

K12 Technical Roadmap and EB Plan

K12 Modernization: Comprehensive Implementation Plan

Presentation Date: October 2025

Audience: Senior IT Leadership & Business Stakeholders

Duration: 60 minutes (45 min presentation + 15 min Q&A)

Timeline: October 15, 2025 - May 1, 2026 (28 weeks)

K12 Modernization

IT Stakeholder Presentation

October 2025

- College Foundation, Inc.
 - North Carolina SEAA Programs
 - **Timeline:** October 15, 2025 - May 1, 2026
-

Agenda

1. **Executive Summary** – Project overview and timeline
 2. **Platform Overview** – Complete system scope
 3. **Complete Feature Inventory** – All core capabilities
 4. **Implementation Roadmap** – Phased delivery plan
 5. **Resource Allocation** – Team structure and assignments
 6. **Risk Assessment** – Critical areas and mitigation
 7. **Success Criteria** – Delivery milestones and quality metrics
 8. **Next Steps** – Execution and monitoring
-

Executive Summary

Complete K12 Modernization Scope

Timeline: October 15, 2025 - May 1, 2026 (28 weeks)

Platform Serves:

- Two scholarship programs (ESA+, Opportunity Scholarship)
 - Up to 80,000 concurrent users
 - Four web portals (Household, School, Provider, Admin)
 - Comprehensive scholarship lifecycle management
-

Core Capabilities Required

- **Household & Student Management** - Applications, renewals, profiles, school selection
- **School Management** - Registration, certification, endorsement, compliance
- **Provider Management** - Enrollment, directory, invoicing, payments
- **Admin Operations** - Application processing, verification, lottery, awards
- **Payment Systems** - Award calculation, disbursements, ESA+ purchasing, reconciliation
- **Verification & Compliance** - Eligibility, domicile, income, mandatory reviews

Critical Deadline: May 1, 2026 - All core functionality must be production-ready

Cross-Cutting Concerns Required

- Communication Center
- Notifications Center
- Rules Engine
- Entra
- Query Builder
- Task Engine
- PandaDocs
- Audit and Logging
- Internationalization
- PID Generator/Integration

3rd-Party Integration(s)

- ClassWallet
- RDS??
- SparkPost (Email Engine)

Data Migrations

- Schools
- Providers
- Household and Students
- Operational Data (existing)

Platform Overview

Enrollment Builder (EB) Overview

- Initial plan to use EB for application forms
 - based on POC
 - simple workflow logic
 - limited validation
- Requires API for data submission and transitions
- Requires Data Mapper

- Transform dynamic form data to static schema
 - Complex mapping rules
-

Enrollment Builder (EB) Continued Development (Current)

- 2-3 resources
 - Add additional/complete validation to form fields
 - Need to map and create configurations for all forms/fields
 - Current estimate is 1.5 PIs to stabilize current POC version
 - (2 resources) Design and implement the **Data Mapper** service to migrate data to static schema
 - has dependency on complete static schema for all enrollment and registration data
-

Enrollment Builder (EB) Continued Development (Refactor)

- 3-4 resources
 - Refactor to use State Machine tools
 - Transition Logic to UI
-

Enrollment Builder (EB) Time Estimates

- EB UI and configuration tools (2 PIs).
 - Data Mapper service (1.5 to 2 PIs).
-

Total: 110+ distinct features to implement

Household & Student Management (15+ features)

- Application submission (ESA+, OS)
 - Renewal workflows
 - Profile and account management
 - School selection and transfers
 - Communication and notifications
-

School Management (20+ features)

- Registration and profiles
 - Student enrollment tracking
 - Certification and endorsement workflows
 - Payment and financial tracking
 - Compliance and reporting
-

Provider Management (12+ features)

- Provider registration and enrollment

- Service directory
 - Invoice and payment processing
 - Compliance and quality management
-

Admin Portal Operations (30+ features)

