Getting the Most Out of Your Data Through Open Standards

1EdTech and Ed-Fi Alliance

Abstract

1EdTech Consortium and the Ed-Fi Alliance are combining open data and rostering standards to enhance data-driven decision-making so educators can maximize the time spent on teaching. In this session, we'll review the results of the pilot phase of this project, and dig into the innovative solution that allows organizations to leverage open standards from both organizations for the best results.

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Agenda

- Introduction

- How can we help you?

- How did we get here?

- Solution overview

- 1EdTech Profiling

- What's Next?

Presenters

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Director, Program Management

1EdTech

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Principal, Touchdown Consulting, LLC

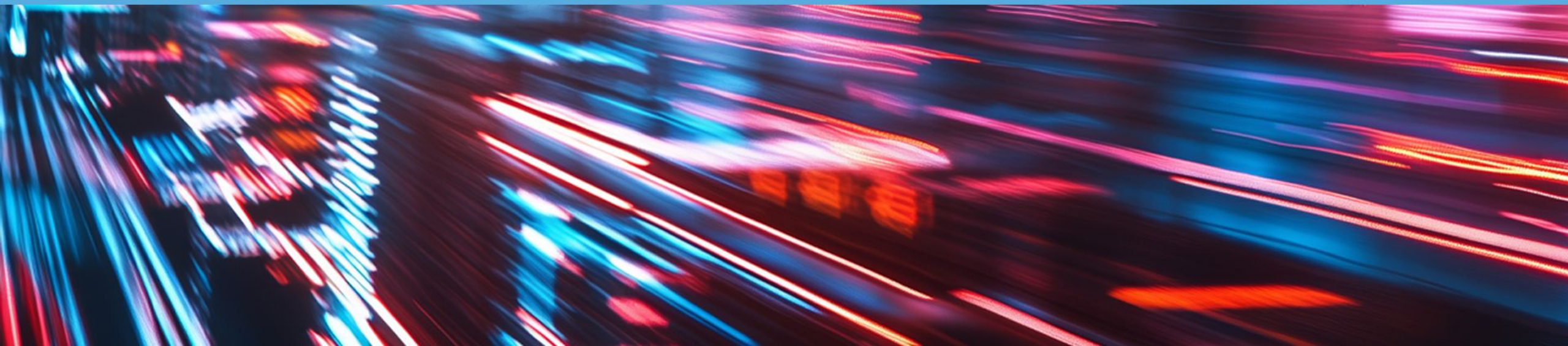Formerly VP, Technology, Ed-Fi Alliance

Show of hands, how many of you are Ed-Fi Experts?

Show of hands, how many of you are OneRoster Experts?

What & Why?

Seeds of collaboration at the Ed-Fi Alliance Tech Congress 2024...

....set some things in motion...

Best Practice Showcase:
Ed-Fi Data Standard & OneRoster

- examples working together in field implementations
- options to consider for standards collaboration

Speakers

Sean Casey
Vendor Partnerships
Ed-Fi Alliance

Katie Favara
Coordinator of Technical Services
Texas Education Exchange

Bryan Smith
Assistant Director
Michigan DataHub

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We asked, you told us

Proposal 1: for data-out use cases to learning tools, endorse OneRoster's use as the starting point.

YES

Proposal 2: Rather than expand use of custom metadata in OneRoster, endorse use of Ed-Fi's APIs to source additional student data beyond the OneRoster specification.

