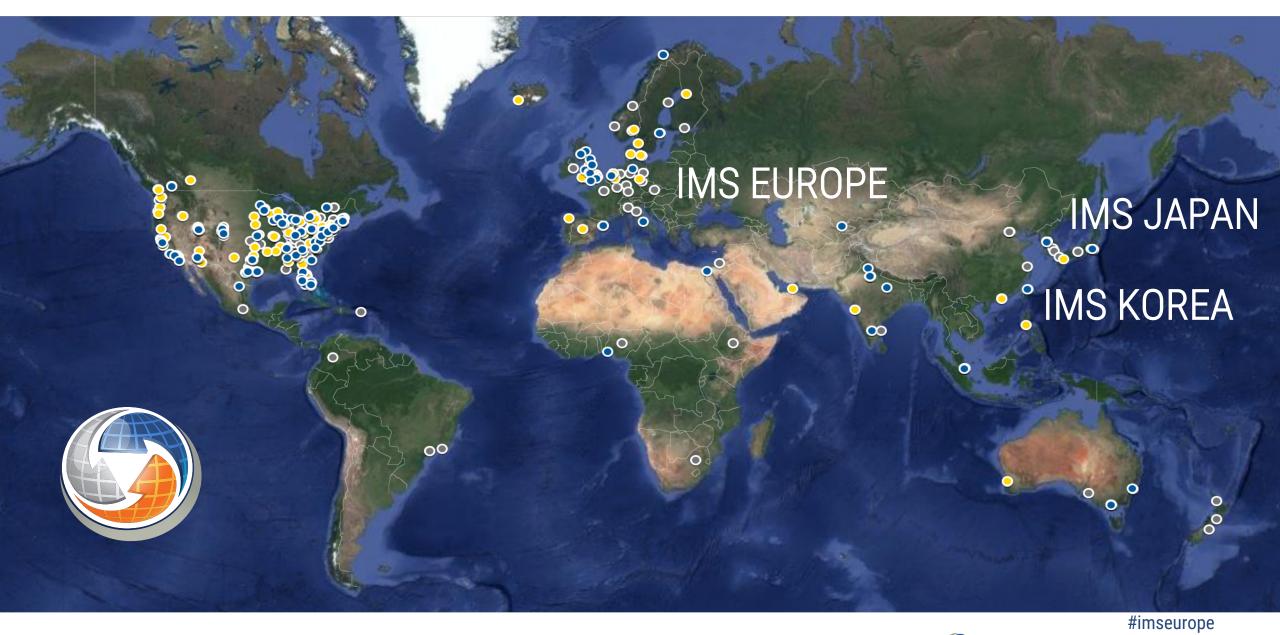




#imseurope









Creating the **FUTURE** EdTech Ecosystem TOGETHER



IMS Global is a Unique Collaboration

- Non-profit membership consortium <u>run</u> by leading districts, states, universities, suppliers as <u>equal partners</u>
- 20-year history as a market change agent: learning platforms, e-assessment, digital curriculum, learning analytics, microcredentials
- 200 end-user organization members (states, districts, universities) representing
 17+ million students in USA
- ☑ World class <u>product ecosystem</u> based on open standards that are adopted organically and broadly, including hundreds of certified products (imscert.org)
- Larger than all other standards efforts <u>combined</u> in the education/learning sectors: 525+ members, financial support approaching that of Worldwide Web Consortium, multi-sector/global span



AACRAO: American Association of Collegiate Registrars and Admissions Officers

EUNIS: European University Information Systems

Dublin Core® Metadata Initative GÉANT

Bill & Melinda Gates Foundation

CNI: Coalition for Networked Information

Association of Public & Land-Grant Universities

Next Generation Learning Challenges

Achievement Standards Network Ed-Fi Alliance

W3C ISTE Online Learning Consortium

WCET Mercarning and Online Technology

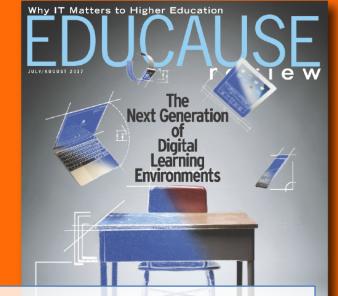
IEEE: Advancing Technology for Humanity

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's Work Is Reported On By Repected IT Analyst Organizations, Such As Gartner, Ovum, and FutureSource