- Application processing and review
 - Verification management (domicile, income, sampling)
 - Award management (lottery, calculation, lifecycle)
 - Document management
 - Communication and case management
 - Reporting and analytics
 - System administration
-

Payment & Financial Systems (18+ features)

- Payment processing (direct payment schools)
 - ESA+ wallet and purchasing
 - Expense approval and compliance
 - Tax reporting and reconciliation
-

Verification & Compliance (15+ features)

- ??: State agency integrations
 - Eligibility verification workflows
 - Ongoing compliance monitoring
 - Audit and compliance reporting
-

Complete Feature Inventory

Household & Student Management Features

Household Application Workflows

- ESA+ new application (disability documentation, EDD upload, LEA Release)
 - Opportunity Scholarship application (income verification, lottery)
 - Renewal applications (simplified for returning students)
 - Application status tracking and notifications
-

Profile & Account Management

- Student and household information
- Contact and communication preferences

- Document storage and retrieval
 - Award and payment history
-

School Selection & Transfers

- School search and directory
 - Enrollment confirmation
 - Mid-year transfer requests
 - School type identification (Direct Payment vs Reimbursement)
-

ESA+ Purchasing (ClassWallet):

- Browse allowable expenses
 - Submit purchase requests
 - Track approvals and payments
 - View transaction history
-

Communications

- To-Do lists and tasks
 - Email/SMS notifications
 - In-app messaging
 - Document upload reminders
-

School Management Features

Registration & Profile:

- School registration workflow
 - DNPE verification
 - School type classification
 - Banking information for payments
 - Administrator account management
-

Student Enrollment:

- Student roster management
 - Enrollment confirmations
 - Semester updates
 - Transfer processing
 - Enrollment reporting
-

Certification & Endorsement

- Annual school certification (tuition/fees)
 - Parent endorsement requests (semester)
 - Deadline tracking and reminders
 - Certification approval workflow
-

Payment & Financial

- Payment schedule visibility
 - Expected payment calculations
 - ACH deposit tracking
 - Payment reconciliation
 - Dual award allocation (OS + ESA+)
-

Compliance

- Testing requirements (grades 3-12, July 15 deadline)
 - Financial review (70+ students, CPA requirement)
 - Background checks (school leadership)
 - Compliance reporting
-

School Portal

- Dashboard with key metrics
 - Student scholarship list
 - Payment history
 - Document management
 - Communication center
-

Provider Management Features

Registration & Enrollment

- Provider application submission
 - Credentials and license verification
 - Background check processing
 - Service category selection
 - Provider agreement signature
 - Approval workflow
-

Provider Directory

- Public provider search
- Category-based browsing
- Service area filters

- Contact information
 - Service offerings
-

Invoice & Payment

- Invoice submission
 - Purchase request matching
 - Payment processing via ClassWallet
 - Payment confirmation
 - Payment history
 - Reconciliation
-

Provider Compliance

- Credential maintenance
 - Annual reviews
 - Service quality monitoring
 - Complaint tracking
 - Performance metrics
-

Admin Portal Operations - Processing

Application Processing

- Application queue management
 - Application review workflows
 - Document verification
 - Data validation
 - Exception handling
 - Processing status tracking
-

Eligibility Determination

- Criteria evaluation
 - Income calculation
 - Domicile verification review
 - Disability documentation review
 - Exception and appeal handling
 - Decision recording and notification
-

Domicile Verification

- Electronic verification via state agencies (DMV, DPI, Revenue, DHHS, Commerce, Elections)
- Document evidence review (utility bills, bank statements)

- Multi-evidence coordination
 - Verification result tracking
-

Income Verification (OS):

- 4% random sample selection
 - IRS transcript validation
 - Income calculation review
 - Extension request processing
-

Application Sampling

- Random selection (4% of applications)
 - Error-prone identification
 - Verification case management
 - Non-compliance handling
-

Admin Portal Operations - Awards & Documents

Award Management

Lottery Administration:

- Lottery batch creation
 - Random selection processing
 - Award offer generation
 - Waitlist management
 - Audit trail maintenance
-

Award Calculation

- ESA+ amount determination (\$9,000 vs \$17,000)
 - OS tiered calculation (income-based)
 - Dual award ordering
 - Per pupil allocation integration (DPI)
 - Award recalculation for changes
-

Award Lifecycle

- Award offer management
 - Acceptance tracking
 - Award activation
 - Mid-year adjustments
 - Renewal processing
-

Document Management

- Document upload processing
 - Type classification
 - Virus scanning
 - Review workflows
 - Approval/rejection
 - PandaDocs e-signature integration
 - Secure storage and retrieval
-

Communication & Case Management:

- Bulk campaigns
 - Email template management
 - Scheduled notifications
 - Deadline reminders
 - Case assignment and tracking
 - Exception queue management
-

Admin Portal Operations - Reporting

Operational Dashboards

- Application pipeline status
 - Processing time metrics
 - Verification completion rates
 - Award utilization tracking
 - Payment disbursement status
 - School compliance monitoring
 - Provider activity metrics
 - System performance indicators
-

Compliance Reports

- Statutory reporting
 - Audit trail exports
 - Financial reconciliation
 - State agency coordination
 - Verification completion
 - Award distribution analysis
 - Fraud detection indicators
-

Business Intelligence

- Program participation trends
 - Geographic distribution
 - Demographic insights
 - Financial projections
 - Resource allocation
 - Capacity planning
 - Performance benchmarking
-

System Administration

- User account management (RBAC)
 - Role and permission configuration
 - Microsoft Entra ID integration
 - Audit logging
 - System configuration
 - Feature flags
 - Policy version control
-

Payment & Financial Systems

Payment Processing

- Payment schedule management (Aug/Sep, Jan/Feb)
 - Parent endorsement validation
 - Tuition and fee calculation
 - Dual award allocation (OS first, then ESA+)
 - ACH payment file generation
 - Payment confirmation tracking
 - Failed payment handling
 - Payment reconciliation
-

ESA+ Wallet (ClassWallet)

- Account provisioning
 - Fund allocation after tuition
 - Balance tracking
 - Transaction logging
 - Rollover calculation
-

ESA+ Purchasing & Expenses

Allowable Expense Categories:

- Curriculum and materials

- Tutoring and services
 - Educational technology
 - Therapies
 - Summer programs
 - AP exams
 - Transportation
-

Purchase Processing

- On-marketplace purchases
 - Off-marketplace invoice submission
 - Category validation
 - Approval/rejection workflow
 - Payment to vendors
 - Transaction recording
-

Compliance & Reporting

- Minimum spending (\$1,000 threshold)
 - Rollover management (\$4,500 annual, \$30,000 lifetime caps)
 - Tax reporting (1099-G for non-tuition spending)
 - Prohibited expense detection
 - Accessory timing and frequency rules
-

Verification & Compliance Systems

State Agency Integration Platform

Agency Integrations Required

- **DMV** - Driver's license/ID verification
 - **DPI** - School enrollment, per pupil allocation
 - **Department of Revenue** - Tax filing verification
 - **DHHS** - Public benefits verification
 - **Department of Commerce** - Public benefits
 - **State Board of Elections** - Voter registration
 - **State CIO** - Infrastructure coordination
-

Integration Capabilities

- Electronic verification requests
- Response processing and validation
- Timeout and error handling

- Manual fallback workflows
 - Data privacy compliance
 - Integration health monitoring
 - Response time SLA tracking
-

Eligibility Verification

Domicile Determination

- G.S. 115C-366 implementation
 - Multiple evidence types
 - Electronic verification priority
 - Document upload alternatives
 - Conflicting evidence resolution
-

Disability Verification (ESA+)

- EDD validation
 - IEP/504 plan review
 - Prior public school verification
-

Income Verification (OS)

- Income calculation worksheet
 - IRS transcript validation
 - Income tier determination
-

