Future Outlook of IT in North Dakota

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Keeping Services Moving Forward

Business continuity in IT is about **resilience**—the ability to sustain essential services as technology, challenges, and needs change.

RESILIENT INFRASTRUCTURE

Maintain reliable infrastructure, recovery capabilities and technology lifecycles so critical services can continue when disruptions occur.

SUSTAINABLE SYSTEMS

Modernize aging systems, reduce technical debt and address single points of failure before they become operational problems.

STATEWIDE READINESS

Coordinate across agencies, security teams and enterprise platforms so continuity is planned before an incident — not improvised during one.

Statewide IT Plan & Proposed Projects for Next Biennium

Statewide IT Planning

A collaborative, ongoing process led by ITD that brings together state agencies to define and maintain a shared tech vision.

The result is twofold:

1. Through regularly occurring meetings, ITD staff collect and maintain information relating to current technology inventory. They also work with agencies to devise and capture IT initiative ideas that will help support agency strategic goals and business objectives. This information is available through the ND Service Portal and (soon) the NDIT Dashboard.

Executive Branch State Agencies
Shall participate in the IT planning process

Judicial & Legislative Branches
Aren't required to participate

Higher Education
Isn't required to submit information to ITD, but does coordinate and collaborate with ITD on IT planning topics

Statewide IT Planning (Cont.)

2. We publish the annual Statewide IT Plan, which is a strategic guide that seeks to (in even-numbered years):
   - Provide an overview of "…technology issues for the next biennium," as required by NDCC § 54-35-15.2(13).
   - Capture IT asks. We must do so for $500,000+ budget asks, per NDCC § 54-59-23(1).
   - Assess the alignment of those IT asks with statewide technology priorities, noting which support statewide strategies strongly, and which don't support statewide goals.
   - Offer other insights that may assist the Governor's Office and the Office of Management and Budget in the creation of the Executive Budget for the next legislative session.

Goals, Objectives, & Initiatives

Per NDCC § 54-59-11, "… the Statewide IT Plan must be developed with emphasis on agency strategic goals, business objectives, and alignment to statewide IT initiatives."

Agency Strategic Goals

Long-term outcomes established by individual agencies that define their purpose and direction, typically aligned with their mission and legislative mandates.

Strategic goals are aspirational and may take multiple years or biennia to accomplish.

Business Objectives

Specific, measurable actions that agency staff intend to accomplish within a defined timeframe to support their strategic goals.

These often involve improving operational performance, customer service, or cost-effectiveness.

Statewide IT Initiatives

The process of ensuring that individual agency plans and projects support and are consistent with broader state IT priorities, such as cybersecurity, digital transformation, and modernization efforts.

Statewide IT Strategic Initiatives

- **Rationalize Applications**
  - Reduce software redundancy and maximize value.
- **Reduce Technical Debt**
  - Modernize outdated systems for sustainability.
- **Leverage ND Gateway**
  - Integrate or build apps with North Dakota's unified digital services portal.
- **Maximize IT Security**
  - Protect data, infrastructure, and public trust.
- **Modernize Data**
  - Treat data as a strategic asset for better services and policy decisions.

Statewide IT Strategic Initiatives (Cont.) Definitions

- **Rationalize Applications**
  - The process of systematically reviewing an organization's portfolio of software applications to determine which ones should be retained, refreshed, reviewed, or retired. This includes cleaning up and optimizing the portfolio so the organization spends less, supports fewer redundant systems, and gains more value from its investments. Solutions that support multiple lines of business, or enterprise usage, are preferable.
- **Reduce Technical Debt**
  - Taking deliberate actions to improve the quality, maintainability, and sustainability of technology systems by addressing shortcuts, outdated practices, or deficiencies that were introduced in the past. This includes replacing old technologies (i.e., mainframe-based systems) with modernized solutions.

Statewide IT Strategic Initiatives (Cont.) Definitions

- **ND Gateway**
  - This is evolving from a single portal for North Dakota's businesses to the state's unified digital front door for all citizens. To support this unified vision and ensure modern, efficient service delivery:
    - All digital services will be listed or interface with ND Gateway.
    - If digital services need to be built, we must strongly consider development on the low-code technology that powers ND Gateway.
- **Cybersecurity Posture Enhancement**
  - By strengthening North Dakota's whole-of-state IT security posture, agencies improve public trust by protecting sensitive citizen data, critical infrastructure, and essential government services from cyber threats that could disrupt operations, compromise privacy, and erode confidence in government.

Statewide IT Strategic Initiatives (Cont.) Definitions

- **Data Modernization**
  - The act of enhancing the state’s ability to deliver efficient, citizen-focused services, and to make informed policy decisions, by ensuring that data is treated as a strategic asset that's managed using modern, standardized, secure practices. A data-modernization initiative is a coordinated, enterprise-level effort to transition from legacy data systems and practices to modern, scalable, and secure data platforms, tools, and governance models. The purpose of data modernization is to ensure that data is accessible, reliable, interoperable, and actionable across the enterprise, thereby supporting better decision-making, innovation, and service delivery.