IMS Is a Regularly Featured Contributor in Major Education Publications, Organizations and Conferences such as EDUCAUSE, CoSN, ISTE, ISO/IEC, WCET, SIIA, CCSSO



20+ years experience as the education sector's partner in leading

the development and adoption of key innovations that have

become the foundation of the interoperable edtech ecosystem

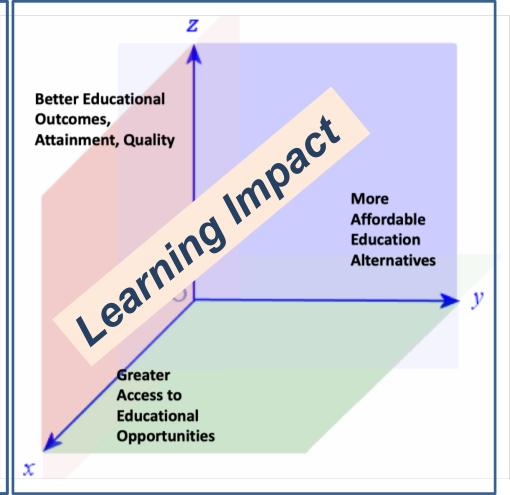
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www.imsglobal.org

@learningimpact



The **mission** of the IMS Global Learning Consortium is to advance technology that can affordably scale and improve educational participation and attainment

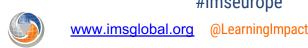


Digital Transformation: What Is It?

From: Ed Clark, EDUCAUSE Review, May 21, 2018

As in other industries, four elements are driving digital transformation in education: customer experience, competitiveness, profitability, and agility.

- Customer experience: Student journey touchpoints, learning outcomes, retention and graduation rates, employment rates, and initial salaries
- Competitiveness: Growing options and scrutiny
- Profitability: Cost pressures
- Agility: Ability to adapt and work across silos



Digital Transformation: What Is It?

From: Ed Clark, EDUCAUSE Review, May 21, 2018



We provide best-in-class digital and online experiences for our community.



We provide vital skills, data, and technology leadership to create new strategic capabilities for the university.



We foster sustainable partnerships and digital ecosystems that give St. Thomas new strategic capabilities.



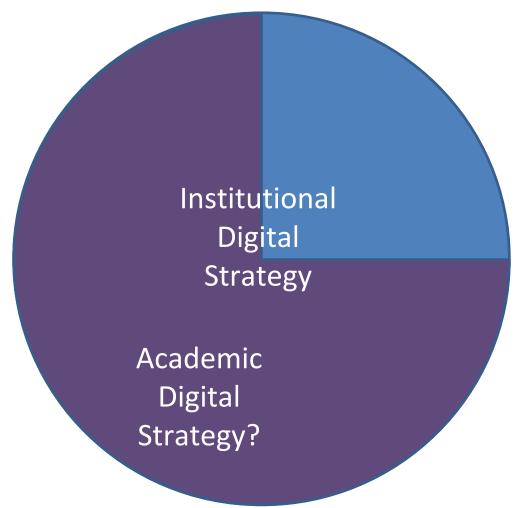
We provide resilient, flexible, responsive, and secure infrastructure and connectivity.



We employ responsive and aware technologies to create valuable interactions and connections.



Digital Transformation: How Much Pertains to Academics?





IMS View of Digital Transformation?

