



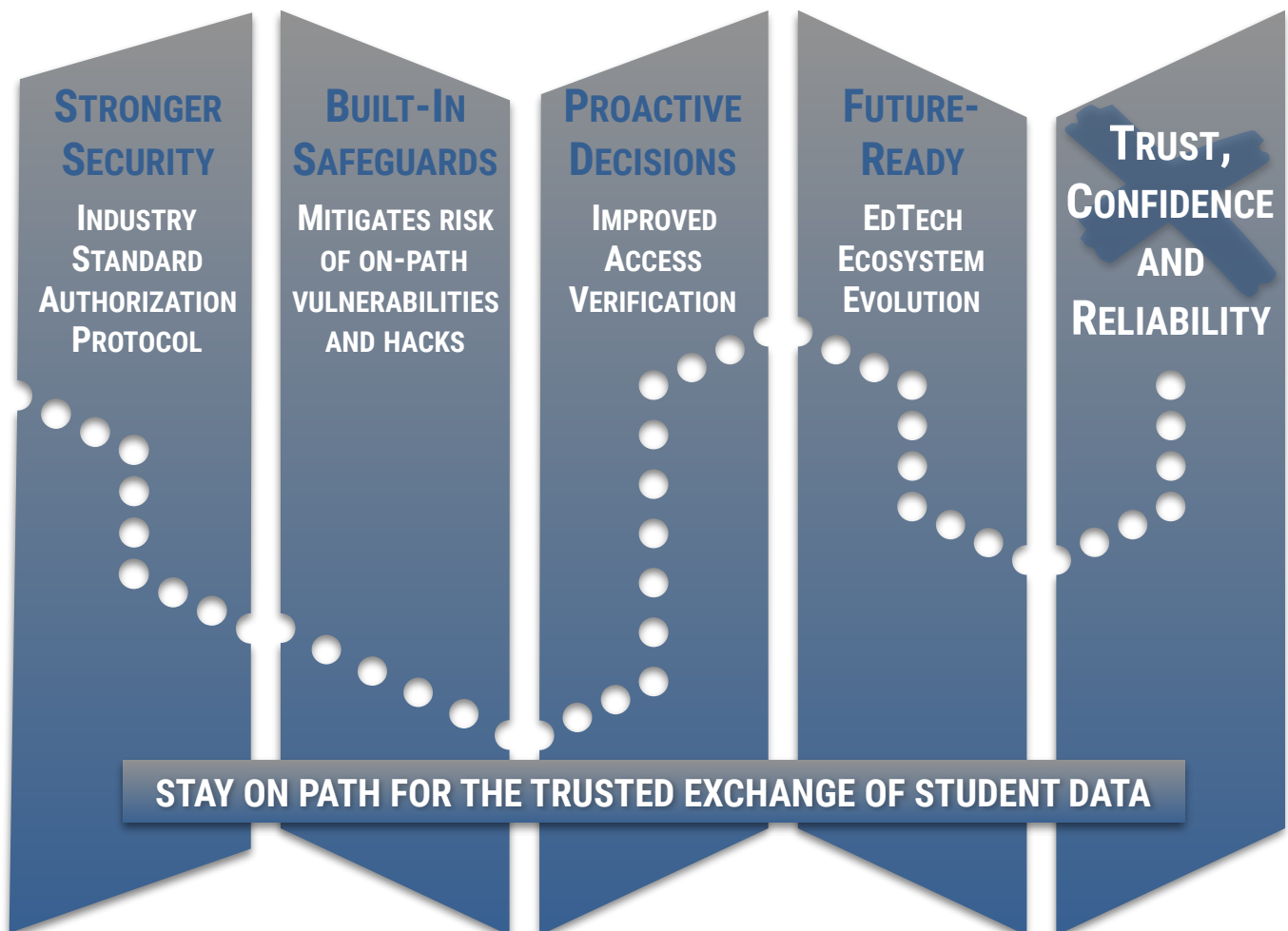
LTI ADVANTAGE

YOUR PATH TO TRUSTED STUDENT PRIVACY AND DATA SECURITY

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.

LTI Advantage leverages a **strengthened security** model that allows for tighter control of authorization roles, which is needed to protect student data. The bidirectional **encryption** of communications through HTTPS requirements protects against eavesdropping and tampering with the communications between the platform and tool. Institutional technology leaders can be more **proactive** in establishing data-specific access permissions—limiting the number of tools that can access PII. LTI Advantage is designed to be extensible and **future-ready** so that as institutions grow their edtech ecosystem they can rest assured that this newly enhanced security model will persist.

The security features in IMS-certified LTI Advantage tools and platforms offer institutions **confidence** that their integrations will be secure and fully interoperable with **reliable** and consistent implementations that minimize the roadblocks and costs encountered with custom integrations.



LTI ADVANTAGE USES MODERN SECURITY FRAMEWORK

LTI Advantage encompasses three service-based extensions of the core Learning Tools Interoperability® (LTI®) standard which require a set of security patterns defined in the updated IMS Security Framework. Use of a common security framework promotes a consistent and compatible implementation and simplifies adoption across all IMS Global standards.

The IMS Security Framework adopts the industry standard protocol OAuth 2.0 for authenticating services along with JSON Web Tokens (JWT) for secure message signing. Features include:

- Separates authorization servers from resource servers to better fit enterprise authorization schemes
- Additional verification of tool and platform authenticity to protect against on-path or in-transfer attacks
- Allows for a more flexible and granular approach to access PII, such as defining application-specific authorization in accordance with best practices and regional and national legislative/regulatory requirements
- Introduces multiple authorization grant types, each with its own protocol flow that makes OAuth 2.0 adaptable for multiple use cases and client types
- Designed to be extensible with new access token types, grant types, and protocol parameters

LTI v1.3—the latest version of the LTI core standard—incorporates this updated security model. **The strength of the market demand for OAuth 2.0/JWT is such that learning platform companies are indicating LTI v1.3 will be their minimum requirement for integrating with tools that exchange PII.**

THE IMPORTANCE OF IMS CERTIFICATION FOR LTI ADVANTAGE

For institutional leaders to fully trust the security of the data that passes between their learning platforms and applications, their edtech products must be IMS Certified for all applicable LTI Advantage extensions.

Under the leadership of IMS Global Learning Consortium's 475+ members (and growing), LTI Advantage is being adopted rapidly as the preferred method of learning product integration. IMS certification of edtech products for LTI Advantage is needed to ensure the above security benefits—and improvements to the user experience—are achieved, and institutional requirements to purchase IMS certified products are met.

The IMS certification process involves a set of verified tests of a product's code in action. Each certification must pass a series of situational and operational test conditions, including actual security operations, to earn the designation of IMS certified and be included in the IMS Certified Product Directory ([imscert.org](https://www.imscert.org)).

An LTI Advantage certified tool must demonstrate:

- Successful implementation of LTI Advantage security policies
- Interoperability with other LTI Advantage certified tools and/or platforms
- Correct implementation of LTI Advantage prescribed standards and services

Learn more at imglobal.org/TakeAdvantage