Proposed Major IT Projects
Next Biennium

- **Major Project Qualifiers**
  a) Has an estimated total cost, as defined by ITD, of $5 million or more;
  b) Requires one year or longer to reach operational status; or
  c) Requires oversight due to its potential benefits, risks, public impact, visibility, or other significant reason.
- **Therefore**
  - Some of the projects on the list of proposed major IT projects for the next biennium will clearly fit item a. above.
  - Some are here based on professional judgement that they will fit item a. or b.
  - IT asks related to construction projects, or where hardware costs are most of the budget spend (and IT services are minor in comparison), aren't considered major (usually).
  - Routine operational “projects” may not be deemed major based on degree of risk.

Proposed Major IT Projects (Cont.)
Next Biennium

Agency Name	Project Name	Project Description	Existing Program	Rationalize Applications	Reduce Tech Debt	Leverage ND Gateway	Maximize Security	Modernize Data
Department of Corrections and Rehabilitation	Client Management System	To continue implementation of a replacement Integrated Offender Management System following completion of procurement and project initiation activities during the 2025–2027 biennium.	Yes	5	5	1	4	4
Department of Corrections and Rehabilitation	Data Strategy & Reporting Buildout	Current capabilities don't fully support the department's need for timely, accessible, and actionable data for operational, management, and executive decision-making.	No	2	2	1	2	3
Department of Corrections and Rehabilitation	Learning Management System	The department currently lacks a centralized Learning Management System (LMS) to effectively manage learning plans, online and face-to-face courses, and automated student progress tracking.	No	3	2	1	2	2
Department of Corrections and Rehabilitation	Open Records Request	Currently, managing open records requests requires significant manual tracking and coordination. Staff must organize requests, monitor statutory response deadlines, maintain documentation, coordinate responses, archive completed requests, and track the status of outstanding items. These manual processes increase administrative workload and create a risk of missed deadlines or inconsistent documentation.	No	1	1	1	1	3

Key: 1 is low alignment, 5 is high alignment

Proposed Major IT Projects (Cont.)
Next Biennium

Agency Name	Project Name	Project Description	Existing Program?	Rationalize Applications	Reduce Tech Debt	Leverage ND Gateway	Maximize IT Security	Modernize Data
Department of Corrections and Rehabilitation	Policy & Complaint Software/Criminal Investigation Tracking Program/PREA Reporting	A centralized solution to manage policies, complaints, internal investigations, and PREA reporting requirements. The system will improve tracking, compliance, accountability, and audit readiness across the department.	No	1	2	1	3	3
Department of Corrections and Rehabilitation	Timekeeping System (Workforce)	The proposed project would implement Workforce, a timekeeping solution already used by other large North Dakota state agencies. The project would move all DOCR employees into one timekeeping system, replacing both PeopleSoft Time and Labor and the InTime scheduling solution currently used at NDSP.	No	1	2	1	2	2
Department of Mineral Resources	NorthStar Phase 5	This plan includes: Data Mart implementation, creation of a data analytics platform, a subscription services upgrade, integration of Stripper Well information into Northstar (from Classic), integration of Well Allocation Commingling information into Northstar (from Classic), and the implementation of efficiencies and fixed bugs.	No	1	3	3	3	4
Information Technology Department	Enterprise Platforms - Identity Management	North Dakota Login is the state's enterprise identity platform for public-facing applications, serving over 1.3 million citizen and external accounts across 99 applications used by 29 agencies. The platform runs on two aging foundations that both must be retired and replaced.	No	4	4	5	4	1

Proposed Major IT Projects (Cont.)
Next Biennium

Agency Name	Project Name	Project Description	Existing Program?	Rationalize Applications	Reduce Tech Debt	Leverage ND Gateway	Maximize IT Security	Modernize Data
Job Service	UI Insurance Modernization	Job Service is requesting $20 million in general funds to continue support of the modernization of the mainframe-based unemployment insurance technology system. During the 2023 Legislative Session, Job Service North Dakota (JSND) requested SIIF funding for the unemployment insurance modernization project. While funding was ultimately provided through ARPA, the use of ARPA dollars imposed a hard funding expiration that will occur before the system can be completed.	Yes	5	5	1	5	5
Retirement and Investment Office	Bold and the Balanced	RIO's current accounting program, Microsoft Dynamics GP, will no longer be supported after September 2029 and must be replaced prior to that date. RIO received funding from the 69th Legislative Assembly to hire a consultant to evaluate IT systems and assist with drafting an RFP. That process has been completed, and RIO has issued an RFP for a new accounting system, data repository, and reporting tools.	Yes	1	4	1	3	4
Workforce Safety and Insurance	CAPS System Replacement	This is continued migration of legacy PowerBuilder (client-based applications to a .NET framework). With this migration, WSI will: 1) Improve internal and external communication. 2) Increase online interactivity for WSI's stakeholders and partners. 3) Streamline processes related to information from/to external audiences.	Yes	2	4	1	3	3