An Academic Technology Perspective

Dimension	Objectives		
Customer experience:	Best-in-class experiences with technology- enhanced teaching and learning for both students and faculty		
Competitiveness:	Easier adoption of instructional and learning innovations supported by technology; better data leads to continuous improvement		
Profitability:	Saving time and costs on application and data integrations; focusing on supporting instructional innovation		
Agility:	Enhanced choice of tools, ease of experimentation, better processes for ensuring enterprise integration		



Enabting the Eldissistem

Ed Tech Interoperability Standards

Technical
<u>Foundation</u> for
Distributed Innovation

Large-Scale Adoption Projects

Adoption of Innovation at Scale Toward Strategic Goals

Annual Learning
Impact Conference &
LIA Awards

Recognition of Impact on Personalization, Performance & Ecosystem

IMS Members Collaborate in Three Essential Dimensions



We Believe in the Power of Education Sector Collaboration Driving an Ecosystem* of Interoperable Products that Support and Enable Digital Transformation and Innovation

* the software and platforms used to make digital learning possible which might include for example an SIS, an LMS, assessment platform, digital content and diverse learning tools

ADVANCING DIGITAL TRANSFORMATION in five key areas



ADAPTIVE DIGITAL CURRICULUM

Packaging learning content from different sources and streamlining the management of digital resources saves valuable instruction time and provides greater choice and flexibility that leads to better learning experiences.

- AccessForAll®
- Common Cartridge® and Thin Common Cartridge Profile
- · EPUB for Education
- OpenVideo



DIGITAL CREDENTIALS

Digital credentials are reshaping the way we think about education and professional development by enabling lifelong learner-control of their evidence-based skills and achievements and supporting the transition to standards-based and competency-based learning.

- Badge Connect API
- CASE Network
- Competencies and Academic Standards Exchange® (CASE®)
- Comprehensive Learner Record Open Badges



INTEGRATED DIGITAL ASSESSMENT

High-quality, innovative digital assessment that is accessible, adaptive, and safeguarded for integrity, complements the teaching and learning process, enabling effective interventions and continuous improvement.

- Accessible Portable Item Protocol® (APIP®)
- Computer Adaptive Testing
- Question and Test
- Interoperability® (QTI®)
- Proctoring Services



Standards <u>As The</u> Shared Ecosystem Platform

LTI® LEARNING TOOLS INTEROPERABILITY®

ONEROSTER

COMMONCARTRIDGE

QUESTION & TEST INTEROPERABILITY

CALIPERANALYTICS®

OPEN BADGES & COMPREHENSIVE LEARNER RECORD

CASE COMPETENCIES & ACADEMIC STANDARDS EXCHANGE



Clickstream learning data from all digital resources—available in real-time and viewable using any dashboard—can help inform student success strategies, institutional academic decisions, instructional design, and provides a common data format for research on student learning.

- Caliper Analytics[®]
- · Edu-API
- · Learning Information Services
- LTI Insights
- OneRoster®

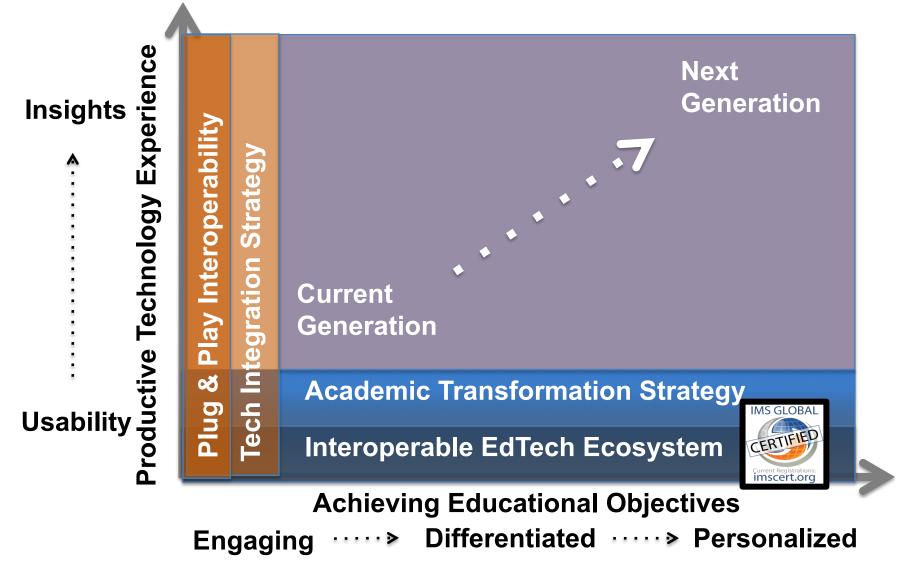


LEARNING PLATFORMS, APPS & TOOLS

Scalable, seamless, and secure integration of all digital content, learning tools, and assessment products into an institution's digital learning environment is the most effective way to support next-generation teaching and learning.