Ongoing Compliance

Annual Verifications

- Per pupil allocation update (DPI, Dec 1)
 - School testing compliance (July 15)
 - School financial reviews (70+ students)
 - Provider credential renewals
 - Background check renewals
-

Audit & Reporting

- Immutable event logging
- Compliance audit trail
- Regulatory reporting

- Exception tracking
 - Fraud detection
-

Cross-Cutting Platform Services

Essential Infrastructure for All Features

Communication Center

- Email template engine
 - Scheduled campaigns
 - Event-triggered notifications
 - Deadline reminders
 - Multi-channel delivery (Email, SMS, Print/Mail)
 - Localization (EN/ES)
-

Messaging Center

- In-app notifications
 - Banner alerts and modals
 - Message inbox
 - To-Do task orchestration
 - Real-time updates
-

Rules Engine

- Eligibility calculation rules
 - Income verification rules
 - Award calculation logic
 - Purchase approval rules
 - Compliance requirements
 - Policy versioning (by program year)
-

Document Service

- Secure storage (Azure Blob)
 - Document lifecycle management
 - Virus scanning
 - PandaDocs e-signature integration
 - Access controls
 - Retention policies
-

Identity & Security

- Microsoft Entra ID integration
 - Role-based access control (RBAC)
 - Multi-factor authentication
 - Single sign-on (SSO)
 - Security audit logging
-

Query & Reporting

- Cube.js reporting layer
 - Ad-hoc query builder
 - Pre-built report templates
 - Dashboard visualizations
 - Data export capabilities
-

#Implementation Roadmap - Complete Timeline

28-Week Phased Delivery Plan (Oct 15, 2025 - May 1, 2026)

```

gantt
    title K12 SEAA Complete Implementation (28 Weeks)
    dateFormat YYYY-MM-DD
    axisFormat %b %d

    section Phase 1: Foundation
    ESA+ Application Forms :a1, 2025-10-15, 2w
    OS Application Forms :a2, 2025-10-15, 2w
    Renewal Workflows :a3, 2025-10-29, 1w
    Income Verification :a4, 2025-11-05, 1w
    School Registration :a5, 2025-11-12, 2w
    Provider Registration :a6, 2025-11-12, 2w

    section Phase 2: Services
    Communication Center :b1, 2025-11-26, 2w
    Messaging Center :b2, 2025-11-26, 2w
    Rules Engine :b3, 2025-12-10, 2w
    Security Integration :b4, 2025-12-17, 1w
    Document Management :b5, 2025-12-17, 1w

    section Phase 3: Admin
    Domicile Verification :c1, 2025-12-24, 2w
    State Agency Integration :c2, 2025-12-24, 2w
    Lottery Service :c3, 2026-01-07, 1w
    Award Calculation :c4, 2026-01-14, 2w
    Certification Workflows :c5, 2026-01-21, 1w

    section Phase 4: Financial
    Payment Infrastructure :d1, 2026-01-28, 2w

```

ClassWallet Integration	:d2, 2026-02-04, 2w
Purchase Workflows	:d3, 2026-02-11, 1w
Payment Reconciliation	:d4, 2026-02-11, 1w
section Phase 5: Portals	
School Portal Features	:e1, 2026-02-18, 2w
Provider Portal Features	:e2, 2026-02-18, 2w
section Phase 6: Compliance	
Compliance Monitoring	:f1, 2026-03-04, 2w
Tax Reporting	:f2, 2026-03-11, 1w
Rollover Calculation	:f3, 2026-03-11, 1w
section Phase 7: Testing	
End-to-End Testing	:g1, 2026-03-18, 2w
Performance Testing	:g2, 2026-03-25, 1w
Security Testing	:g3, 2026-03-25, 1w
section Phase 8: UAT	
User Acceptance Testing	:h1, 2026-04-01, 2w
Defect Resolution	:h2, 2026-04-08, 2w
section Phase 9: Launch	
Production Setup	:i1, 2026-04-15, 1w
Staff Training	:i2, 2026-04-22, 1w
Go-Live	:crit, i3, 2026-04-29, 2d