Proposed Major IT Projects (Cont.)
Next Biennium

- **2026 Major IT Ask**
  - 13 projects
  - Estimated at $90 million
  - Figures will vary by the time budgets are reviewed by OMB and the Governor's Office and the Executive Budget is issued. (This also doesn't include the potential ERP replacement project, or pending HHS project asks.)
- **2024 Major IT Ask**
  - First pass: 33 projects at $185 million
  - Executive Budget: Cut to $83 million
- **2022 Major IT Ask**
  - 24 projects at $206 million

More Projects in the Statewide IT Plan

- **A Few Notes**
  - Today's list contained potential major projects, but not all projects.
  - What's included in this major projects list represents the biggest one-time technology investments—and therefore most of the technology spending—but the Statewide IT Plan will include significantly more IT projects.
  - But this still won't be close to everything. For example:
  - As part of the IT planning and budgeting processes from 2024, this biennium to date, we have so far only known about 16% of the IT project requests across the executive branch.
  - The remaining 84% have come from other developments during session or after.
    - Most significantly, through agency needs within program or business-line budgets.
    - Other reasons include: Software companies ending support for products with only a short lead time, grants being issued for specific needs, and compliance mandates appearing unexpectedly.

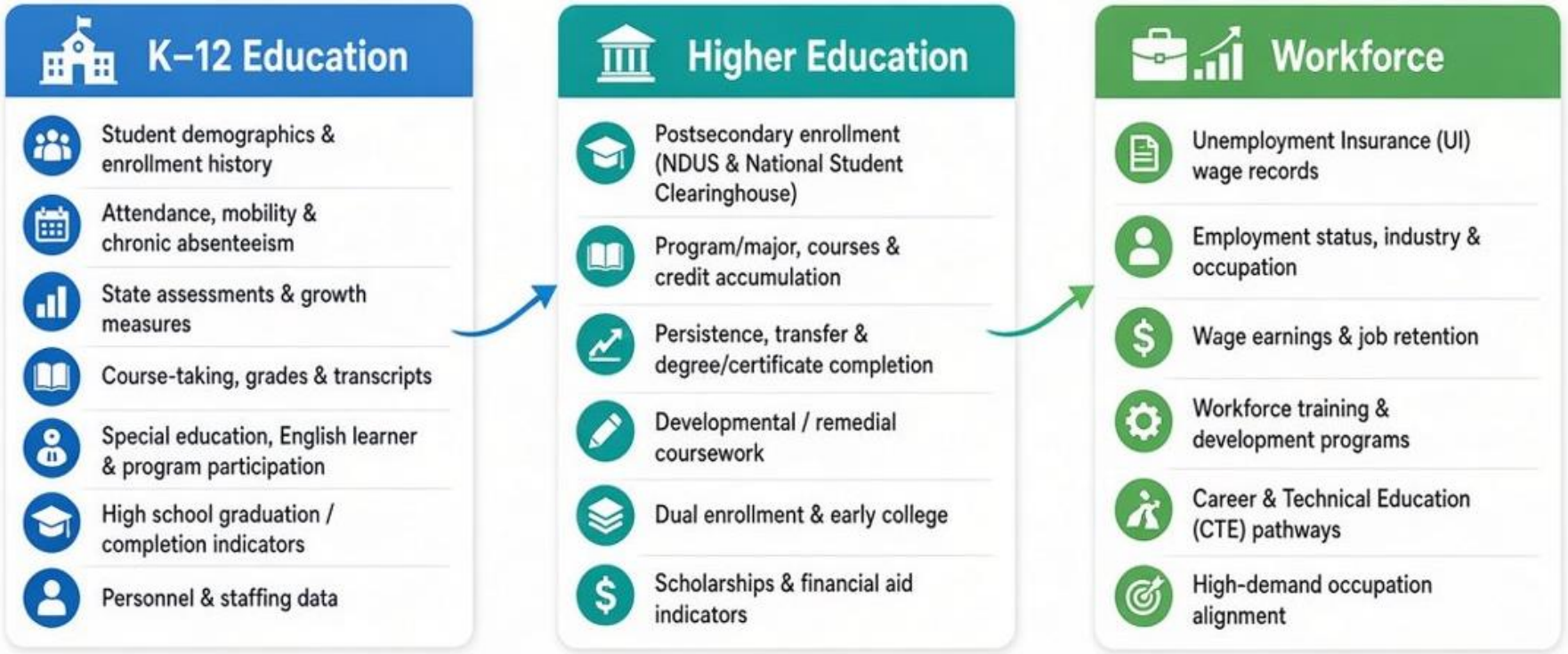
Other IT Planning Gaps

- Agencies not required to have any type of strategic business plan (outside of a few cases).
- Biennial budget planning can be long, cumbersome, and resource-intensive, with each agency approaching it differently.
- IT planning remains primarily retrospective, as ITD staff are often not part of the conversations that happen at idea inception.
- Funding conversations for IT at agencies, and throughout legislative session, largely occur outside the purview of ITD, with the need for—and approaches to—IT work for agencies being tackled across disparate entities.
- *Formal strategic planning tends to improve organizational effectiveness, but the greatest value comes from using planning as a mechanism for analysis, prioritization, alignment, and adaptation (not from treating the plan as a rigid prediction of the future).**

