

INFORMATION TECHNOLOGY COMMITTEE

North Dakota Century Code Section 54-35-15.1 requires the Legislative Management during each biennium to appoint an Information Technology Committee in the same manner as the Legislative Management appoints other interim committees. The committee consists of six members of the House of Representatives and five members of the Senate. The chief information officer (CIO) of the state serves as an ex officio nonvoting member of the committee.

Pursuant to Section 54-35-15.2 the committee's responsibilities include:

1. Meet at least once each calendar quarter.
2. Receive reports from the CIO.
3. Review the activities of the Information Technology Department (ITD).
4. Receive and review information related to information technology (IT) projects with a total cost of \$500,000 or more, including startup and closeout reports.
5. Receive and review information regarding any IT project of an executive branch agency with a total cost of between \$100,000 and \$500,000 as determined necessary by ITD.
6. Receive a report from the CIO regarding the recommendations of the State Information Technology Advisory Committee (SITAC) relating to the prioritization of proposed major IT projects and other IT issues.
7. Receive information from the State Board of Higher Education regarding higher education IT planning, services, and major projects.

Section 54-35-15.3 authorizes the Information Technology Committee to review any IT project or IT plan. If the committee determines a project or plan is at risk of failing to achieve its intended results, the committee may recommend the Office of Management and Budget (OMB) suspend the expenditure or funding appropriated for a project or plan. This duty did not require action by the Information Technology Committee during the 2019-20 interim.

Section 54-35-15.4 provides the Information Technology Committee may request the State Auditor to conduct an IT compliance review, including an agency's IT management and planning as well as compliance with IT plans and standards. This duty did not require action by the Information Technology Committee during the 2019-20 interim.

The committee is responsible for receiving various reports, including:

- A report from the State Board of Higher Education regarding higher education IT planning, services, and major projects. (Sections 15-10-44 and 54-35-15.2)
- A report from the CIO regarding the recommendations of SITAC relating to the prioritization of proposed major IT projects and other IT issues. (Sections 54-35-15.2 and 54-59-02.1)
- A report from the CIO regarding the coordination of services with political subdivisions and a report from the CIO and the CIO of the North Dakota University System regarding coordination of IT between ITD and higher education. (Section 54-59-12)
- The annual report from ITD. (Section 54-59-19)

In addition to its direct statutory responsibilities for the 2019-20 interim, the Legislative Management assigned the committee the following responsibilities:

- Receive a report from the Statewide Longitudinal Data System Committee on the status of the statewide longitudinal data system (SLDS), including recommendations for further development, cost proposals, proposals for legislation, and data sharing governance. (Section 54-59-36)
- Receive a report from the Emergency Services Communications Coordinating Committee before November 1, 2020, regarding the use of assessed communications services fee revenue and recommendations for changes to the operating standards for emergency services communications. (Section 57-40.6-12)
- Receive a report from the State Department of Health (DOH) before July 1, 2020, regarding the implementation of electronic access to vital records. (Section 7 of House Bill No. 1004 (2019))
- Receive a report from the Commissioner of University and School Lands regarding the status of the IT project. (Section 10 of House Bill No. 1013 (2019))

- Study ITD's transition to the run-grow-transform model and the IT unification initiative. (Section 7 of House Bill No. 1021 (2019))
- Receive a report by September 1, 2020, from ITD regarding its review of service rates charged to state agencies. (Section 9 of House Bill No. 1021 (2019))
- Receive a report from the CIO, before June 1 of each even-numbered year, regarding the implementation of distributed ledger technologies. (Section 1 of House Bill No. 1048 (2019))
- Receive a report during the 2019-20 interim from ITD regarding internal local area network services provided for higher education campus housing. (Section 1 of Senate Bill No. 2318 (2019))
- Study the potential benefit value of blockchain technology implementation and utilization in state government. (House Concurrent Resolution No. 3004 (2019))

Committee members were Representatives Corey Mock (Chairman), Glen Bosch, Shannon Roers Jones, Nathan Toman, Don Vigesaa, and Robin Weisz; Senators Kyle Davison, Merrill Piepkorn, Larry J. Robinson, Shawn Vedaa, and Terry M. Wanzek; and Citizen Member Shawn Riley.