Roadmap Recommendation (Phase 1)

Enrollment Builder (EB) Decision

Risks Identified

- High complexity and uncertainty
 - Significant development effort to date
 - Require 1.5 PIs to Stabilize current POC version
 - Potential delays impacting May 1, 2026 deadline
 - Limited flexibility for future changes
 - Performance concerns at scale
 - Enrollment Builder UI limitations
 - Naive POC Architecture
-

Data Mapper Challenges

- Complex mapping rules
- Error handling and validation

- Performance at scale
 - Maintenance burden
 - Current Architecture limitations
-

Noted Feature Limitation

Prompts cannot support self-service for:

- Developing new prompts
- Any system functionality beyond data gathering

The kinds of changes above will always require a support ticket for custom development by CFI. -

Original CFI/SEAA Proposal

Enrollment Builder (EB) Paused

The current Enrollment Builder (EB) POC will be paused until the core platform is delivered and stable.

Key Recommendations for CORE

1. Focus on core features first
 1. Parallel development approach
 2. Angular Reactive Forms
 1. Advanced validation, type-safe, well-tested
 2. Advanced form patterns
 3. Accessibility compliance
 3. Cross-cutting services early
 1. Foundation for all features
 4. Data Migration early/continuous
-

Roadmap Recommendation (Phase 2)

Dynamic Forms Approach

- Enrollment Builder (EB re-imagined)
 - Dynamic Form Generation to supplement core forms
 - scope: limited, targeted use cases, meta-data use
 - integration with ad-hoc Query Builder
-

Implementation Roadmap - Phase Details

- Sample...
-

Phase 1: Foundation & Core Applications (Weeks 1-8)

Weeks 1-4 (Oct 15 - Nov 11):

- ESA+ and OS application forms (reactive forms)
- Application submission workflows
- Document upload integration
- Basic student profile management
- Application status tracking

Weeks 5-8 (Nov 12 - Dec 9):

- Renewal workflows (both programs)
- Income verification workflow
- Eligibility determination submission
- Household profile management
- School registration and profile
- Provider registration workflow

Deliverable: Families can submit applications, schools and providers can register

Phase 2: Cross-Cutting Services (Weeks 9-12)

Weeks 9-10 (Dec 10 - Dec 23):

- Communication Center (email templates, triggers)
- Messaging Center (in-app notifications)
- Microsoft Entra Security integration
- Document Management (PandaDocs)

Weeks 11-12 (Dec 24 - Jan 6):

- Rules Engine integration
- Query Builder (Cube.js) foundation
- Basic reporting dashboards

Deliverable: Communication infrastructure operational, security implemented

Phase 3: Advanced Workflows & Admin (Weeks 13-16)

Weeks 13-14 (Jan 7 - Jan 20):

- Domicile verification workflows
- State agency integration framework
- Verification sampling service
- Admin application review workflows

Weeks 15-16 (Jan 21 - Feb 3):

- Lottery service implementation

- Award calculation engine
- Award lifecycle management
- School certification workflows
- Parent endorsement workflows

Deliverable: Complete admin processing capabilities, awards can be offered

Phase 4: Financial & Payment Systems (Weeks 17-18)

Weeks 17-18 (Feb 4 - Feb 17):

- Payment processing infrastructure
- ACH payment file generation
- ClassWallet integration
- ESA+ purchase request workflows
- Expense approval rules engine
- Payment reconciliation

Deliverable: End-to-end payment processing operational

Phase 5: School & Provider Portals (Weeks 19-20)

Weeks 19-20 (Feb 18 - Mar 3):

- School portal features (dashboard, roster, certification, payments)
- Provider portal features (directory, invoicing, payments)

Deliverable: Schools and providers have full self-service capabilities

Phase 6: Compliance & Reporting (Weeks 21-22)

