

Trusted Portable Learning Context

Can education adopt AI on its own terms?

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July 2026



When AI does not have all the facts.

How do you think AI should respond in education when it does not have all the facts?



When Context Is Missing

It looks like this..

Progress Ignored

The system can't see what the learner already knows.

Objectives Misaligned

Feedback isn't grounded in course goals or assessment design.

Constraints Unknown

Course rules, policies, or allowed practices aren't visible..

Inconsistent Behaviour

Different tools and models produce different answers to the same situation.

These are not model failures - they are context failures.

Context failures are also control failures. Institutions lose visibility into what AI sees and says. That makes this sector-wide work.



AI. A lot Is Happening At Once

AI in education is moving on several fronts in parallel



Explosion in models, capabilities, and agents that want to plug in

AI agents are learning to connect to tools and systems.



Standards exist that connect AI to tools and systems

Connectivity is easy – the challenges are with governance and control



Who stays in control?

Institutions are asking how to keep control of their data.





What the Sector Needs

Can AI reflect the needs of every side of the sector?

Institutions

- Control of data and policy
- Predictable cost at scale
- Confidence to say yes to AI

Suppliers

- Access to data
- Simple integration pattern instead of hundreds
- Room to innovate

Learners & educators

- AI that knows their course and goals
- Consistent answers across tools
- Privacy respected by default