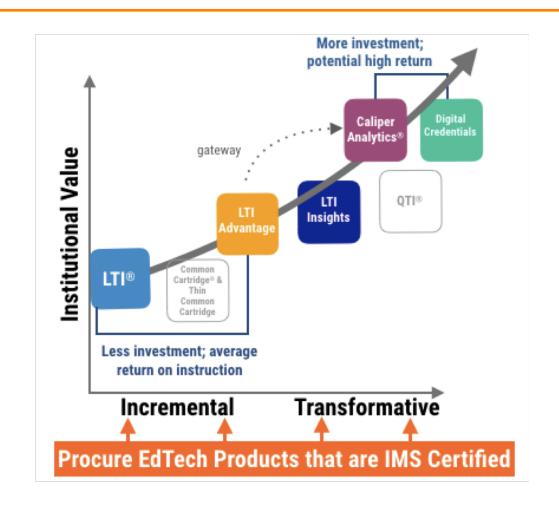
- App Vetting & Privacy
- Learning Tools
- Interoperability® (LTI®)
- LTI Advantage
- · LTI Resource Search

Transformation Strategy (IT and Academic)



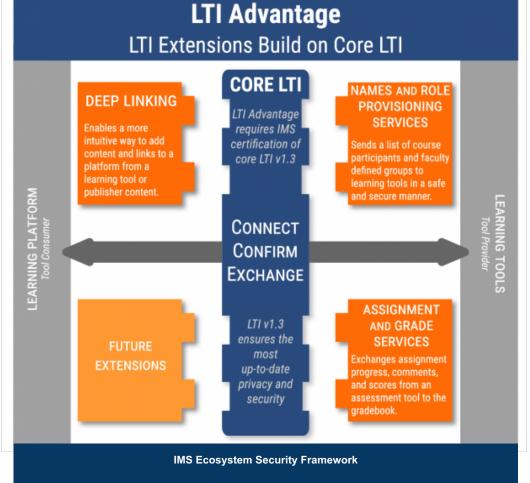


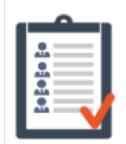
IMS Standards Enable Your Strategy



LTI Advantage: Innovation at the Speed of Now













LTI Advantage Early Adopters















































LTI Advantage Toolkit



http://www.imsglobal.org/lti/toolkit

UCF Center of Excellence for LTI

Center of Excellence Program:

- Led by any IMS Contributing Member institution that has a strategic vision and experience enabling a digital ecosystem using at least one IMS Standard to improve teaching and learning experiences.
- Provide leadership, best practices and support to accelerate adoption of IMS standards and to help institutions of all sizes evolve their digital learning strategy to improve teaching and learning experiences.
- Contact Kelly Hoyland (<u>khoyland@imsglobal.org</u>) to discuss becoming a Center of Excellence

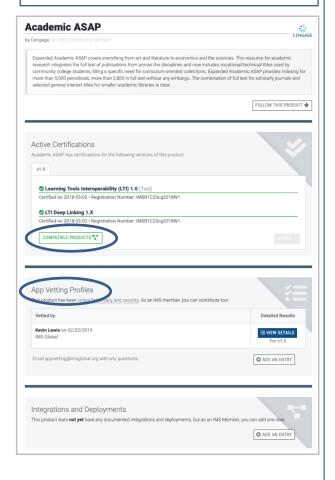


UCF Center of Excellence Activities:

- Promote best practices to nurture and grow the next generation digital learning ecosystem
- Propagate the work of the community
- Propose practical guidance in creating, adapting, and adopting standards-based integrations
- Facilitate/participate in professional development opportunities to prepare faculty and staff adopt standards-based edtech tools via webinars and hackathons
- Find/contribute sample code, how tos, tips & tricks, to get started with LTI
- Learn more at https://cdl.ucf.edu/lticenter/

Product Directory imscert.org

Developers community of over 2800 interoperable products with current certifications





PRODUCT CERTIFICATIONS

This is the official listing of products that have passed IMS Global interoperability certification.