Weeks 21-22 (Mar 4 - Mar 17):

- Compliance monitoring workflows
- Testing requirement tracking
- Financial review management
- Background check tracking
- Tax reporting (1099-G)
- Rollover calculation
- Minimum spending enforcement

Deliverable: Full compliance and regulatory reporting capabilities

Phases 7-9: Testing & Launch (Weeks 23-28)

Weeks 23-24 (Mar 18 - Mar 31):

- End-to-end workflow testing

- Performance and load testing (80K users)
- Security testing and penetration testing
- Integration testing (all external systems)

Weeks 25-26 (Apr 1 - Apr 14):

- User acceptance testing
- Defect resolution
- Performance optimization
- User feedback incorporation

Weeks 27-28 (Apr 15 - Apr 28):

- Production environment setup
- Data migration and validation
- Staff training
- Documentation finalization

May 1, 2026: Production Launch 

Resource Allocation & Team Structure

Development Teams (16 FTE Total)

Frontend Team (7 FTE)

- Angular application development (4 portals)
- Reactive forms implementation
- Portal UI components
- Responsive design and accessibility
- Material UI integration

Backend Team (7 FTE)

- .NET API development
- Business logic implementation
- Database schema design and optimization
- Integration development
- Performance optimization

Integration Team (2 FTE)

- ClassWallet API integration
- PandaDocs integration
- ???: State agency connections (7 agencies)

- Payment rails integration
 - External system coordination
-

QA Team (2-4 FTE)

- Test plan development
 - Automated testing (unit, integration, E2E)
 - Manual testing
 - UAT coordination
 - Defect tracking and resolution
-

Subject Matter Experts (6 FTE)

- Business analyst (requirements)
 - DBA (database optimization)
 - ?? Security specialist (compliance, penetration testing)
 - DevOps Lead (infrastructure, CI/CD)
-

Risk Assessment - High Priority

Critical Risk Areas & Mitigation

State Agency Integrations (HIGH RISK)

- **Challenge:** 7 different agencies, varying APIs, unknown response times, coordination complexity
 - **Mitigation:**
 - Early integration testing starting Phase 3
 - Fallback to manual verification workflows
 - Regular agency coordination meetings
 - Integration health monitoring and SLA tracking
 - Dedicated integration team member
-

ClassWallet Integration (HIGH RISK)

- **Challenge:** Complex ESA+ workflows, vendor dependency, webhook reliability, transaction integrity
 - **Mitigation:**
 - Sandbox environment testing early (Phase 4)
 - Idempotency keys for all transactions
 - Comprehensive error handling and retry logic
 - Regular vendor communication and status checks
 - Transaction reconciliation processes
-

Payment Processing (HIGH RISK)

- **Challenge:** Financial transactions, ACH accuracy, dual award ordering, regulatory compliance
 - **Mitigation:**
 - Extensive testing with sample data
 - Automated reconciliation workflows
 - Comprehensive audit trail for all transactions
 - Financial controls and approval gates
 - Regular reconciliation with schools
-

Data Migration (HIGH RISK)

- **Challenge:** Legacy data quality, volume, complexity, schema mapping
 - **Mitigation:**
 - Early data profiling (Phase 1)
 - Iterative migration testing
 - Phased migration approach
 - Validation checkpoints
 - Rollback procedures
-

Risk Assessment - Medium Priority

Performance at Scale (MEDIUM RISK)

- **Challenge:** 80,000 concurrent users, peak load periods (application windows, payment cycles)
 - **Mitigation:**
 - Load testing starting Phase 7
 - Performance monitoring infrastructure
 - Caching strategies (Redis)
 - Database optimization
 - Azure auto-scaling configuration
-

User Adoption & Training (MEDIUM RISK)

- **Challenge:** Multiple user groups, varying technical proficiency, change management
 - **Mitigation:**
 - Early UAT involvement (Phase 8)
 - Comprehensive training program (Phase 9)
 - User documentation and video tutorials
 - Phased rollout by user group
 - Dedicated support during launch
-

