IMS Standards Update 2020:
Technical Perspective

IMS Europe Technical Meeting

October 2020

IMS GLOBAL®
Learning Consortium

Better Learning From Better Learning Technology ®

IMS Standards Update 2020

The Covid-19 outbreak has placed great stresses and demands on every organization. IMS, with the significant support of our Members, has continued to make important progress on the development of standards for EdTech. More significantly, IMS has made great progress in providing new resources and tools to make it easier to work within the IMS EdTech Ecosystem. In this presentation the IMS Chief Architect will give an overview of the IMS Standards and provide an update on the latest technical activities. He will also provide important information on the new new resources and tools that are available to IMS Members. Finally, he will give insights into the technical work that IMS expects to complete in the next 12 months.

IMS Chief Architect
IMS Global
csmythe@imsglobal.org

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Content

IMS Specifications Context

Technical Highlights 2019-2020

Technical Objectives 2020-2021

IMS ECOSYSTEM and IMS Europe

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Short Biography

- Joined IMS in May 1999

- Responsible for the development of many IMS specifications inc.

  - Question & Test Interoperability (QTI)

  - Content Packaging

  - Accessible Portable Item Protocol (APIP)

  - OneRoster & Learning Information Services (LIS)

  - OpenVideo Metadata

- Currently IMS Chief Architect and responsible for:

  - How the specifications fit together to create the IMS ECOSYSTEM

  - Overseeing the technical details of the specifications

  - Supporting adoption of the specifications

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Drivers for the Creation of a Specification

Vendor Perspective – Identification of a common interoperability pain-point in the market that is constraining the market

Institutional Perspective – Improving learning by resolving market failure or supplier monopoly

IMS Perspective – Building upon previous specification successes to support more learning workflows by enhancing and/or combining specifications

IMS Specification Suite

Accessibility
Accessible Portable Item Protocol
Caliper Analytics
Competency Definitions
Content Packaging
Common Cartridge
Competencies & Academic Standards
Exchange
Course Planning & Scheduling
Digital Repositories
Enterprise
Enterprise Services
ePortfolio
General Web Services
Interactive WhiteBoard/ Common File
Format