1EdTech is the convening these conversations across the sector

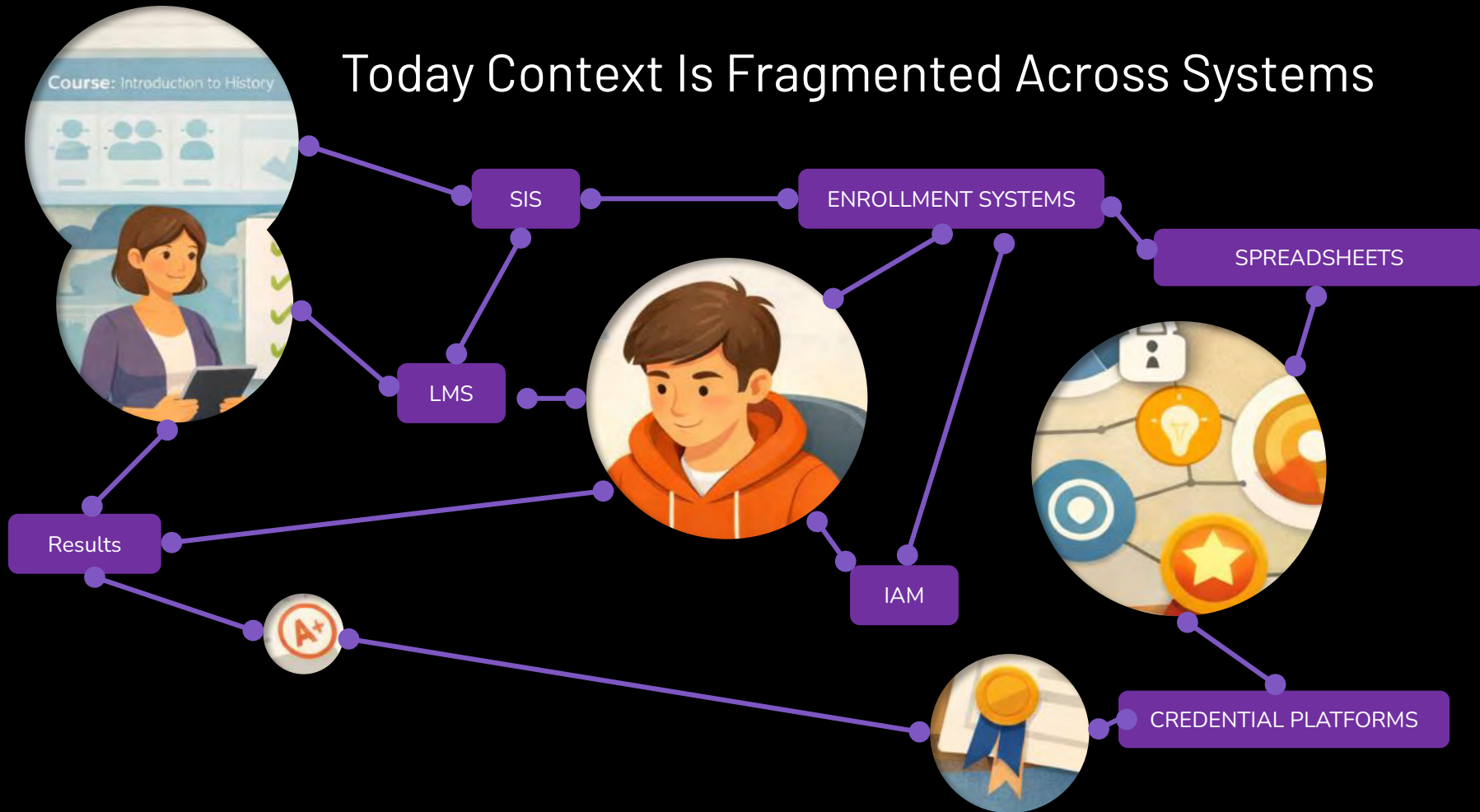


What AI needs...

AI systems are more useful if they can see the full picture

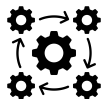


Today Context Is Fragmented Across Systems



Beyond interoperability

Shared context is not the same as interoperability.



Interoperability is about **moving data** between **systems**.



Shared context describes **what's happening** right now.

Sharing context with AI also raises questions that must be answered by the whole sector...





Scale, Cost, and Equity

Open questions the sector must answer together.

- 1 Is the sector ready for when there are more agents than students?**
Several agents will serve each learner at once. The pattern has to keep duplicate load off source systems.

- 2 Who pays for the compute and token?**
Institutions, suppliers, or a mix. The answer will shape the market.

- 3 Do you have policies for Bring-your-own-agent scenarios?**
Students will arrive with their own agents.
Personal agents will know more about the students' learning needs than any institutional agent

No single vendor or institution can settle these alone.



The Economics of Agentic AI

Cost turns shared context into a market need.

~1,000x

more tokens per agentic task
than a single chat exchange

4.2M vs 3.4k

average tokens per task, agentic work
vs chat

153 : 1

input to output ratio; the whole context
is re-sent on every turn

30x

cost variance across runs of the same
task; spend is hard to predict

Every agent that rebuilds context from scratch pays this bill again. Compile context once, share it, and route work to the right specialist model.