YES

Proposal 3: Ed-Fi Alliance and 1EdTech communities coordinate specifications to simplify data exchange
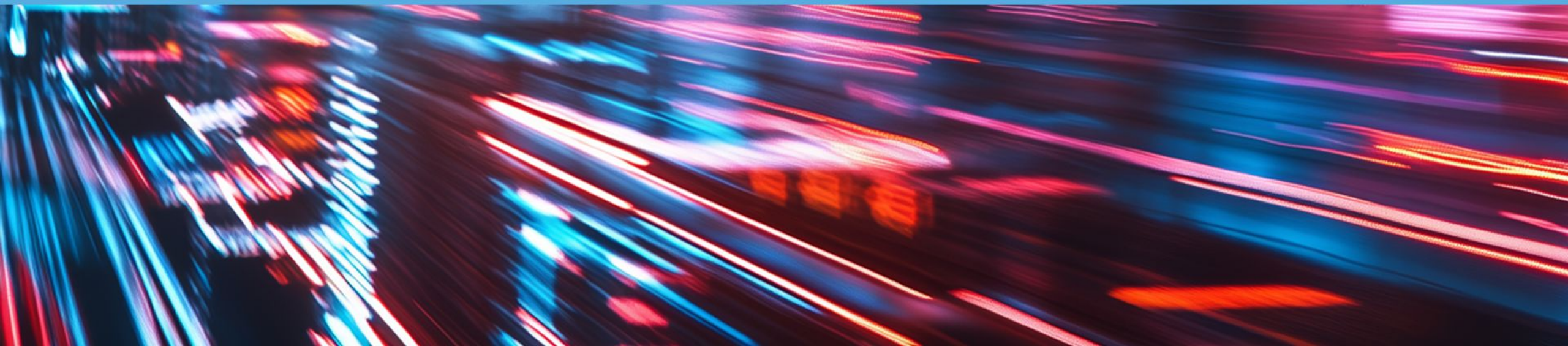
YES

Focused Opportunity: Rostering Applications

- **1EdTech and the Ed-Fi Alliance** are working together to develop a coordinated rostering approach and scalable pathways for richer data integrations
- The collaboration aims to
  - Enhance data **driven decision-making**
  - **Maximize educator time** for teaching
  - Align with d**ata-driven policies** to unlock state and federal funding
  - **Reduce fragmentation** across disparate EdTech products at both state and local levels
- This is a **community-driven** initiative. Mutual community members are already building valuable integrations and there is support for a growing set of use cases enabled by rostering.
- Key **partners** will participate in a **pilot** phase this year.

How?

Learning from Existing Implementations

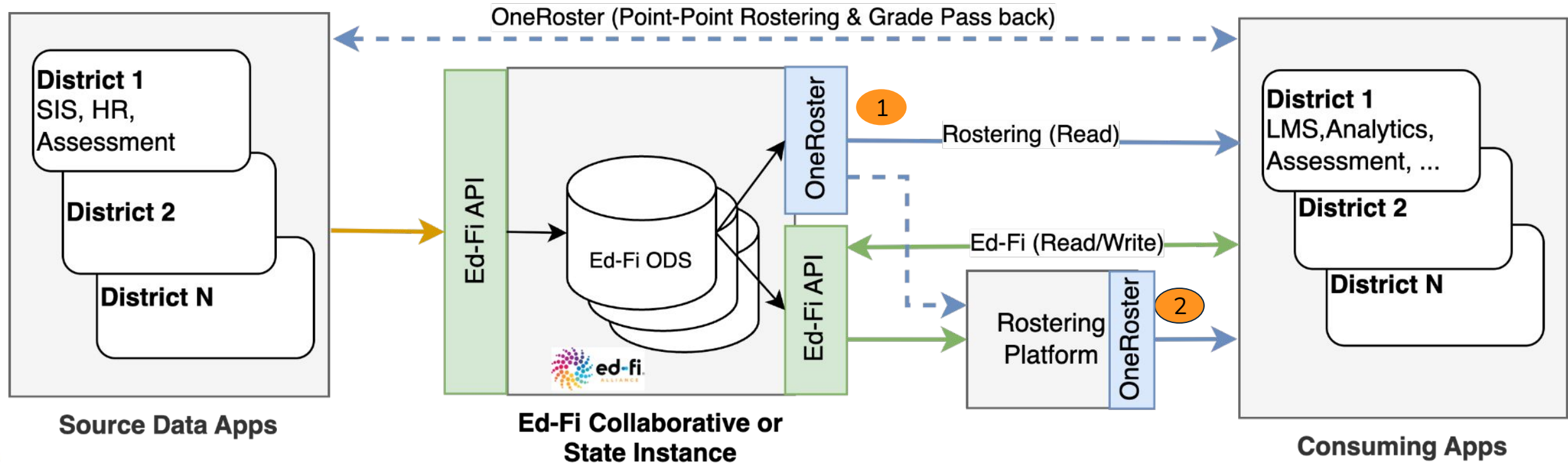| Criteria	Michigan Data Hub	ClassLink (Delaware)	EdGraph	Education Analytics
General Information				
OneRoster Version	1.1	1.1, 1.2 *(Clients choose; Connector outputs 1.1)*	1.1	1.1
Implementation Type	REST API Provider *(+ Flex Exporter for CSV)*	CSV Export & REST API	CSV Export & REST API *(+ PUT support)*	CSV Export only
1EdTech Certification	✓ REST Provider 1.1	✓ REST Provider 1.1, 1.2	✓ REST Provider 1.1 ✓ CSV Export 1.1	✗ No certification
Ed-Fi Version	v6.2 (DS 4.0)	v6.2 (DS 4.0)	v6.2 (DS 4.0) v7.2 (DS 5.1)	v7.1 (DS 5.0)
Production Use	376 active districts	~40 districts	100's of districts indirectly *(vendor-owned districts)*	*TBD*
Vendor Adoption	CSV: 77 vendors API: 106 vendors	CSV: ~ 10% of vendors API: ~ 90% of vendors	<5 vendors each (CSV & API)	*TBD*
Architecture				
Integration Pattern	Ed-Fi as central hub *(Direct from ODS)*	Parallel implementations with middleware translation	Parallel implementations with middleware translation	Ed-Fi as central hub + downstream data store *(ELT approach)*
Multi-tenancy	Separate Ed-Fi ODS per tenant	Tenant isolation at downstream DB	Tenant isolation at downstream DB *(Single API router)*	Tenant isolation at downstream DB