- Learner Information
- Learning Design
- Learning Information Services
- Learning Object Discovery and Exchange
- Learning Tools Interoperability
- LTI Resource Search
- Meta-data
- OneRoster
- Open Badges
- Question and Test Interoperability
- Resource List Interoperability
- Shareable State Persistence
- Simple Sequencing
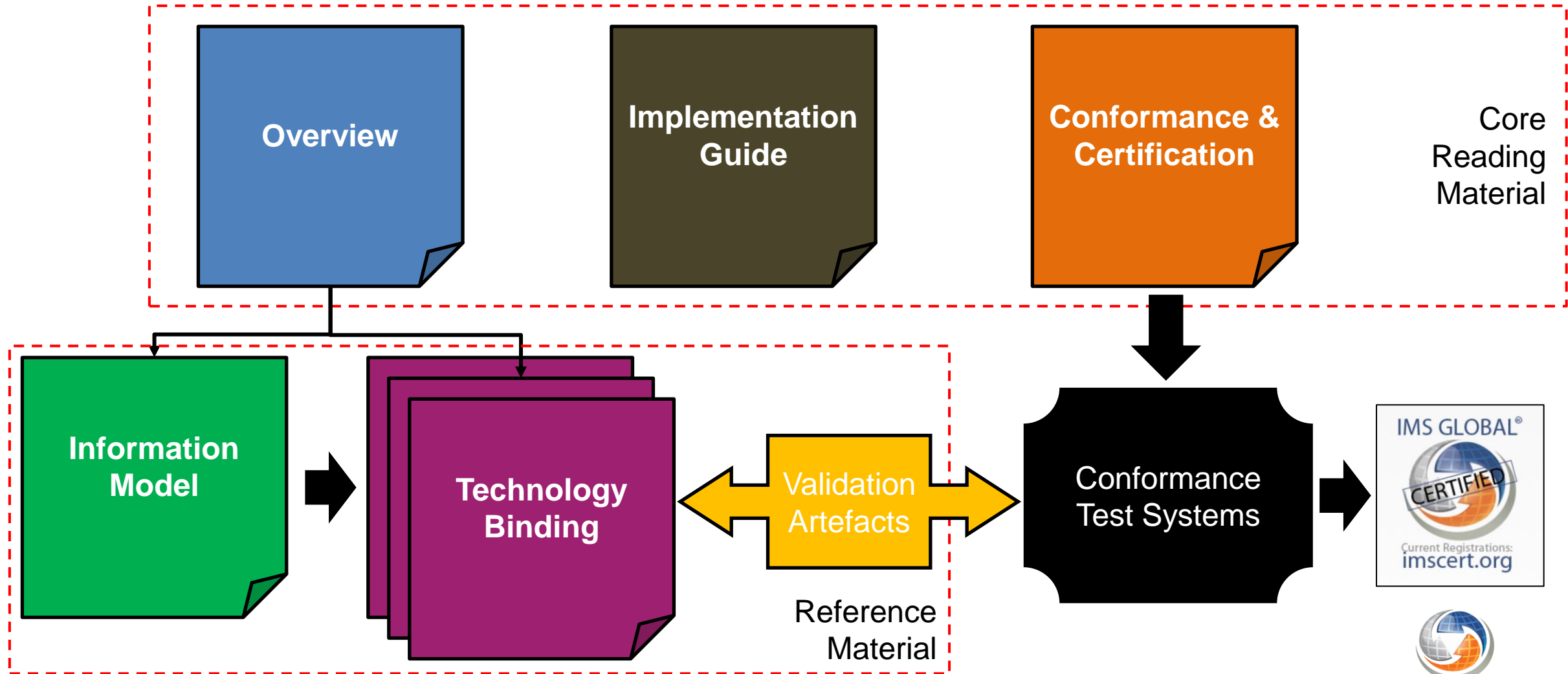- Tools Interoperability
- Vocabulary Definition Exchange

A wide range of specifications (29) published since 1999.

We have an extensive legacy responsibility.

Latest (2020)

First (1999)

Published Documentation

Core Reading Material
- Overview
- Implementation Guide
- Conformance & Certification

Reference Material
- Information Model
- Technology Binding
- Validation Artefacts
- Conformance Test Systems

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Current Registrations: imscert.org

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Current Specification Activity

New Specification

- Comprehensive Learner Record
- Open Video Metadata
- Computer Adaptive Testing
- EDU-API
- Assessment Results Management

New Version

- OneRoster 1.2
- QTI 3.0
- Open Badges 2.1
- Thin CC 1.4

Profile

- Proctoring (LTI 1.3)
- SBAC (QTI 3.0)
- OneRoster 1.2 (Japanese)
- OneRoster 1.2 (Europe)

Evaluation

- CASE 1.1
- Caliper Metric Profiles

IMS 5-Minute Video Series

New series of 5-minute duration videos on IMS specifications (13 videos available NOW)

Available on the IMS Global channel on YouTube

Playlist: https://www.youtube.com/playlist?list=PLysC4Zd9-FmD773cUYratfgiwBtLGr7Jb

IMS 5-Minute Video Series (LTI)

LTI Advantage Overview
See IMS Global YouTube playlist: https://www.youtube.com/playlist?list=PLysC4Zd9-FmD773cUYratfgiwBtLGr7Jb

OneRoster Overview
See IMS Global YouTube playlist: https://www.youtube.com/playlist?list=PLysC4Zd9-FmD773cUYratfgiwBtLGr7Jb

EDU-API Overview
See IMS Global YouTube playlist: https://www.youtube.com/playlist?list=PLysC4Zd9-FmD773cUYratfgiwBtLGr7Jb

Digital Credentials & OpenBadges
See IMS Global YouTube playlist: https://www.youtube.com/playlist?list=PLysC4Zd9-FmD773cUYratfgiwBtLGr7Jb

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Specifications

New Candidate Final specifications
- CLR 1.0, Open Badges 2.1 , Assessment Results Management 1.0, Common Cartridge 1.4