*George, B., Walker, R.M. and Monster, J. (2019), Does Strategic Planning Improve Organizational Performance? A Meta-Analysis. Public Admin Rev, 79: 810-819. https://doi.org/10.1111/puar.13104

SLDS Program Report

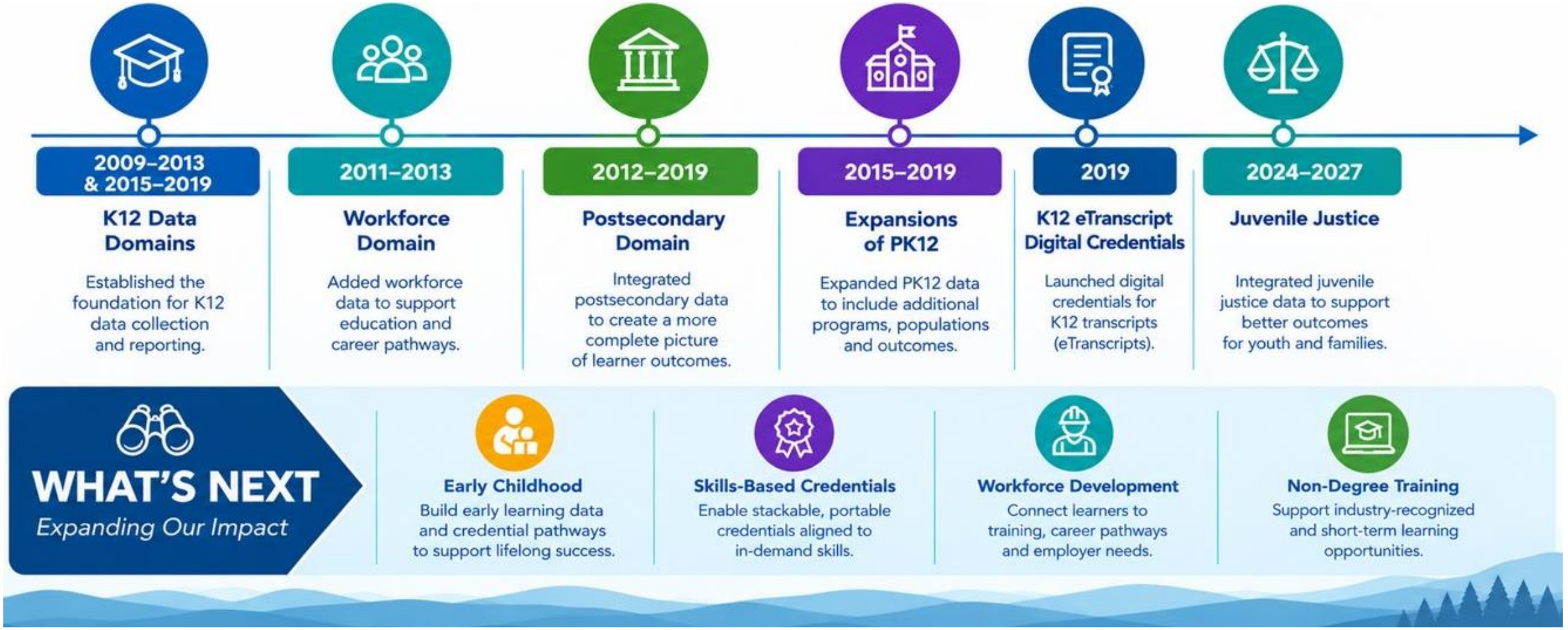
Statewide Longitudinal Data System
Connecting K–12, Higher Ed, & Workforce



Securely linked individual-level records across systems (using unique identifiers) enable research on student preparation, postsecondary success, and workforce outcomes while protecting privacy under FERPA and ND law.

Data sources: ND Department of Public Instruction, ND University System, Job Service ND | Managed by ND Information Technology Department | insights.nd.gov

The SLDS Journey
Building a Connected Data Ecosystem



SLDS Research
Using Education & Workforce Data for Policy

- **Question 1:** What skills are most important for Kindergarten students to have to set them up for success?
  - Unfortunately, Kindergarten students are most at risk to drop out of high school if they have low socioeconomic status, as measured by free/reduced lunch. The highest academically performing Kindergarten students on free/reduced lunch *still* graduate less often than the lowest academically performing Kindergarten students who aren't on free/reduced lunch. Additional datasets may help illuminate why that is.
- **Question 2:** Do North Dakota students receiving the state scholarship remain in-state more often for work and/or study?
  - Yes! North Dakota high school graduates who receive the state scholarship are more likely to stay in-state for work and/or study than those who don't. Even 10 years after earning their degree, they're still more likely to remain in the state.