STUDY OF INFORMATION TECHNOLOGY UNIFICATION

Background Information

The Legislative Management assigned the committee the responsibility of studying ITD's transition to the run-grow-transform model and the IT unification initiative pursuant to Section 7 of House Bill No. 1021 (2019). The study was to include a review of changes in fees, services, operations, processes, and system.

The 2019 Legislative Assembly approved a transfer of 96 full-time equivalent (FTE) IT positions from five agencies for the 2019-21 biennium, which included a reduction of salaries and wages in each agency transferring FTE positions to ITD and an increase in operating expenses to allow the agency to pay ITD for the salaries and wages of the FTE positions, including compensation increases authorized by the Legislative Assembly. The following positions were transferred to ITD:

Budget No. - Agency	FTE Increase (Decrease)
226 - Department of Trust Lands (DTL)	2.00
325 - Department of Human Services (DHS)	48.00
540 - Adjutant General, Department of Emergency Services	4.00
750 - Parks and Recreation Department	1.00
801 - Department of Transportation (DOT)	41.00
Total	96.00

Section 8 of House Bill No. 1021 (2019) provided legislative intent that ITD provide direction to the executive branch agencies in the Governor's cabinet not included in the IT unification initiative pilot project. The 15 agencies taking operational and strategic IT direction from ITD during the 2019-21 biennium are--the Governor's office, OMB, DOH, the Department of Environmental Quality, the Indian Affairs Commission, Job Service North Dakota (JSND), the Department of Labor and Human Rights, the Department of Financial Institutions (DFI), the Securities Department, Workforce Safety and Insurance (WSI), the Highway Patrol, the Department of Corrections and Rehabilitation, the Department of Commerce, the Game and Fish Department, and the Bank of North Dakota. The Bank is voluntarily receiving operational and strategic IT direction from ITD.

In August 2020, the Legislative Council surveyed the five agencies selected for the 2019-21 biennium IT unification initiative pilot project. The survey results provided the committee with a comparison of the agencies estimated 2019-21 biennium IT expenditures with and without IT unification, including information regarding actual 2017-19 biennium IT expenditures and estimated 2021-23 biennium IT expenditures. The information does not include federal funding received as a result of the Coronavirus (COVID-19) pandemic, major IT projects, one-time funding for IT initiatives, or other IT costs, such as expenditures paid to third-party vendors or other IT expenditures indirectly related to IT unification. A summary of the total expenditures reported by the agencies is shown below:

	2017-19 Biennium Actual IT Expenses	2019-21 Biennium Estimated IT Expenses Without Unification	Fiscal Year 2020 Actual IT Expenses	Fiscal Year 2021 Estimated IT Expenses	Total 2019-21 Biennium Estimated IT Expenses With Unification	Difference - 2019-21 Biennium Estimates - With and Without Unification	2021-23 Biennium Estimated IT Expenses
Total	\$65,642,746	\$85,613,538	\$40,315,840	\$46,271,297	\$86,587,137	\$973,599	\$107,598,258
Increase		\$19,970,792			\$20,944,391		\$21,011,121
Percent increase		30.4%			31.9%		24.3%

Information Technology Department

The committee received information from ITD regarding the run-grow-transform model, the 2019-21 biennium IT unification initiative pilot project, and future IT unification initiatives.

Run-Grow-Transform Model

The run-grow-transform model is a guide for spending money and dedicating IT resources. The model includes a redistribution of IT resources from running operations to growing and transforming IT. Growing IT resources includes expanding existing services and transforming IT resources including fundamentally changing IT organizations. The IT functions in the run-grow-transform model often change, meaning a function that grows or transforms IT today may be part of running operations tomorrow.

2019-21 Biennium Information Technology Unification

The committee received information regarding the effect of the IT unification initiative approved for the 2019-21 biennium on fees, services, operations, processes, and systems. The process to incorporate the new 96 FTE positions included a review of benefits, policies, operating procedures, and human resource-related matters. The Information Technology Department reported a challenge of transferring the new FTE positions to ITD was reconciling human resource policies between ITD and the employee's former employing agency.

The Information Technology Department will measure the success of the 2019-21 biennium IT unification pilot project by evaluating IT mission alignment, cost management, risk containment, processes, tools, contracts, FTE positions, cost of units of service, and volume purchasing efficiency.