Scope Creep (MEDIUM RISK)

- **Challenge:** Feature requests, changing requirements, stakeholder expectations
 - **Mitigation:**
 - Formal change control process
 - Phase 2 feature parking lot
 - Regular stakeholder communication
 - Sprint-level scope reviews
 - Executive escalation for scope changes
-

Success Criteria & Quality Metrics

Delivery Milestones

- ✓ **Phase 1 complete** - December 9, 2025
 - ✓ **Cross-cutting services** - December 23, 2025
 - ✓ **Admin features** - February 3, 2026
 - ✓ **Financial systems** - February 17, 2026
 - ✓ **Portal features** - March 3, 2026
 - ✓ **Compliance features** - March 17, 2026
 - ✓ **Testing complete** - March 31, 2026
 - ✓ **UAT approved** - April 14, 2026
 - ✓ **Production ready** - April 28, 2026
 - ✓ **Production launch** - **May 1, 2026** ✓
-

Quality Metrics

- ✓ **Zero critical data integrity issues** in production
 - ✓ **80,000+ concurrent users** supported (load tested)
 - ✓ **<2% defect escape rate** post-UAT
 - ✓ **95%+ user satisfaction** in initial surveys
 - ✓ **100% regulatory compliance** (audit ready)
 - ✓ **之心 second page load times** (95th percentile)
 - ✓ **99.9% uptime** during business hours
 - ✓ **Complete audit trail** for all transactions
-

Business Outcomes

- ✓ **ESA+ and OS applications processed without manual intervention**
 - ✓ **Award calculations automated and auditable**
 - ✓ **Payment disbursements on schedule**
 - ✓ **Reduced support call volume (improved UX)**
 - ✓ **Staff productivity gains from automation**
 - ✓ **Improved user experience** across all portals
 - ✓ **Complete transparency** for families, schools, providers
-

Dependencies & Prerequisites

External Dependencies (Critical Path Items)

Required for Phase 4 (February 2026):

ClassWallet API - ESA+ purchasing, wallet management**

- Sandbox access needed by January 2026
 - Webhook endpoints configured
 - Transaction testing completed
-

PandaDocs API - Document e-signatures**

- API credentials and templates
 - Webhook callback configuration
 - Integration testing
-

Payment Rails - ACH disbursement infrastructure**

- Bank account setup and verification
- ACH file format specification
- Test transaction capability

Required for Phase 3 (January 2026):

State Agency APIs - Domicile and income verification**

- DMV, DPI, Revenue, DHHS, Commerce, Elections
- API contracts and authentication
- Test environments
- Data use agreements/MOUs

Required for Phase 2 (December 2025):

Azure ServiceS - Hosting, storage, identity

- Production subscription
 - Microsoft Entra ID tenant
 - Blob storage configuration
 - APIM setup
-

Email/SMS Providers - Communication delivery

- Service selection and contracts
 - API integration
 - Template configuration
-

Technical Prerequisites

- Development and staging environments (completed)
 - CI/CD pipeline established/stable (in progress)
 - Monitoring and logging infrastructure (in progress)
 - Backup and disaster recovery (Phase 9)
 - Production environment (Phase 9)
-

Organizational Prerequisites

- Project governance structure
 - Stakeholder approval process
 - Change management procedures (in development)
 - Training program development (Phase 8-9)
 - Support team readiness (Phase 9)
 - Communication plan execution (ongoing)
-

Implementation Approach & Execution

Proven Development Methodology

Technology Stack (Proven Patterns)

- Angular reactive forms (type-safe, well-tested)
 - .NET APIs (scalable, maintainable)
 - SQL Server (static schema, high performance)
 - Azure services (enterprise-grade infrastructure)
 - Material UI (accessibility compliant)
-

Development Approach

- Domain-Driven Design (DDD)
 - Agile/Scrum methodology
 - 10-day sprints
 - Continuous integration/deployment
 - Automated testing (unit, integration, E2E)
 - Code reviews and quality gates
 - Regular stakeholder demos
-