Work in Progress: CTE Concentrators, Dual Credit, Choice Ready

SLDS Snapshot

- **Challenges**
  - Modernizing data-collection approaches
    - Changing data sources
    - New K–12 student information system (Infinite Campus)
    - Changes to how the SLDS collects data on courses, attendance, etc.
    - New UI wage replacement system
    - Recruiting and retaining skilled resources (high-demand talent)
  - Aligning to common education data standards (CEDS)
    - Legacy SIS systems are expensive for collecting data
- **New Data Domains**
  - Juvenile Justice
  - Starting non-degree and training data collections (Training Quadrants)

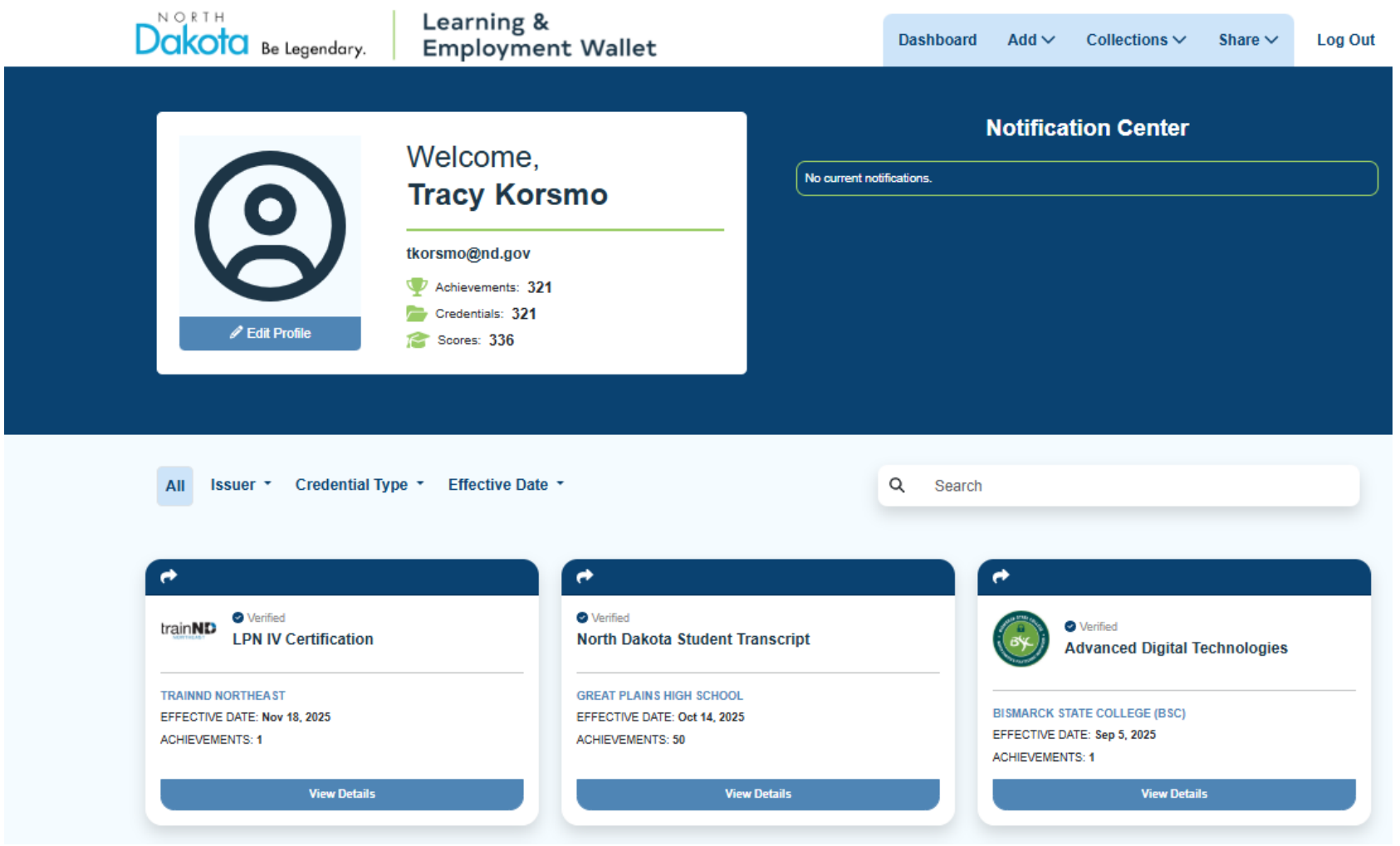
SLDS Expansions & Future Data

- **New Data Needs**
  - Early childhood (Kindergarten readiness)
  - Workforce training programs
  - Emerging apprenticeships
  - Career and technical (new plans of study)
  - Stackable credentials (skills-based hiring) and competency-based education
  - Occupations of North Dakota's workforce