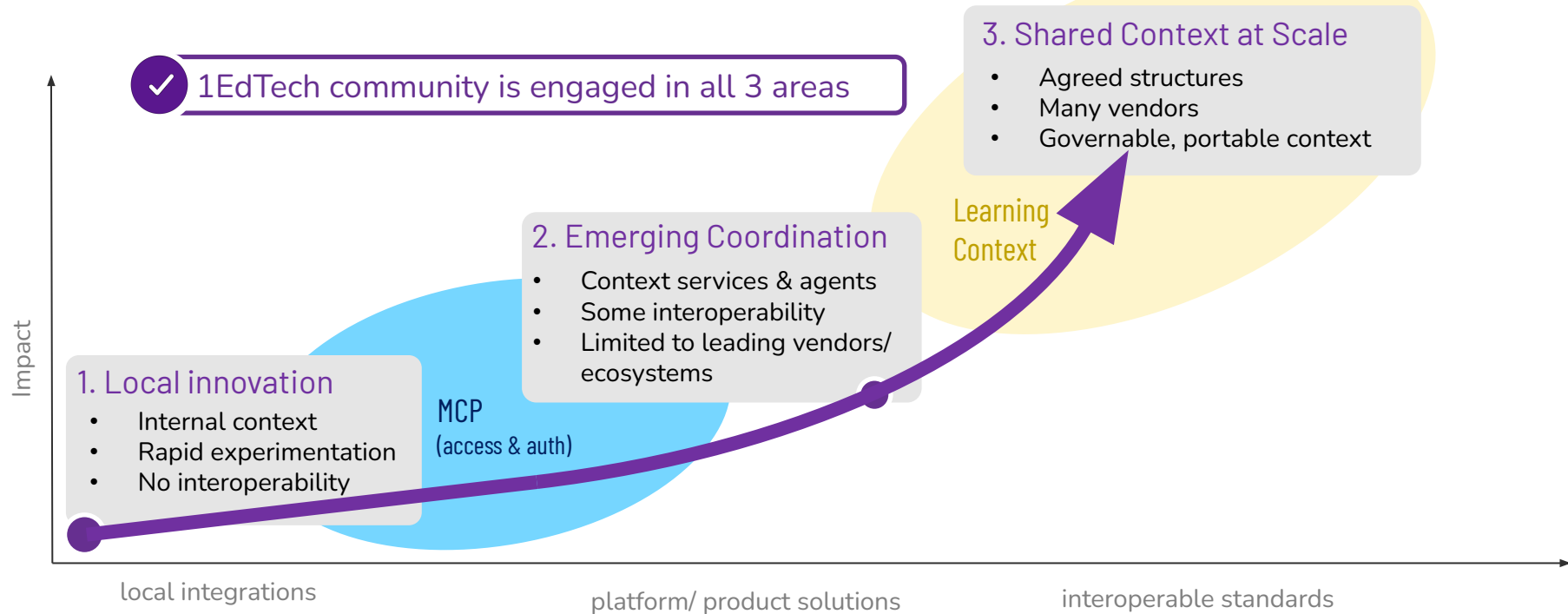


A glimpse into the ongoing work

1. Conversations with leaders across the industry are ongoing - discussing these open questions.
2. AI Rubrics - community definition of best practices
3. Technical work/ best practices on MCP Authentication, Student/ Educator-centric access control and sandboxing
4. Standards and patterns to optimized the trusted, portal exchange of learning context to
 - a. Contain the cost
 - b. Provide layers of control, data security and governance
 - c. Recognise the active role of agentic workflows in education



AI in Education Landscape



Qualities of Context

Describes a learning situation.



Context is time-bound.

It reflects a specific moment, not a permanent state.

Context is situation-bounded.

It is defined by what is happening, not by a data standard or the system that produced it.

Context is broad, not deep.

It spans many kinds of information, *but* only the relevant parts of each.

Context is only relevant information.

It captures what matters for a situation - *not* everything a system knows

Context is dynamic and event-driven.

Every interaction creates a new context



Shared Context

A structure to capture just enough information to describe a learning situation



context

2026-I-13T10:03 Context A

Learner Information:	30%
Course Information:	10%
Curriculum/ Skills:	25%
Progress Data:	25%
Achievements:	10%
Personal Needs:	0%
Etc...	