Future Information Technology Unification

The committee received information regarding proposed IT unification for the 2021-23 biennium and future bienniums, including the effect on fees, services, operations, processes, and systems. The Information Technology Department will propose the IT unification of all Governor's cabinet agencies and the Bank of North Dakota during the 2021 legislative session, including the transfer of 66 FTE positions to ITD.

The Information Technology Department intends to seek unification of the entire executive branch after the 2021-23 biennium. Agencies not in the Governor's cabinet that have discussed the possibility of unifying IT staff with ITD include the Department of Public Instruction (DPI), Secretary of State, Retirement and Investment Office, Public Employees Retirement System, State Historical Society, Insurance Commissioner's office, Industrial Commission, Public Service Commission (PSC), and State Water Commission (SWC). The Information Technology Department also may request DTL unify the department's remaining FTE IT position. These 10 agencies have a combined 25 FTE IT positions that could be transferred to ITD if future IT unification initiatives are approved.

Agencies that have not discussed the possibility of unifying IT staff with ITD include the Attorney General, the Housing Finance Agency, the Department of Career and Technical Education, the School for the Blind, the School for the Deaf, the State Library, and the Tax Department, which have a combined 36 FTE IT positions.

The Information Technology Department estimates IT unification could save the state \$640 million per biennium in salaries and benefits due to automation and process redesign being performed by IT instead of staff. These initiatives could lead to FTE positions being reprioritized for other work needed by agencies or potentially being eliminated. To realize the estimated \$640 million per biennium salaries and benefits savings, ITD would need approximately \$230 million, of which \$120 million would be to replace old technology, \$65 million would be for process automation of manual tasks, and \$45 million would be for business analysts to update state agency processes.

Agencies in Support of Information Technology Unification

The committee received information from DOT, DHS, and DTL regarding the agencies' inclusion in the IT unification pilot project for the 2019-21 biennium, including any department benefits, issues, or concerns of IT unification and any cost-savings realized as a result of IT unification. The committee received information from DOH, JSND, WSI, and the Bank of North Dakota regarding benefits, issues, and concerns of IT unification, and the agency's interest in being included in future IT unification initiatives.

Department of Transportation

Prior to the approval of the IT unification initiative, some of the 41 DOT IT staff were concerned with unification, primarily due to the IT staff being required to transfer to a different agency. The Department of Transportation and ITD worked together during the transfer of IT staff to address staff concerns related to benefits, leave balances, personnel files, background checks, and work weeks. According to the information provided to the committee, DOT has not experienced a reduction in the level of IT services provided to DOT as a result of IT unification. The Department of Transportation indicated additional time will be needed to evaluate the cost-effectiveness of the unification initiative pilot project.

Department of Human Services

The Department of Human Services welcomed IT unification because instead of having three IT budgets--for DHS staff, ITD, and third-party vendors--DHS now only has two IT budgets for ITD and third-party vendors. While there have been challenges with IT unification, the challenges were expected and DHS and ITD have responded to the challenges appropriately.

Department of Trust Lands

The unification of IT FTE positions was mostly beneficial for DTL. A combination of unification, new cloud-based software systems, and a new website platform has resulted in IT efficiencies for DTL. A benefit of having 2 of DTL's 3 FTE IT positions being transferred to ITD is that those individuals will have additional opportunities for promotion due to ITD having a larger IT staff. However, the unification initiative has resulted in a delay of services by requiring DTL to submit a service request to ITD rather than having department staff address IT concerns directly. Other issues regarding IT unification include projected expenses for the 2019-21 biennium being approximately \$181,017 more than if DTL would not have unified with ITD. The 2 FTE programmer analyst positions transferred to ITD often are not available to work on DTL's land management system, resulting in DTL relying on the department's remaining FTE IT position for many of its priority DTL IT needs. Another concern of IT unification is a lack of cross-training for ITD programmers who are knowledgeable about department systems and if the 2 programmers transferred to ITD are not available, DTL has no one to maintain and fix department systems. The Department of Trust Lands does not anticipate IT savings as a result of IT unification until the 2023-25 biennium.

State Department of Health

Communication and coordination of projects are potential concerns of future IT unification initiatives, as well as a concern regarding the loss of IT expertise in DOH. The Information Technology Department has attempted to address these concerns by developing a key customer management process to connect the two departments.

Information technology unification would allow DOH to dedicate more resources to transforming and growing technology rather than running technology and bring consistency to DOH products and processes, such as software licensure, electronic filing of documents, and product development and utilization. The State Department of Health believes there are more benefits of IT unification than issues or concerns; therefore, DOH would be interested in future IT unification initiatives.