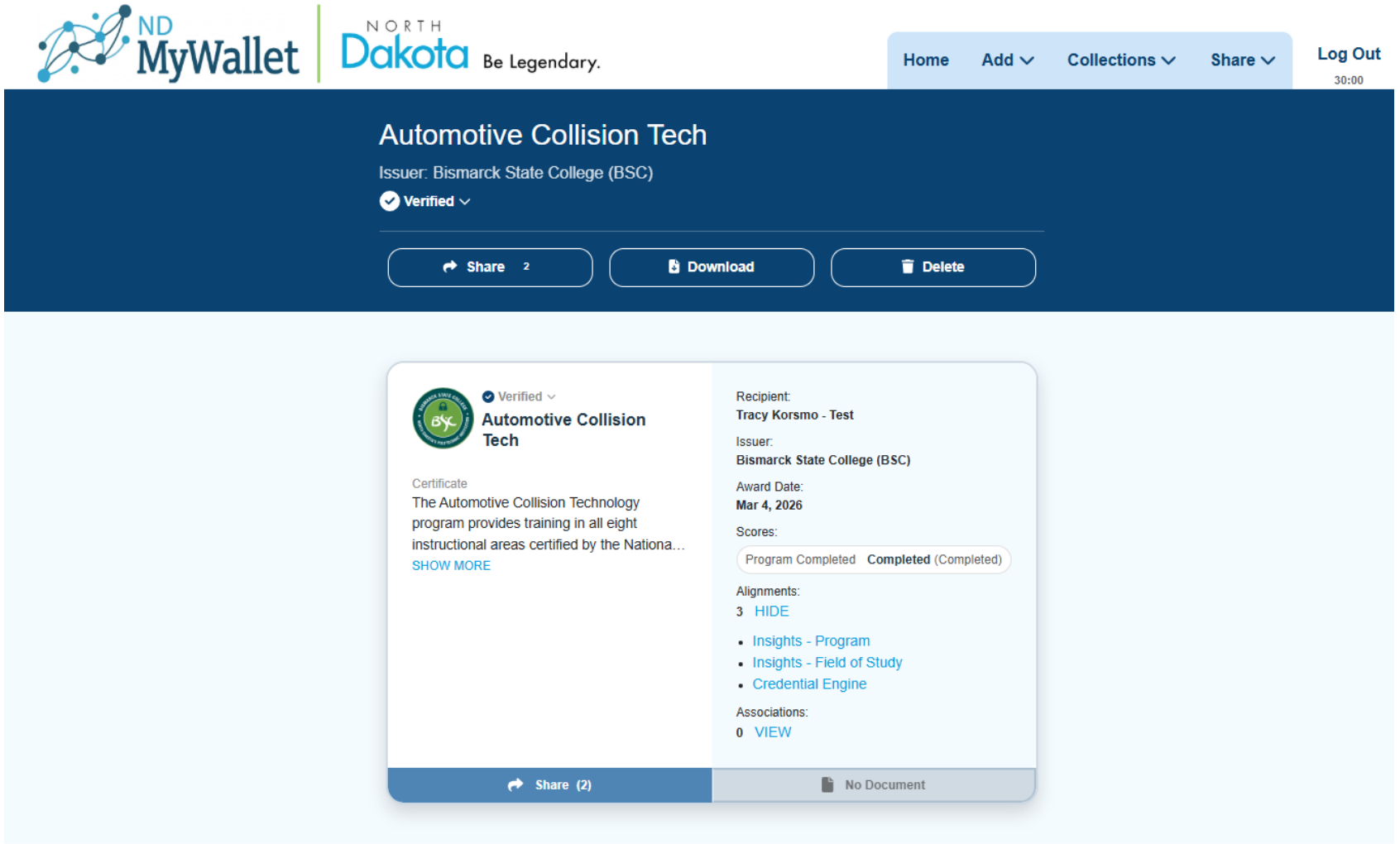
Verifiable Credentials
Digital Wallets

- **Definition:** Verifiable credentials (VCs) are secure, privacy-respecting digital documents that can be easily verified online, representing IDs, degrees, licenses, transcripts, and other official documents. Cryptographic signatures make them tamper-evident and verifiable.
- **Location:** Credentials such as learning and employment records (LER) are typically house within a digital wallet, but can even be placed on a piece of paper such as a birth certificate.
- **VC Service:** A credential-issuing service is available to K–12, higher education, and agencies.
- **SLDS:** North Dakota utilizes data in SLDS to create and award digital credentials.
- **Lake Region State College:** Has gone to production issuing digital credentials to students.
- **NE Training Quadrant:** They're testing for non-degree credentials.
- **BSC:** They're testing the system, as well.
- **Framework:** The architecture designed by North Dakota supports the state-endorsed digital identity (SEDI) framework that's being worked on nationally.

Verifiable Credentials (Cont.)



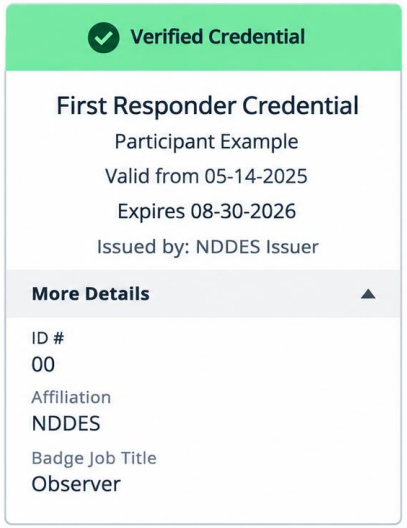
Verifiable Credentials (Cont.)