New Public Candidate Final specifications
- Proctoring 1.0, QTI 3.0

Caliper 1.2 Final Release

EDU-API Charter established

IMS 5-Minute Video Series (Credentials)

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Context for New Technical Work

Establish IMS Europe Technical Working Group
- OneRoster 1.2 Profile, LTI GDPR Best Practices, EDU-API

Compatibility Check for OneRoster 1.1 & Common Cartridge/Thin Common Cartridge Implementations 1.2/1.3

Preparation for Student Learning Data Model (SLDM) & Unified Model

CASE Network

https://www.imsglobal.org/casenetwork

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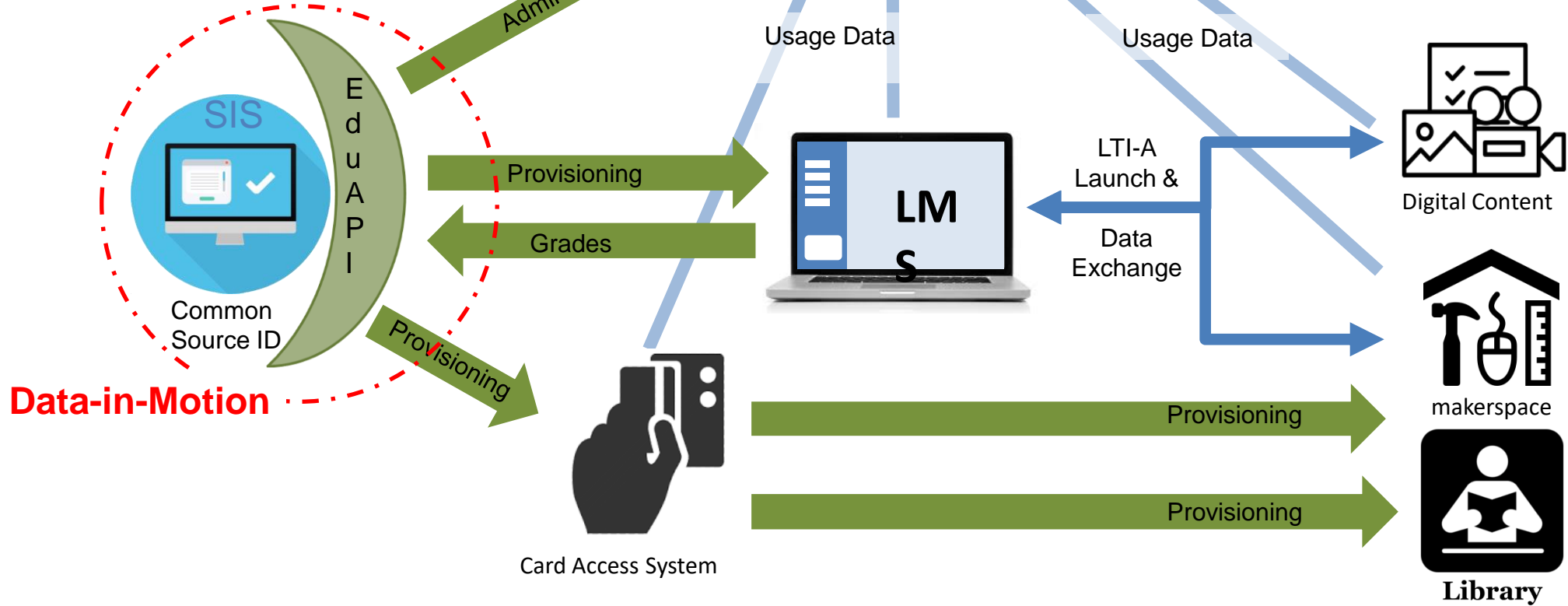
EDU-API

EduAPI is a set of industry standard extensible APIs to support user provisioning, common source ID and administrative data exchange