vocabularies

LTI® Advantage

Edu-API™

CASE®

LTI® Advantage

QTI®

ELM EDC OpenID, SAML...
Including non-1EdTech Standards



We Already Have the Vocabulary

25 Years Of Development Across Global Education Community

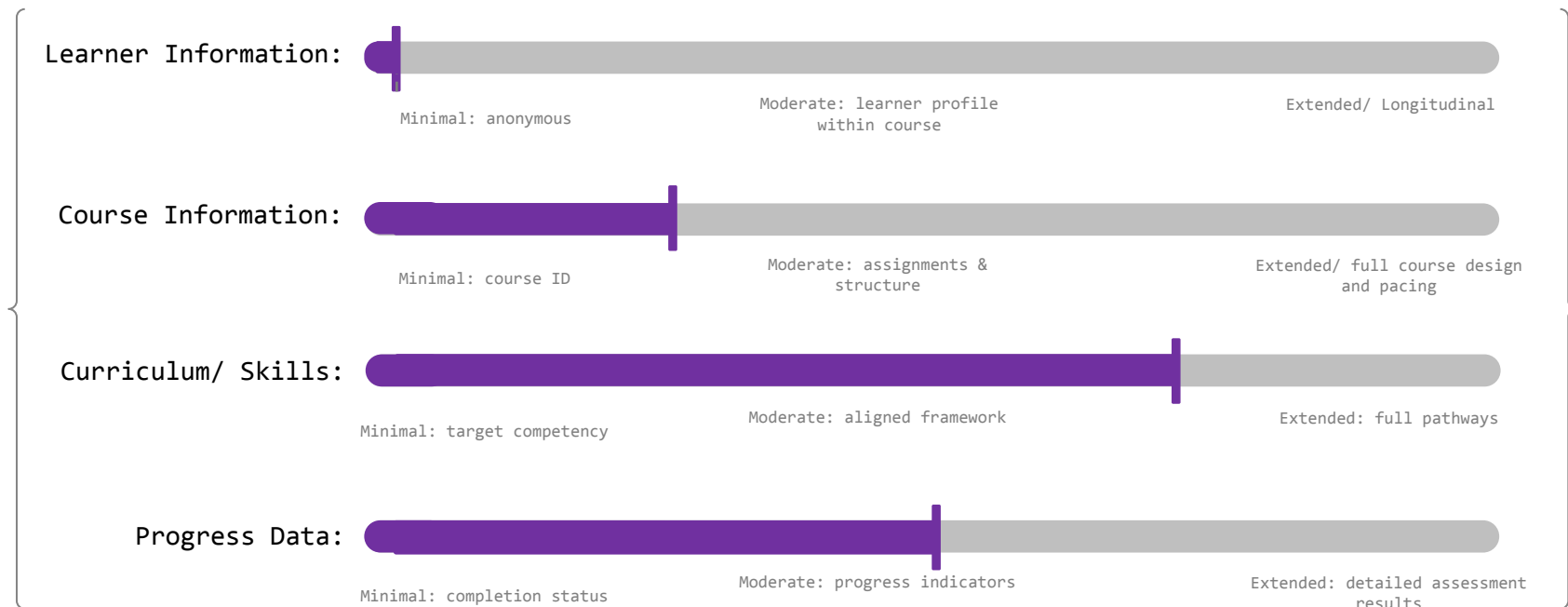


Any learning situation can be described using a **subset** of our shared vocabulary