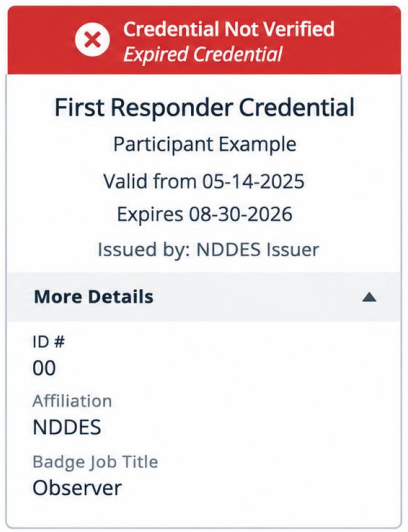
NDDES Pilot Results

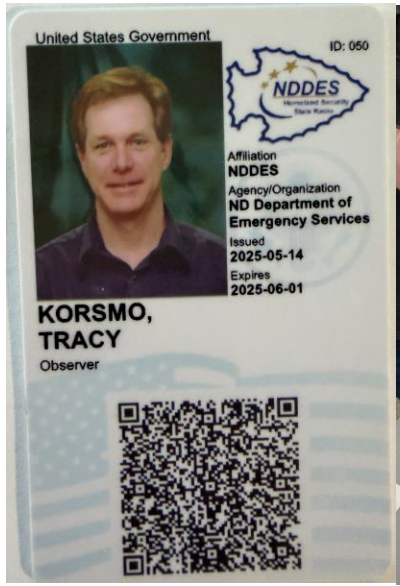
- **Use Case**
  - Incident managers can use the system to track who has credentials, who has access, and who checks in and out of the Emergency Operations Center.
  - A pilot exercise was held June 10, 2025, in conjunction with the Operation Chastise exercise.

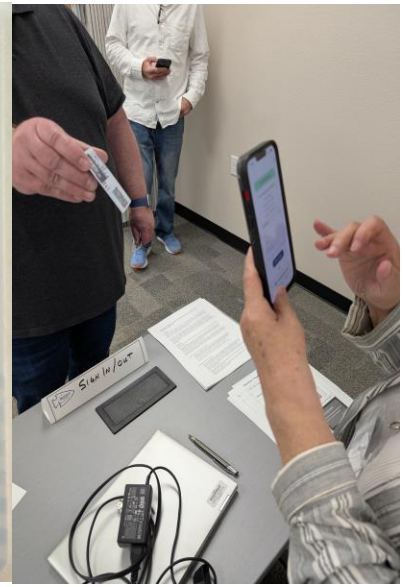
4. If you get a good scan, you will see this:



5. If you get a bad scan, you will see this:







NDDES Pilot Results (Cont.)
Birth Certificate

ND Department of Health and Human Services
Bismarck, North Dakota

Certification of Birth

THIS IS TO CERTIFY THAT THERE IS ON RECORD IN THE VITAL RECORDS UNIT OF THE DIVISION OF PUBLIC HEALTH, NORTH DAKOTA DEPARTMENT OF HEALTH AND HUMAN SERVICES, BISMARCK ND, THE FOLLOWING ENTRY OF BIRTH:

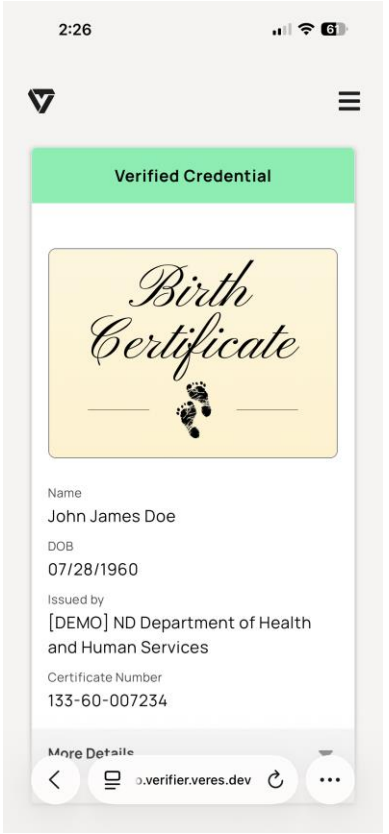
NAME:	JOHN JAMES DOE
BIRTH PLACE:	MINOT, NORTH DAKOTA
DATE OF BIRTH:	JULY 28, 1960
SEX:	MALE
FATHER'S NAME:	RONALD WILLIAM DOE
MOTHER'S MAIDEN NAME:	DONNA MARIE JONES
FILING DATE:	AUGUST 03, 1960
CERTIFICATE NUMBER:	133-60-007234
DATE ISSUED:	AUGUST 19, 2025

SAMPLE

002580164

Darin J. Meschke
State Registrar of Vital Statistics

This certificate is issued in compliance with the laws of the State of North Dakota
(NOT VALID without reversed raised impression seal in the lower right corner)



Budget Packages

Budget Packages
Strategic Impact & Value

- **Statewide Benefits**
  - Centralized, secure, and accessible digital services for agencies and residents.
  - Cost savings through shared platforms and reduced duplication.
  - Improved resilience, compliance, and readiness for emerging technology and threats.
- **Long-Term Vision**
  - Positioning North Dakota for efficient modernization, rapid response to evolving needs, and digital access to services for all citizens.

