



Upcycling existing technologies: Migrating to a SIF 3 infrastructure

*The question organizations are asking is, “Is there an approach that supports a **gentle migration** to an **open, modern technology stack** that won’t further tax our existing resources, allows us to **retain full control of our data**, and will help us recognize **immediate benefits** while working toward substantial long-term goals?”*

The Challenge:

Vendors, Local Education Agencies (LEAs) and State Education Agencies (SEAs) have invested a significant amount of resources over the last decade+ on building and administering open standards-based data sharing ecosystems powered by SIF2. By and large, these hard-fought initiatives have met with good success, and continue to serve their original purpose to this day. Increasingly, however, application developers are demanding an integration toolset that better aligns with modern industry best practices.

In response to these pressures, organizations are evaluating how best to balance the needs of supporting their existing mission critical infrastructure while at the same time updating their infrastructure to support the next wave of initiatives.

Option A) Keep things as they are. As vendors invest in updating their software, they are reluctant to pour resources into a legacy integration framework...especially when there are modern alternatives. “Keeping things as they are” leads not to stability but to stagnation and atrophy.

Option B) Move wholesale to a new open-standards technology stack. In a vacuum, cutting over to a new open-standards technology stack (such as **SIF 3 Infrastructure** or others) would be a great approach...however, this is a time consuming, expensive, and risky “boom or bust” approach. Add to this the real-world obligations to support learners and administrators, and this approach feels like trying to change a tire while speeding down the highway.

Option C) Run the legacy stack in parallel with the new stack. Running two stacks in parallel also means *supporting* two stack in parallel. Given a large increase in resources, this could be a viable approach...but these are times when organizations are being asked to accomplish more with less.

Option D) Allow a private vendor to “own” the data sharing problem with a proprietary API. At first blush, it is very attractive to have an external actor come in and take over. The three big issues with this approach are is the data model robust enough to handle what I want to share? Is it flexible enough to adapt to our needs?; is it acceptable for your data to be claimed as a corporate asset?; and, when applications are built to a proprietary API, what happens when the owner of this API gains a monopoly?

Opportunity:

Instead of relegating the venerable SIF2 deployments to the technology scrap heap, many are “upcycling” their investment by wrapping the existing data pipes with technology that bridges

the gap between the old and new worlds. A host of new services are now available that are able to transparently plug into existing implementations (by natively speaking SIF 2) and then serve as the provider of that information to “next generation” applications using the SIF Unity API. This approach combines the benefits of a modern, open-standards API with the data ownership demanded by education agencies while not risking service disruption of mission critical systems or adding more burden to staff.

Success Story:

Cedar Labs, a Minnesota-based company with deep experience in SIF and data interoperability in education, has created a SIF 3 Infrastructure certified broker that is able to perform this spec-bridging. The product, named Hosted Zone, provides this bridge using a Software-as-a-Service approach – vendors and education agencies don't need to invest in any additional infrastructure, they can simply plug their SIF 2.x tools into Hosted Zone, and their data are available using the simple, standards-based Application Programming Interface (API) of SIF 3 Infrastructure that is universally accessible to software developers.

One clear example of how quickly these benefits can be realized comes from a state wide implementation of a Response to Intervention software tool, launched in the state of Iowa in Fall 2013. The software tool, created by TIES, a non-profit software vendor, provided a way for Iowa to implement a state wide early warning and response system, delivering early assessments and tools to monitor student progress. The tool, known across the state as *Iowa TIER*, promised to give teachers a way to quickly know which students needed additional intervention in reading, and track students' progress within those interventions, while also giving the state a way to communicate critical information to its schools, to promote research-based practice state wide.

Given the tremendous benefits of this software, the Iowa Department of Education wanted to “scale up” this software implementation as quickly as possible across its districts. The software from TIES was ready, but the ability to keep the data in *Iowa TIER* “in sync” with the data in districts' Student Information Systems (SIS) was a key need for the success of this project. Teachers needed to have immediate access to the information on their students in order to realize the benefit of the early warning system.

The solution came from the fact that Iowa had an existing SIF 2.x infrastructure in place, which district SISs were using to provide state reporting. By connecting to this infrastructure using *Hosted Zone*, TIES was able to provide real-time data integration between district SISs and the Iowa TIER software. TIES' developers didn't need to invest resources in learning SIF – the real-time migration of Hosted Zone provided the data to TIES using the SIF Unity API. And, the SIS providers weren't required to make any changes to the work they had done to export data from their software systems. Because of the strength of the open source SIF data model, these data initially included student roster data, but have since been expanded to include staff data, student attendance, behavior, and course grades. The ability to extend the benefit of this project quickly has been a key value-add of the SIF 2-to-SIF 3 infrastructure. Without making any changes to their existing state reporting infrastructure, the Iowa Department of Education was able to plug into the SIF 3 Infrastructure API, to sync staff information from district SISs with their state-wide portal. Currently, every public elementary school, many public middle schools, and many non-public elementary and middle schools, representing over 700 schools and over 200,000 students across the state of Iowa, are connected to *Iowa TIER* using Hosted Zone.

How do I start?

Education Agencies, SIS providers, and Software Developers are all invited to freely participate in the community sandbox. Please contact sandbox@cedarlabs.com for information on how to connect.

“We want vendors and education agencies to be able to extend the value of their existing investment. In many cases, these SIF 2 projects continue to have tremendous value to their developers. Hosted Zone just opens a window on these projects, so that the more modern benefits of SIF 3 Infrastructure can be realized instantly, without any disruption or additional investment in that existing work.”

Mike Reynolds, President and Founder of Cedar Labs

Useful Links:

Cedar Labs website:

<http://www.cedarlabs.com>

TIES website:

<http://www.ties.k12.mn.us>

A4L website:

<https://www.A4L.org>

SIF 3 Infrastructure:

<http://data.a4l.org/sif-infrastructure/>

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