

Next Generation Infrastructure
Opportunity for High Schools to Engage in AI Projects
Helping Local Agencies Transition to Digital
Page 1 of 3

Empower Students. Modernize Public Infrastructure. Shape the Digital Future.

High schools have a unique opportunity to connect classroom learning with real-world impact. This program invites students to collaborate directly with local public agencies to modernize construction management systems—using structured digital data and AI-driven approaches.

By participating, students contribute to next-generation infrastructure projects while gaining hands-on experience with emerging technologies like XBRL (eXtensible Business Reporting Language) and digital data exchange.

Why This Matters

Public works agencies across the country still rely on legacy systems and manual processes to manage construction contracts—especially through the **Application for Payment (AFP)** process.

Transitioning these systems to digital, interoperable standards is critical for:

- Improving efficiency and transparency
- Enabling secure data exchange across stakeholders
- Supporting scalable financial and infrastructure analytics
- Unlocking insights for capital markets and policy decision-makers

Students can play a key role in this transformation.

Supporting Compliance with Legislative Mandates

Modernizing AFP processes through XBRL directly supports compliance with transparency and reporting requirements such as:

- California's [Bill Text – AB-1223 Construction contract payments: Internet Web site posting.](#)

By digitizing Application for Payment data:

- Agencies can more easily publish required payment information online
- Data becomes consistent, structured, and ready for public disclosure
- Reporting processes shift from manual uploads to automated workflows
- Compliance becomes an embedded feature of the system—not an added burden

This approach reduces administrative overhead while improving accuracy, timeliness, and public accountability.

How the Program Works

1. Identify a Local Agency Partner

Students connect with a local public works agency that manages construction contracts (e.g., city, county, or transportation authority).

2. Review Existing AFP Forms

The agency provides its current Application for Payment (AFP) forms and identifies all data elements used in its processes.

Next Generation Infrastructure
Opportunity for High Schools to Engage in AI Projects
Helping Local Agencies Transition to Digital
Page 2 of 3

3. Map to the XBRL AFP Standard

Students analyze agency data elements and compare them to the **XBRL AFP taxonomy**:

- Identify which elements already exist
- Highlight gaps where new elements may be needed

4. Participate in Standards Development

Students contribute insights through the **XBRL review and comment process**, helping expand and refine the AFP taxonomy.

5. Deliver a Digital Mapping Solution

Students provide the agency with an XBRL mapping framework to enable:

- Import/export of AFP data using standardized formats
- Integration with third-party platforms
- Deployment of student-developed tools or prototypes

Unlocking Value for Capital Markets & Small Business

Digitizing AFP data does more than improve internal processes, it creates new opportunities across the broader ecosystem.

Capital Markets Visibility

When project-level payment data is standardized and accessible:

- Investors and analysts can monitor infrastructure project progress
- Risk can be assessed with greater transparency
- Funding decisions can be made with more confidence

Benefits for Local Small Businesses

This transparency is especially powerful for small and emerging contractors:

- **Improved Access to Capital:** Verified, standardized payment data can support financing and lending decisions
- **Level Playing Field:** Smaller firms gain the same access to project intelligence as larger organizations
- **Reduced Administrative Burden:** Automated data exchange minimizes manual reporting requirements

By connecting operational data to financial ecosystems, agencies can help create a more inclusive and efficient construction economy.

Student Learning Objectives

This program goes beyond technical skills—it prepares students to thrive in a data-driven world.

Core Competencies

- Understanding structured data and digital reporting standards
- Learning how complex systems exchange information
- Applying AI and data modeling concepts in real-world contexts

Next Generation Infrastructure
Opportunity for High Schools to Engage in AI Projects
Helping Local Agencies Transition to Digital
Page 3 of 3

Strategic Thinking

Students explore deeper questions such as:

- What happens when infrastructure data is digitally accessible at scale?
- How does transparency influence funding, risk, and policy decisions?
- How can digitization improve equity and participation in public projects?

Benefits for High Schools

- Real-world AI and data science experience
- Alignment with STEM and workforce readiness goals
- Partnerships with local government and industry
- Portfolio-ready, impactful student projects

Benefits for Public Agencies

- Streamlined compliance with transparency mandates like AB-1223
- Accelerated digital transformation at low cost
- Access to emerging talent and innovative thinking
- Improved interoperability with contractors and financial systems

Get Started Today

For Educators

Integrate this initiative into coursework or extracurricular programs to connect students with meaningful, real-world challenges.

For Students

Lead the change—partner with a local agency and help modernize how infrastructure gets built and financed.

For Public Agencies

Collaborate with local schools to advance your digital transformation while investing in the next generation.

Build the Bridge Between Education and Innovation

This initiative is more than a project—it's a pathway for students to actively shape the future of digital infrastructure. By working together, schools and public agencies can unlock smarter systems, stronger compliance, and more equitable access to opportunity.

Ready to participate? Start by connecting with a local public works agency today.