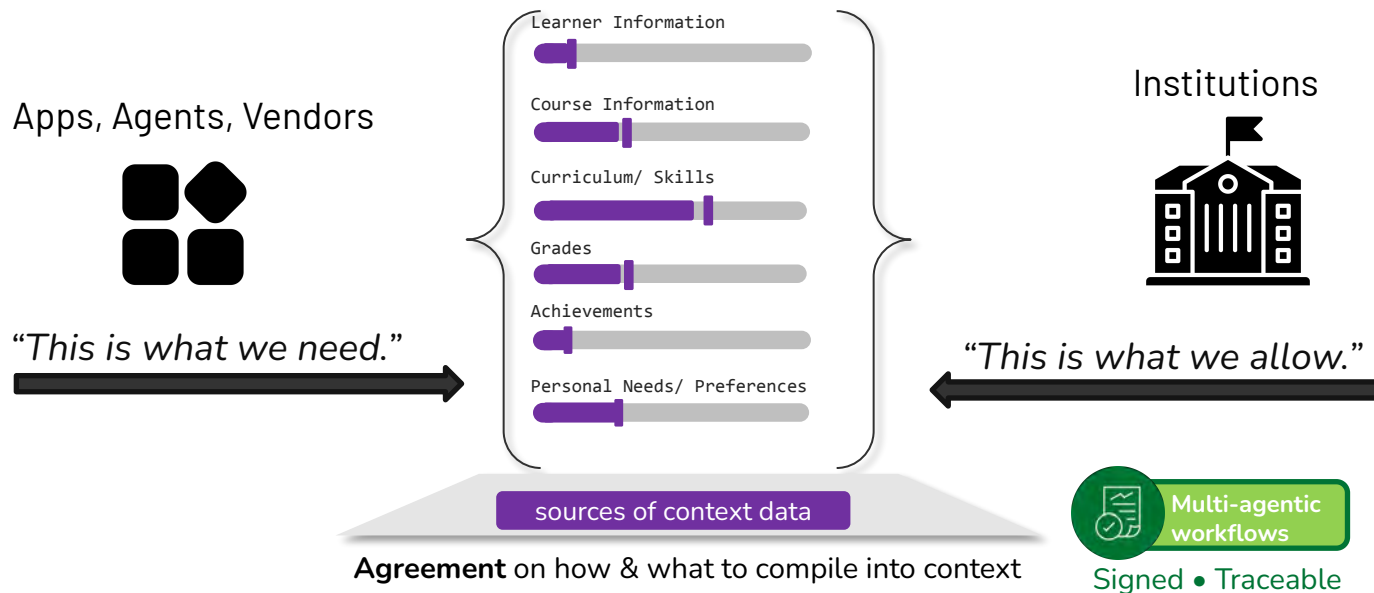
Shared Context

A structure provides a backbone for governance



Shared Context as a Coordinating Artifact

A backbone for coordination, governance, and trust



Intent, consent, and trust travel together.



Shared Context Requires New Patterns

Same ingredients. New recipe.

We already have the ingredients

Learners • Courses • Skills
Progress • Achievements • etc

Shared Context is the recipe

It defines how the right ingredients are assembled to describe a specific learning situation.



This Pattern Has a Name

A name for the coordinating artifact you saw earlier.

trusted portable learning context (tplc)

- A structured, time-bound description of one learning situation.
- Assembled from authoritative sources.
- Governed by the institution that owns the data.

Enough for an agent to act, and no more.



<https://1ed.tech/TPLCRFC>



Why “Trusted”? Why “Portable”?

Two qualifiers, two needs.

Trusted

What lets an institution release it with confidence

- Data comes from authoritative sources
- Consent and disclosure policy applied before release
- Describes a real situation at a real time
- Verifiable by the recipient when the use case requires it

Portable

What makes it dependable for the agents that use it

- Travels agent-to-agent without losing meaning
- Governance travels with it
- Compiled once, shared across many agents
- No duplicated query load on source systems



tplc vs. Agent Memory

A folder of markdown files is not institutional context.

Expiry

Enrollments end. Consent lapses. Credentials get revoked.
tplc knows when its contents stop being true. A memory file doesn't.

Provenance

Institutional fact, or model inference?
In a memory store every line looks the same. A tplc keeps the distinction explicit.

Policy at release

In a memory store, consent is whatever the agent wrote down.
In a tplc, **the institution decides what leaves, before it leaves.**

Agent memory keeps its place inside a single agent's own workspace.



Trust Properties

Three properties required to build confidence. 1 of 2.

Consent

Sovereignty

Provenance

Realtime

Querying

Composition

Consent

Context carries only what policy permits for the purpose at hand. Institutions keep control, and suppliers get a clear contract to build against.

Sovereignty

The institution that owns the data can enforce policy and data access controls at the source.

Provenance

Signed when the stakes require it: who compiled it, from which sources, under which policy, at what time. Recipients can verify institutional data rather than model inference.



Operational Properties

Three properties that make it work at scale. 2 of 2.

Consent

Sovereignty

Provenance

Realtime

Querying

Composition

Realtime

Compiled at the moment of action against current data. Agents act on what is true now.

Querying

Agents state the situation, learner, purpose, and need. One query pattern replaces hundreds of bespoke integrations.

Composition

One coherent artifact drawn from SIS, LMS, assessment, identity, credentials, and curriculum. Consumers get the full picture without integrating each source.

Together, the six properties make context safe to release and practical to use.