Mapping and Gap Analysis

Recommendations for Integration and Alignment

1. **Establish clear mapping conventions**: Develop a detailed field-by-field mapping guide between OneRoster and Ed-Fi to ensure consistent data exchange

2. **Align descriptors and enumerations**: Develop an approach to configure Ed-Fi descriptors to match OneRoster's terminology

3. **Implement robust identifier strategy**

4. **Address differences in authorization**

5. **Develop a strategy for reducing OneRoster custom extensions**

6. **Develop a OneRoster Profile for Ed-Fi**: Explore the creation of a joint profile to enhance interoperability, leveraging both standards' strengths.
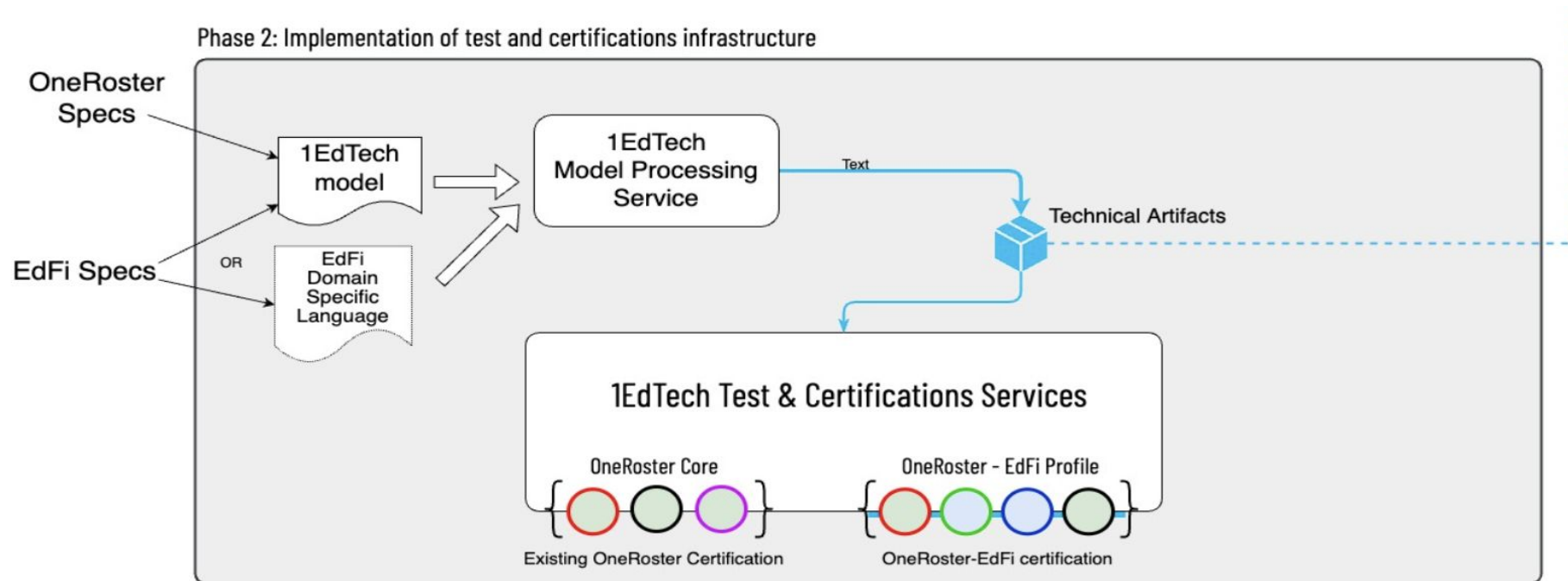
Proposed Architecture: Services from Both Standards