Student Privacy Interop

Institutional/supplier collaboration for scalable and effective student data privacy across the edtech sector

- **Data Collected**
- Security
- **3rd Party Data Sharing**
- **Advertising**



https://www.imsglobal.org/activity/app-vetting-and-privacy

IMS Global Lite App Vetting Rubric (Draft) The following rubric may be used as a guide while vetting applications. The rubric is still in draft format and only available to IMS members. Feedback on the rubric may be sent to appvetting@imsglobal.org

Data Collected	Does Not Meet Expectations	Meets Expectations (Reservations)	Meets Expectations
The policies list all data collected	Policies do not list data it collects	Policies give a broad statement of data it collects	Policy lists the data collecte
The policies indicate how data is collected	No indication of how data is collected	Policy gives a broad statement of how data is collected	Policies state specifically ho data is collected
The policies state who owns the data	Policies do not state who owns the data	User owns data but supplier grants itself control on the use of the data	Policy states the user owns the data alone
The policies allow users to delete their data entirely	Policy does not allow users to delete their data or mention of how to delete data	Policy de-identifies users, cannot fully delete data	Policies allow users to delet data entirely after a period of time
The policies state the retention of data	Policy does not include a data retention policy	Policy has a 90 day retention policy	Policy has a 60 day retention policy
Security	Does Not Meet Expectations	Meets Expectations (Reservations)	Meets Expectations
Policies state how data is protected	No indication of how data is protected	Broad statement with no specifics on steps taken to protect data	Policy lists steps it takes to protect data
Policies state all confidential & sensitive information is encrypted throughout	No data encryption or mention of data encryption	Data encrypted at login only	Data encrypted throughout
Policies state whether or not it enforces strong password creation	Does not enforce strong password creation or mention of requirements	Provides guidance for password creation	Enforces strong password creation
policies indicate whether or not it has 2 step authentication	Does not have 2 step authentication	Uses the simplest form of authentication	Offers 2 step authentication but does not enforce it
Policies state the use of cookies	Uses cookies for purposes not related to functionality of app	States the use of cookies but does not list cookies	Lists all cookies used and each cookies purpose
Third Party Data Sharing	Does Not Meet Expectations	Meets Expectations (Reservations)	Meets Expectations
The policies list all 3rd parties	Policy says it may share but does not list 3rd parties on its site	Policy lists all 3rd parties as one	Policy lists 3rd parties separately
The policies state what information is shared with each 3rd party	Policy does not indicate what information is shared with 3rd parties	Policy groups all 3rd parties with same information shared	Policy lists what informatio is shared with each 3rd part separately
Users can opt out of 3rd party data sharing	Policy does not state if users can opt out of 3rd party data sharing	States users can opt out. Process not simple or quick	Easy opt-out process for users
Supplier requires their 3rd parties to adhere to the terms of the vendor/customer agreement	Supplier claims no responsibility for 3rd party policies	Supplier does not claim responsibility for 3rd party links but warns users against sharing additional data	Supplier claims responsibili for 3d party privacy practice
User is notified of a change in third parties. Example: vendor moves the application to a different hosting vendor.	User is not notified	User is notified after change has occurred	User is notified of intent to change third parties
Advertising	Does Not Meet Expectations	Meets Expectations (Reservations)	Meets Expectations
Policies indicate whether or not advertisements are displayed	No indication if ads are displayed or inappropriate ads displayed. Claims no responsibility for ads	Age Appropriate advertisements are displayed before login	Appropriate advertisements displayed after login
Policies indicate whether or not users are targeted for advertisement	Users are targeted for ads or claim no responsibility for ads	Policies state the possible use of ad targeting by 3rd parties & claim no responsibility	Policy guarantees no ad targeting
Policies indicate whether or not any 3rd parties track or collect information for advertisement	Explicitly states 3rd party tracking or no mention of 3rd party tracking for ads	Policies state that 3rd parties might track or collect your information but gives you the option to Opt-Out	States 3rd parties are not used for ads or tracking
Policies indicate whether or not web beacons or tracking are used for ad purposes	States use of web beacons or no mention of web beacons	States the use of web beacons strictly for purposes intended for app functionality	Only tracks interactions wit application
Policies state whether or not users can opt	Users cannot opt out of sharing with	No indication of whether opt-out is an option, unclear. Parental consent	Users can opt out of sharin with advertisers (typically n