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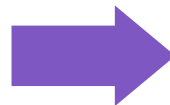
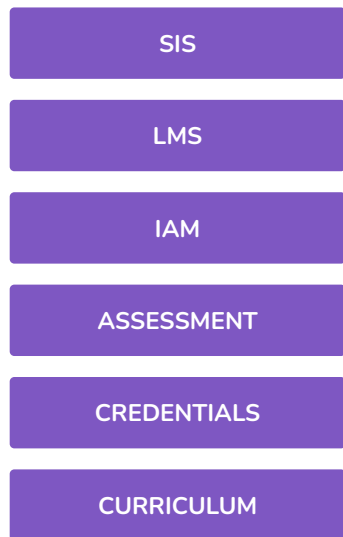
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The “tplc” Service or Layer

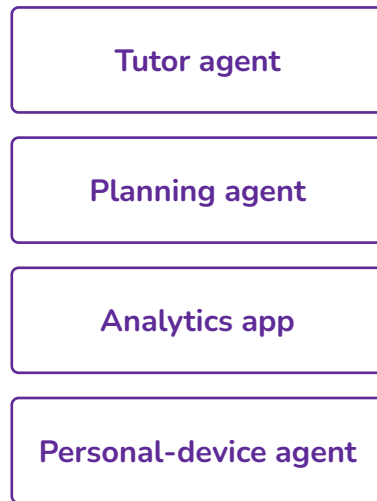
A coordinating layer between systems of record and the agents that use them.

Source systems



MCP · REST ·
GraphQL

Agents & apps

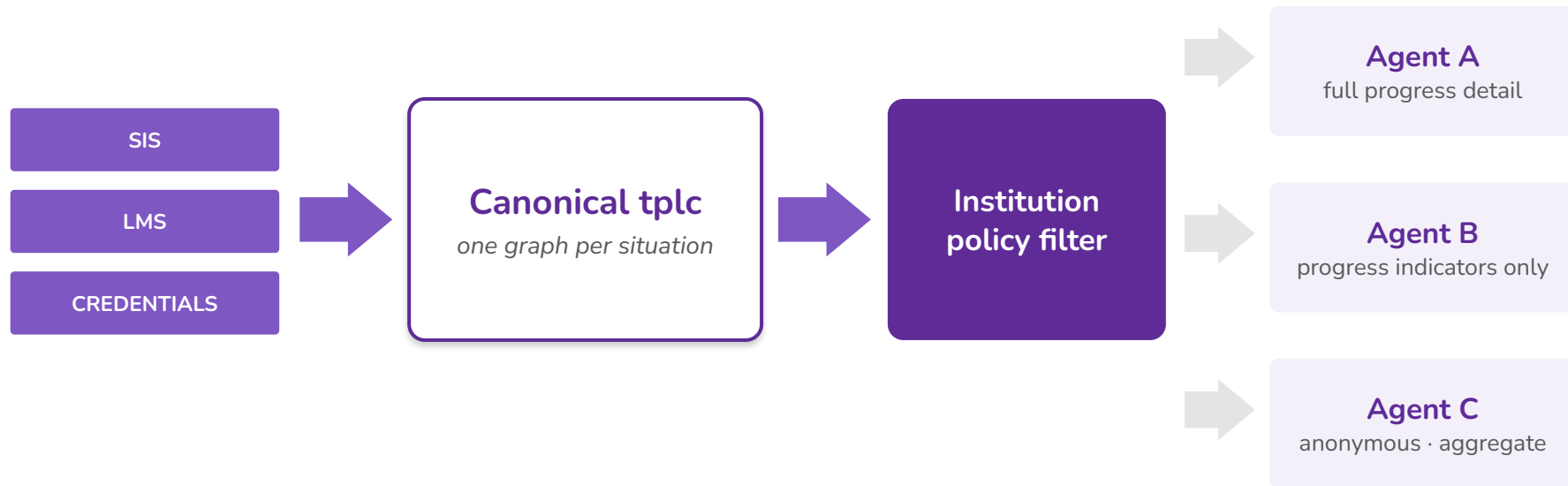


Deployment can be institution-hosted, regional, or vendor-hosted. The institution governs policy in every model.



Compile Once, Project to Many

One canonical context. Policy-filtered projections per recipient.