Source Data Apps

Ed-Fi Collaborative or State Instance

Consuming Apps

OneRoster (Point-Point Rostering & Grade Pass back)

District 1 — SIS, HR, Assessment

District 2

District N

Ed-Fi API

Ed-Fi ODS

OneRoster

Ed-Fi API

Rostering (Read)

Ed-Fi (Read/Write)

Rostering Platform

OneRoster

District 1 — LMS, Analytics, Assessment, ...

District 2

District N

Developing a OneRoster Profile for Ed-Fi

Phase 2 proposes a future-state where the 1EdTech infrastructure that maintains and supports the 1EdTech ecosystem for certification and diagnostics, can be applied to support the OneRoster-EdFi joint profile.

Phase 2: Implementation of test and certifications infrastructure

OneRoster Specs

EdFi Specs

OR

1EdTech model

EdFi Domain Specific Language

1EdTech Model Processing Service

Text

Technical Artifacts

1EdTech Test & Certifications Services

OneRoster Core

Existing OneRoster Certification

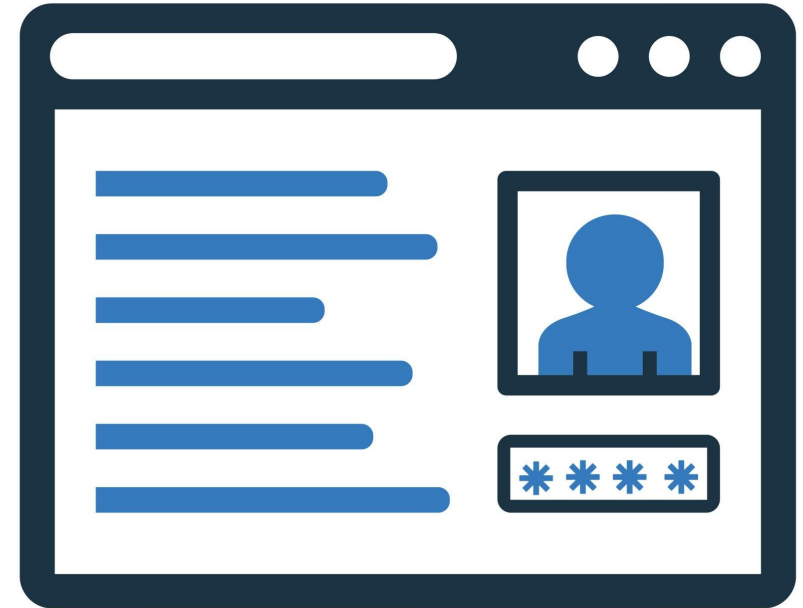OneRoster - EdFi Profile

OneRoster-EdFi certification

- Circle indicates services within each Spec
- Inner color indicates the source spec. (Green - OneRoster, Blue - EdFi)
- Outer color is an indicator of a similar service domain

- (i.e. Rostering could be 'Red' outer ring and is currently available in both specs whereas other domains are unique to each spec)

What is Profiling?