Institutional Leadership

HED and K12 IMS members collaborate within IMS on key topics that set priorities for the IMS standards work and inform each other.

Institutions Can Provide Greater Choice, Flexibility & Innovation

IMS Global Higher Education Members Are on a Sustainable Route to Making the Most of an Accelerating Landscape of EdTech Innovation and Creating Resources That the Entire Higher Education Community Can Utilize to Support Next Generation Digital Learning

Listen to this EdTech Times Podcast to hear IMS Global CEO, Rob Abel, discuss how interoperability can improve educational experiences for both teachers and students.

The IMS Global Higher Education member community, under the leadership of our Higher Education
Institutional Leadership Board, has been helping institutions implement IMS Global open standards and
practices that yield the following benefits:

- Greater Innovation: enable an instructional environment in which technology "gets out of the way" and becomes highly supportive of next generation teaching and learning environments
- Better Data Access and Educational Insight: remove significant barriers to collecting and analyzing data to support student success initiatives
- Seamless User Experience: synchronize user, course and context information to eliminate manual transfer of information and enable single sign-on to make the use of technology much easier for teachers and students
- Flexible Pathways to Degree Completion: enable personalized learning and pursuit of nontraditional programs to assess and award credentials beyond the traditional transcript
- Improve Efficiency and Reduce Integration Costs: significantly reduce the time and money it takes
 to integrate third-party learning platforms, tools, and content into the institution's digital
 ecosystem

IMS Global standards have been critical to the integration strategy we have been pursuing in the Teaching and Learning space at Michigan. Learning Tools Interoperability (LTI) in particular has reduced associated effort levels and cost by at least an order of magnitude over custom solutions.



Sean DeMonner

Director of Enterprise Teaching & Learning Applications, University of Michigan

Hear What IMS Institutional Leaders Are Saying About LTI Advantage

LTI Advantage is the foundation for enabling an innovative, flexible, and extensible digital learning ecosystem with industry-level security. By adopting this revolutionary approach for integrating learning applications and platforms, institutions will have more trust in its ability to protect sensitive student data and personally identifiable information (PII) within its digital ecosystem. Learn more about LTI Advantage.



#imseurope



Institutional Leadership

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Understand How Your Data is Being Used

IMS App Vetting benefits institutions that do not have the time or the resources to thoroughly vet an application. IMS App Vetting is different from other approaches to evaluating edtech applications because it promotes communication and collaboration among IMS members. Learn more about App Vetting and Privacy.

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 from 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 institutions 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 →



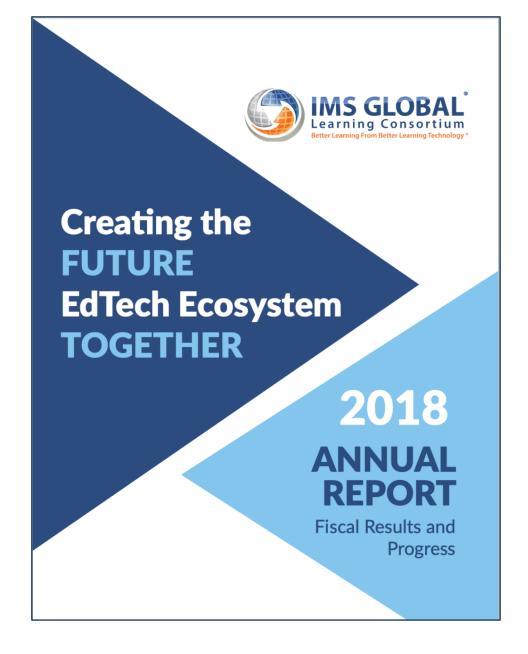
LTI Advantage

The next phase of integration for the Learning Tools Interoperability (LTI) standard comprising three extensions that focus on providing the best user experiences with your teaching and learning solutions.