Parallel Development Strategy

- Frontend and backend teams work simultaneously
 - Portal development in parallel (Phases 1-5)
 - Testing starts early (Phase 7)
 - No critical blocking dependencies
 - Risk mitigation through redundancy
-

Monitoring & Course Correction

How We Stay On Track

Progress Tracking

- Sprint velocity monitoring
 - Burn-down charts by phase
 - Feature completion metrics
 - Defect tracking and trends
 - Integration test results
 - Performance benchmarks
-

Risk Monitoring

- Weekly risk register review
 - External dependency status
 - Resource availability tracking
 - Technical debt assessment
 - Testing coverage metrics
-

Quality Gates

- Code coverage thresholds (>80% custom)
 - Performance benchmarks (<3s page load)
 - Security scan results (zero critical)
 - Accessibility compliance (WCAG 2.1 AA)
 - Load test results (80K concurrent users)
-

Course Correction Triggers

- Sprint velocity drops >20%
- Critical defects discovered
- External dependency delays
- Resource availability issues
- Scope creep detected

Contingency Plans

- Resource augmentation options
 - Scope prioritization matrix
 - Phase schedule buffers
 - Alternative integration approaches
 - Manual workflow fallbacks
-

AI & Automation??

- Developer acceleration tools (code generation)
- Automated code reviews (SonarQube)
- AI-assisted testing (test case generation)
- ChatGPT for documentation and support

Post-Launch Support & Phase 2

Production Support Plan

Launch Support (May-June 2026)

- Dedicated support team (24/5 coverage)
 - Rapid response to critical issues
 - User adoption monitoring
 - Performance tuning
 - Quick-fix deployment capability
-

Ongoing Support (July 2026+)

- Standard support hours (8am-6pm EST)
 - Incident management process
 - Change request handling
 - Monthly maintenance windows
 - Quarterly feature releases (minor)
-

Monitoring & Operations

- Application performance monitoring (APM)
 - Error tracking and alerting
 - User analytics
 - System health dashboards
 - Capacity planning
-

Phase 2 Planning (Post-May 1, 2026)

Evaluation Period (May-July 2026):

- Collect operational data
- Analyze user feedback
- Identify enhancement opportunities
- Assess technical debt

Potential Phase 2 Features:

- Advanced reporting and analytics
- Mobile applications (native iOS/Android)
- Enhanced provider marketplace
- Automated verification improvements
- AI-powered fraud detection
- Parent self-service enhancements
- **Enrollment Builder re-evaluation** (data-driven decision)

Phase 2 Decision Criteria:

- Actual form change frequency
 - User feedback and pain points
 - Operational efficiency metrics
 - ROI analysis
 - Technical debt assessment
 - Budget availability
-

Key Success Factors

What Makes This Plan Achievable

Focused Scope

- Clear feature inventory (110+ features)
 - No nice-to-have features in Phase 1
 - Proven technology stack
 - Parallel development possible
-

Adequate Timeline

- 28 weeks from October 15 to May 1
 - Realistic phase durations
 - Built-in testing time (6 weeks)
 - Buffer for unexpected issues
-

Right Resources

- dedicated FTEs
 - Specialized teams (frontend, backend, integration, QA)
 - SME support available
 - Vendor partnerships established
-

Clear Governance

- Defined decision-making process
 - Regular stakeholder communication
 - Change control procedures
 - Escalation paths
-

Risk Management

- Identified high-risk areas
 - Mitigation strategies defined
 - Contingency plans ready
 - Regular risk reviews
-

Quality Focus

- Automated testing throughout
 - Early and continuous testing
 - User acceptance testing (2 weeks)
 - Performance and security testing
 - Quality gates at each phase
-

Stakeholder Alignment

- Clear requirements and priorities
 - Regular demos and feedback
 - Transparent communication
 - Shared understanding of constraints
-