Profiling is the process of taking a 1EdTech specification and tailoring it to the needs of a specific market segment. Regional profiles are a common scenario but is not the only possibility
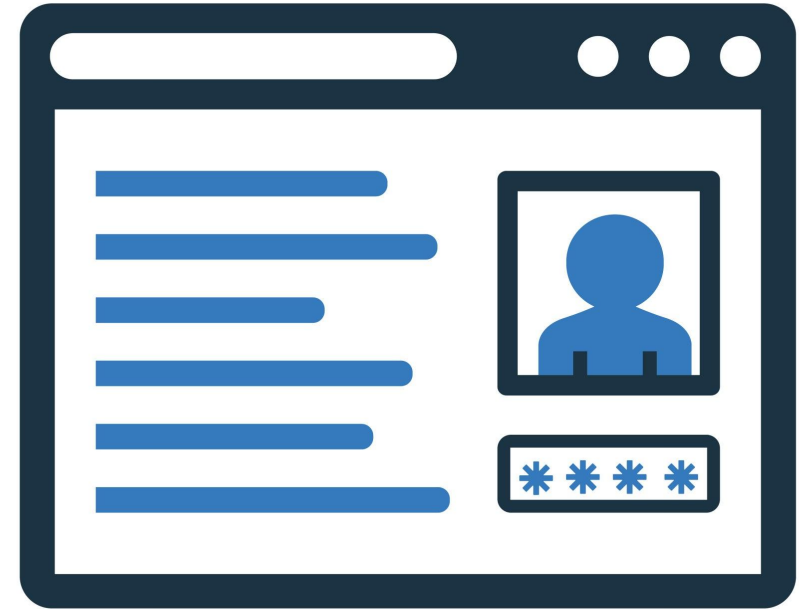
A Few Examples:

- Norwegian K12 OneRoster
- Japan OneRoster CSV
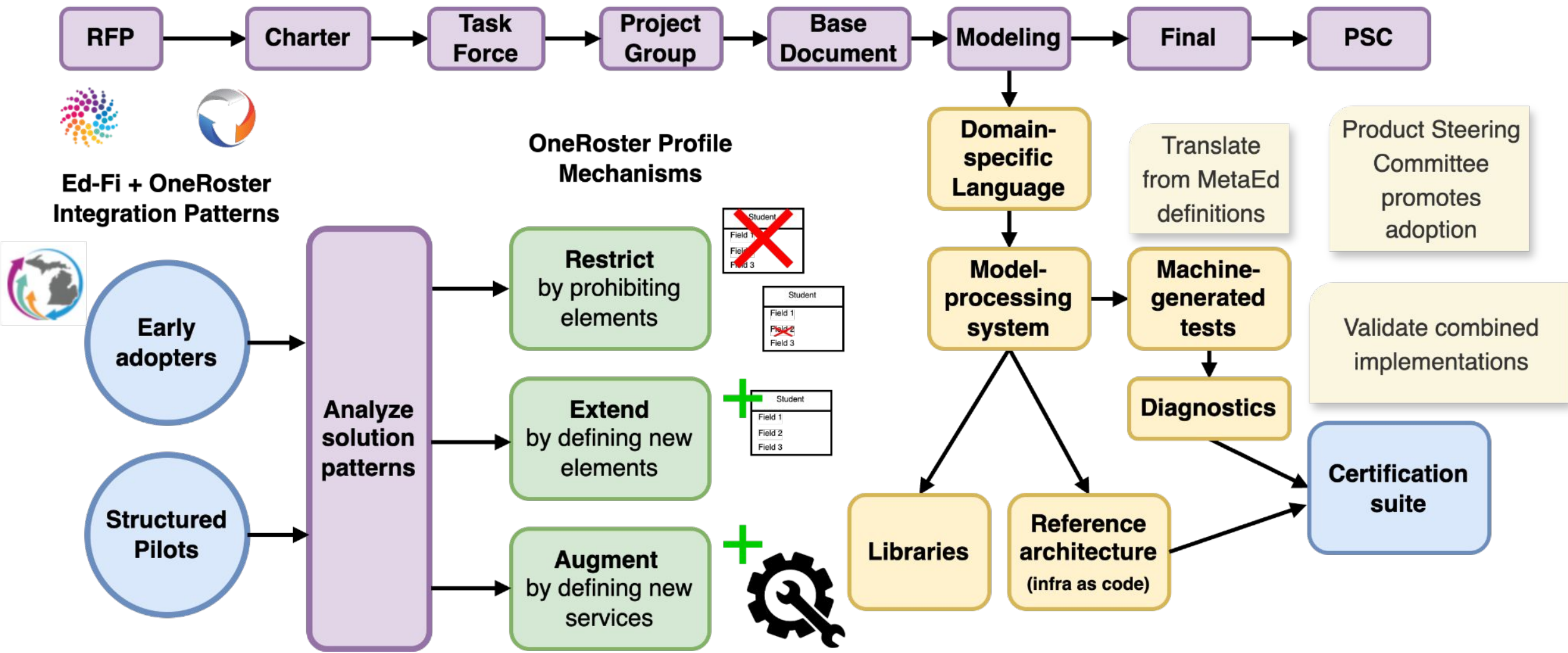- German Resource Search Profile
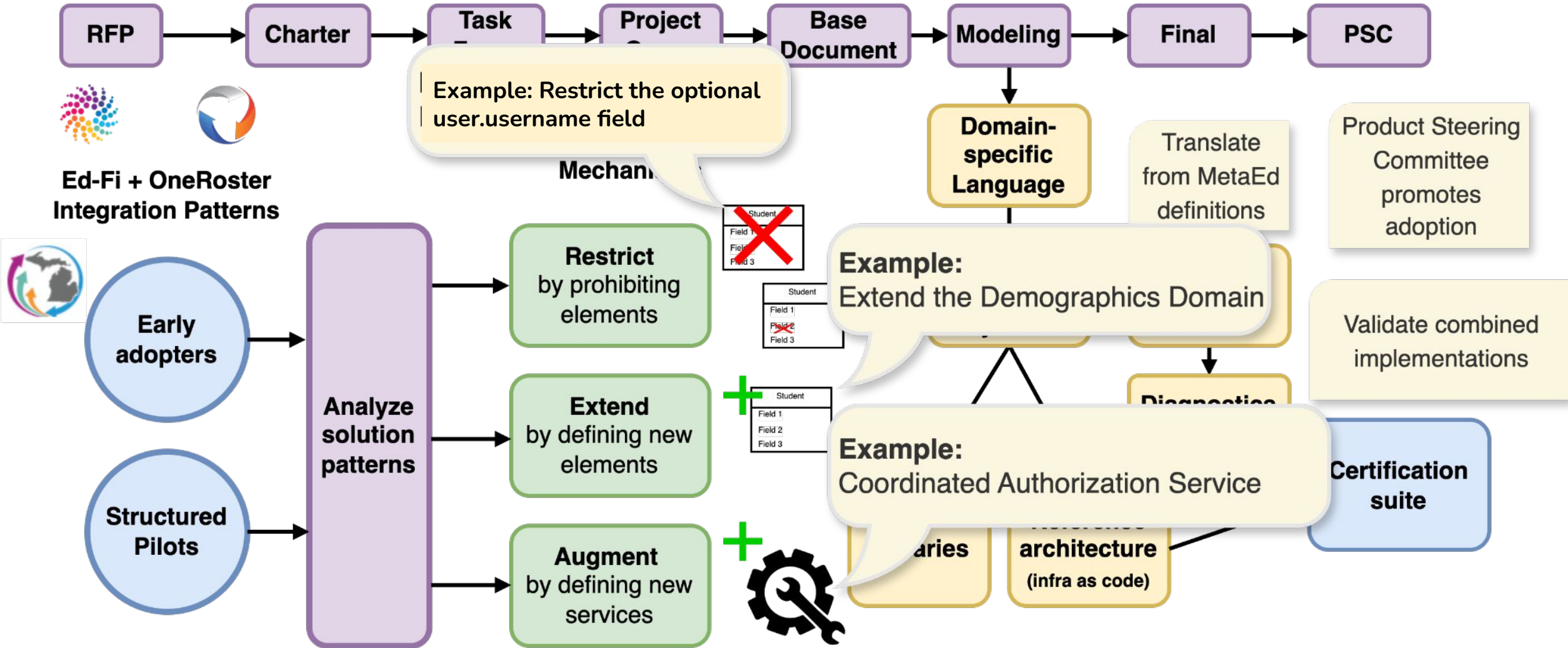- Assessment Results Profile

Why do we build profiles?

Profiles are the 1EdTech mechanism for maintaining interoperability while addressing the needs of specific segments of the market.

Profile development governance

Profile development governance

Outcomes of the Ed-Fi Alliance + 1EdTech Rostering Standards Coordination

Outcome	Deliverables	Why it Matters
1. Aligned Standards	Mapping of key roster entities and data elements across Ed-Fi and OneRoster	Reduce friction for vendors and agencies supporting both standards
2. Implementation Artifacts	Alignment guidance and practical tools	Enable real-world adoption and scalable implementation
3. Joint Governance	Ongoing collaboration via Steering Committee and working group	Sustains alignment and ensures community voice in evolution

What's Next?

Implement & Certify for OneRoster 1.2

Provide feedback on our approach

Tell us your needs and challenges

Provide Feedback

https://www.1edtech.org/about/partners/ed-fi