Learn More →

www.imsglobal.org









IMS Conformance Certification: The Best Way to Implement IMS Standards

The IMS Global community established the certification program to deliver on the value proposition of a trusted, plug-and-play edtech ecosystem. IMS provides code libraries, real-life tests, staff support, and other resources to ensure reliable and consistent product integations—at the lowest possible cost. Visit the IMS Certified Product Directory—the official catalog of products with active IMS certifications guaranteed to meet the IMS standards for which they have passed testing—at imscert.org

In 2019, 210 different learning platforms, apps, and tools achieved IMS certification for atotal of 523 active certifications across all IMS standards.



1691 total individual certifications since

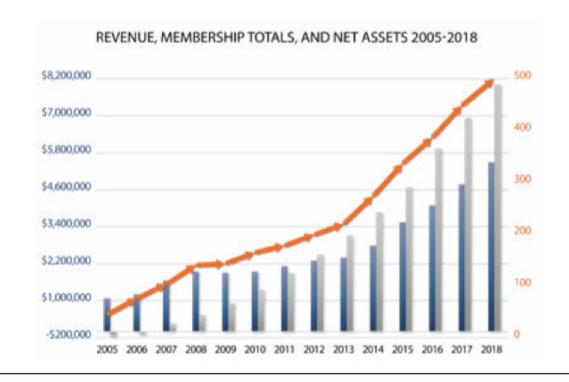
the program began

increase in total number of certifications from 2017-2018





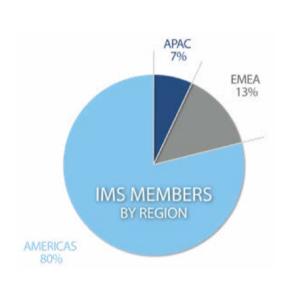
MEMBERSHIP HAS INCREASED 19.23% CAGR OVER THE LAST 13 YEARS REVENUES HAVE GROWN 13.24% OVER THE LAST 13 YEARS





COLLABORATION













IMS Conformance Certification: The Best Way to Implement IMS Standards

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Save the Date

LEARNING IMPACT LEADERSHIP INSTITUTE

18-21 MAY 2020 | DENVER, COLORADO

- Join over 600 decision-makers and innovators across higher education, K-12, government, and ed-tech supplier organizations from around the globe to collaborate and play a significant role in sustainable digital transformation of education
- Twelve program tracks, over 120 breakouts, bootcamps, hackathons and much more to help organizations adopt and leverage IMS edtech innovation ecosystem
- Call for presentations to open in early October
- Details will be available at www.imsglobal.org/lili2020



2020 Learning Impact Awards Competition

- Global competition to recognize technology projects that demonstrate great potential to improve learning impact
- Call for nominations will open early January 2020
- Finalists selected in February will advance to the final round of competition
- Recognition and presentation of a platinum, gold, bronze or silver medal winners will take place during the 2020 Learning Impact Leadership Institute in Denver
- Winners will be recognized in a press release and in the
 2020 Learning Impact Report
- Additional details at https://www.imsglobal.org/lili/awards.html



LEARNING IMPACT REPORT



IMS Europe Success Factors

- ☑ What are the key focus areas for IMS Europe work?
- What are the compelling technical areas for IMS Europe to provide <u>leadership</u>?
- What are the key markets for IMS Europe to enable (regions, sectors, product categories)?
- ☑ Can IMS Europe enable one or more Ecosystems in those markets?
- How does IMS enable European organizations in IMS Global and vice versa (enabling global organizations in Europe)?





Thanks!

Rob Abel Ed.D.

Chief Executive Officer IMS Global Learning Consortium imsglobal.org rabel@imsglobal.org