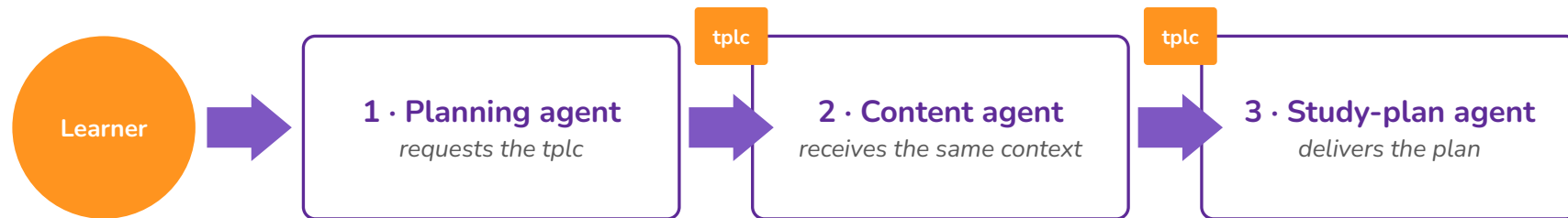


The canonical record stays stable. Each recipient sees the view its purpose justifies.



One Context, Passed Along the Chain

Example: a student prepares for an assessment



Institution tplc service compiles and releases the governed context once

Each agent works from the same governed context, with no repeat queries and no over-sharing.





What This Asks of standards for Source Systems

These sit alongside today's integrations.

Query interfaces

Consumers ask for the projection they need instead of fetching resources one at a time.

Realtime delivery

Current data in seconds, alongside existing nightly sync.

Per-user, per-request auth

Policy is evaluated against the actual user and purpose rather than a service account.

Vocabulary mapping

A documented path from native data models to the shared standards.

Cross-border and regional data rules add a further layer for the community to reconcile.





Help Shape the tplc

The next steps are open to everyone.



<https://1ed.tech/TPLCRFC>

Read & comment

The principles paper is open for public comment now.

Next steps

Community to develop a technical RFC later this year, covering proposed architectures, patterns, and substrate.

Build and Test with us

Join the working groups. Take part in the hackathons later this year.

1EdTech convenes institutions, policymakers, and suppliers. No other body in the sector sits across all three.

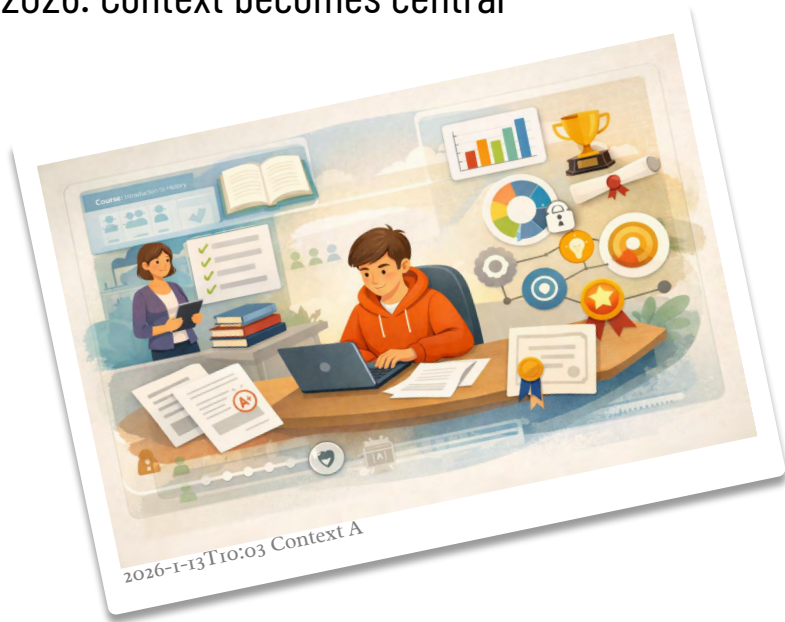
Help shape the tplc from the start.

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Summary

2026: Context becomes central



2026-1-13T10:03 Context A



We don't want this choice.

Refuse • Generalize • Hallucinate

We want AI acting in a *trusted portable learning context*

Governed at the source • compiled in the moment • portable across agents

Open standards matter more than ever

25 years of vocabulary is the ingredients; tplc is the recipe

The community is already moving

Principles paper open for comment now

Hackathon and technical RFC (Part 2) later this year

If you want to help shape this future, join us

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