Learning Record Warehouse

Analytics Processing

Common Data Model

Data-at-Rest

CALIPER Analytics Events

Administrative Data

Usage Data

Usage Data

SIS

EduAPI

Common Source ID

Data-in-Motion

Provisioning

Grades

Provisioning

LMS

LTI-A Launch & Data Exchange

Digital Content

makerspace

Provisioning

Provisioning

Card Access System

Library

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IMS Framework Documents

Security Framework 1.1 – update to add new features

Extensions Framework 1.0 – collation and documentation of use of extensions

JSON API Framework 1.0 – new pattern to be applied to ALL IMS service specifications

IMS Ecosystem Accelerator Program
Guarantee Your Integrations Work

The Ecosystem Accelerator Program is an integration testing, issue resolution, and cloud-based compatibility service from IMS to guarantee your edtech product integrations work. Through this program, IMS provides digital ecosystem support tools for school districts, universities, and curriculum suppliers to accelerate digital on day one, data transparency, trust, product compatibility, and the cooperative evolution of open standards that make IMS a uniquely effective organization.

The Ecosystem Accelerator Program combines IMS Certification and the new IMS Compatibility Check service.

OneRoster Compatability Check is Available Now

Integrate with confidence knowing that your OneRoster integrations work the first time and every time. Features of OneRoster Compatibility Check include:

OneRoster® Compatibility Check

For Districts	For Suppliers	For Districts and Suppliers
CHARACTERIZATION: Identification of the unique capabilities of your OneRoster data	**CHARACTERIZATION**: Identification of the unique capabilities of your software	**SUPPORT**: Personal and expert assistance from the dedicated IMS team
VERIFICATION: Assurance that your data meets the requirements for integration with OneRoster certified products	**VERIFICATION**: Assurance that your software meets the requirements of an IMS certification	
COMPARISONS: Access to reports on how your institution will integrate with multiple suppliers	**COMPARISONS**: Access to reports on how your products will integrate with an educational institution	

Common Cartridge Compatability Check is *Launching Soon*

- Ability to easily check that required curriculum standards are included within a cartridge and correctly align with the resources you provide.
- Verify that the metadata is supplied before providing to your customers. See what metadata your cartridge contains at every level.

To participate in the IMS Ecosystem Accelerator Program contact Lisa Mattson at lmattson@imsglobal.org today.

[IMS Ecosystem Accelerator Program (EAP)](#)

IMS 5-Minute Video Series (OneRoster)

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App Vetting Rubric

Key links are:

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

- https://www.imsglobal.org/activity/app-vetting/rubric-light

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IMS ECOSYSTEM

A view of the IMS ECOSYSTEM from the perspective of the various component systems and functionality.

- SAML
- Provisioning
- OneRoster
- LTI SSO

- Schedule
- Records
- Roster
- Gradebook
- Demographic Data

- Standards-Based Content
- Approved Resources
- Digital Curriculum

Rostering

Student Information System (SIS)

Digital Tools and Content

CASE for Standards
LTI Interoperability
Caliper Analytics
QTI Assessment
OneRoster
IMS GLOBAL
Digital Learning Ecosystem

Productivity Tools

Assessment System

- Collaboration
- Presentations
- Personal Storage
- Word Processing
- Spreadsheets

- Rubrics
- Assessment
- Analytics
- Data-Driven Instruction
- Progress Monitoring

Learning Management System (LMS)

- Classes
- Calendar
- Assignments
- Organization
- Communication

Profile of an IMS Specification

Compatible version of an IMS specification tailored to a specific market / region / community
- IMS Europe lead on this for OneRoster 1.2, etc.

Through IMS, establish conformance and certification to the Profile
- IMS Europe support the creation of new Conformance Test System versions

Work with IMS to publish and promote the adoption of the Profile
- IMS Europe to establish the IMS Ecosystem in European countries

Questions & Comments?

Contact Colin Smythe (csmythe@imsglobal.org) and/or Markus Gylling (mgylling@imsglobal.org) and/or Nynke de Boer (ndeboer@imsglobal.org) and/or Lisa Mattson (lmattson@imsglobal.org)

Members can post to the IMS Forums at:
https://www.imsglobal.org/forum

Access working documents and raise issues at:
https://github.com/IMSGlobal