Budget Packages (Cont.)
Overarching Themes

Cybersecurity Modernization & Risk Mitigation

Multiple packages focus on strengthening statewide cybersecurity posture (certificate lifecycle management, toolsets, patching automation, AI phishing defenses, web application firewall, security awareness training).

- **Drivers**
  - Industry mandates (i.e., shortened SSL/TLS certificate lifetimes)
  - New federal guidance from OMB and NIST (requiring agencies to track all of their encryption-related assets and prepare for future post-quantum security standards)
  - Assessment results (showing gaps in credential rotation, privileged account management, patching timeliness, and vulnerability remediation)
- **Desired Outcome:** Modernization is no longer optional—toolsets, automation, lifecycle platforms, application firewalls, and training expansions are required to meet statutory obligations and industry compliance.

Budget Packages (Cont.)
Risks, Disruption, & Impacts

Cybersecurity Exposure & Compliance Failure

- The inability to meet accelerated certificate rotation timelines leads to outages, broken services, and security risks.
- AI-driven phishing and business email compromise attacks continue to bypass legacy tools, with some incidents already resulting in major financial and PHI exposures.
- Vulnerabilities are being discovered and exploited faster than ever before, due to advanced technology used by threat actors.

Budget Packages (Cont.)
Overarching Themes

- **Enterprise Efficiency & Digital Transformation**
  - Several packages focus on the need for common applications, integration platforms, and centralized identity management aimed at eliminating duplication, streamlining operations, and changes to funding models. There is an emphasis on shared platforms, low-code solutions, and digital accessibility of services.
  - **Drivers**
    - Microsoft's retirement of Azure Active Directory Business-to-Customer (B2C) by 2030 requires a mandatory statewide migration—it can't be deferred.
    - Agency requests to reduce, remove, or simplify our billing structure.
    - Accessibility compliance is required under ADA, WCAG, and NDCC 54-59/54-44.65.
  - **Desired Outcome:** Centralized, compliant platforms that ensure consistent digital services, reduce duplicative licensing, and meet governance needs.

Budget Packages (Cont.)
Risks, Disruption, & Impacts

Operational Inefficiencies & Fragmentation

- Agencies revert to siloed tools, duplicative costs, inconsistent security, and a weakening enterprise posture.
- Forced emergency migration of applications increases cost, risk, and disruption.

Accessibility, Legal, & Reputational Risks

- Without a centralized accessibility program to assist agencies, ADA compliance and accessibility progress erodes, exposing agencies to services that are less accessible for all North Dakota citizens, and increasing the legal risk to the state.

Budget Packages (Cont.)
Overarching Themes

Data & AI Enablement

Packages include investment in statewide data and AI foundations to support analytics, automation, and improved decision-making. Requests support the expansion of data governance, stewardship, and interagency collaboration.

- **Drivers**
  - Agencies must prepare for rapid adoption of emerging technologies—current budget cycles lag behind industry innovation.
- **Desired Outcome:** Investments in data platforms and an AI foundation will help ensure compliance, improve interoperability, and provide actionable insights for state leadership.

Budget Packages (Cont.)
Risks, Disruption, & Impacts

Data & AI Enablement

- Agencies fall further behind in adopting modern data and AI tools, reinforcing data silos and fragmented solutions.
- Then there's increased operational risk from inconsistent data practices, and limited ability to use statewide analytics or automation to improve outcomes.
- The state also sees higher long-term costs as agencies procure their own disparate data/AI solutions rather than leveraging a shared enterprise platform.
- There's a loss of momentum toward modern data governance and interagency data sharing.

Budget Packages (Cont.)
Overarching Themes

Operational Resilience & Public Safety

A group of packages addresses needs for hardware replacement, SIRN operations, the K–12 network, and public safety IT support, ensuring continuity of essential infrastructure and services. This is addressing aging systems, capacity gaps, and new facility needs.

- **Drivers**
  - SIRN operations underpin interoperability for 20,000+ first responders; statutory mechanisms fund operational support.
  - Lifecycle requirements mandate hardware replacement.
  - Agencies request additional public safety support within their facilities.
- **Desired Outcome:** Operational continuity of essential services that requires maintaining funding levels as dictated by statutory public safety obligations and system lifecycle requirements.

Budget Packages (Cont.)
Risks, Disruption, & Impacts

Operational Resilience & Public Safety

- Hardware reaching end-of-support causes service instability and increased outages across critical systems.
- SIRN operations face funding shortfalls, impacting radio reliability for 20,000+ first responders statewide and jeopardizing public safety communications.
- New facilities lack sufficient IT public safety staffing, leading to downtime, slower response, and elevated risks within secure environments.

Budget Packages (Cont.)
Key Takeaways

- The packages are anchored in strategy, industry standards and best practices, security findings, and ever-changing requirements that are often outside of the control of the state.
- Funding is critical to mitigate cybersecurity, operational, and compliance risks.
- Investment ensures continuity, modernization, and statewide value—avoiding fragmented solutions and costly emergency responses.