Workforce Safety and Insurance and Job Service North Dakota

The biggest challenge of IT unification for WSI and JSND relates to funding. Job Service North Dakota is 98 percent federally funded and WSI receives 100 percent of its funding from special funds from employer premiums. These funding sources will need to be considered if the two agencies are selected for future IT unification initiatives and FTE positions are transferred to ITD. If IT costs increase, JSND does not have additional federal funds to address the additional IT costs and an increase in employer unemployment insurance premiums may be necessary for WSI.

The agencies believe IT unification would add value to the agencies and the state by strengthening the level of services provided by leveraging knowledge, ensuring collective compliance, monitoring services, and providing data security and cybersecurity. The agencies would be interested in future IT unification initiatives.

Bank of North Dakota

The Bank of North Dakota volunteered for future IT unification initiatives due in part to several Bank IT staff having recently sought employment opportunities with ITD. The Bank has 16 FTE IT positions that could be transferred to ITD. The Information Technology Department started the start-stop-continue review process for these IT positions in December 2019. The Bank signed a memorandum of understanding with ITD in January 2020 to document the two agencies' commitment to working together.

The benefits identified by the Bank of North Dakota of unifying its IT staff with ITD include allowing Bank IT staff more career opportunities and having access to better software tools and more cybersecurity resources. The committee was informed IT unification will not result in any additional costs to the Bank in the foreseeable future but IT expenditures are expected to decrease several years after unifying with ITD. The agencies have focused on aligning information security, technology services, application support, data management, and project management. The Bank's IT unification concerns include the maturity of ITD data management services, resourcing of project management, whether costs will be cost neutral, and the challenge of transferring staff to ITD because Bank staff are unclassified employees while ITD staff are classified employees.

Agencies Not in Support of Information Technology Unification

The committee received information from the Attorney General's office, PSC, DPI, and SWC regarding benefits, issues, and concerns of IT unification, and the agency's interest in being included in future IT unification initiatives.

Attorney General

The Attorney General does not support unifying Attorney General IT staff with ITD because the Attorney General's office, as a North Dakota law enforcement agency, must comply with criminal justice IT standards and regulations of federal agencies, such as the Federal Bureau of Investigation. The Attorney General has 19 FTE IT positions.

Public Service Commission

The Public Service Commission does not support unifying its IT staff with ITD because IT unification is not in the best interest of the agency, the industries the agency represents, or North Dakota citizens. The agency supports continued collaboration with ITD, but believes it is important to maintain IT staff within PSC. There are 3 FTE IT positions in PSC.

Department of Public Instruction

The Department of Public Instruction began a review of department IT personnel with ITD in November 2019 for possible IT unification. The department has 7 FTE IT positions, including 3 FTE programmer analyst positions.

The benefits of unification reported by DPI include the potential for sharing methods, practices, and expertise with other state agencies, possible efficiencies, technology alignment, and possible cost-savings. Department of Public Instruction questions and concerns of IT unification include how IT staff would be used if DPI unified with ITD, what the response time would be for submitting IT work requests to ITD, cost and efficiency outcomes, and how services to North Dakota's 120,000 K-12 students would be affected.

The COVID-19 pandemic halted the review process to evaluate whether to unify department IT staff with ITD. Due to the uncertainty of IT unification and not being able to complete the review process, DPI does not support unification with ITD at this time.

State Water Commission

The State Water Commission does not support unifying its IT staff positions with ITD. The agency has 2 FTE programmer analyst positions.

The State Water Commission's IT infrastructure includes data initiatives to support water resource management and engineering and scientific analysis requirements. The agency does not utilize commercial software for water resource management. Experience with agency practices and water resource management requirements are necessary to meet the agency's IT needs.

If SWC unified its IT staff with ITD, the SWC indicated either ITD would have to expand its services to meet the needs of the agency or SWC would have to retool the agency's infrastructure to move data to ITD systems. The agency reported neither option is considered cost-effective or desirable for the SWC.

The State Water Commission estimated the biennial cost of unifying its IT staff with ITD at \$6.8 million compared to the current biennial agency IT budget of \$909,000. The \$6.8 million estimate does not include any estimates of rewriting agency software code. The biennial maintenance costs after unifying with ITD are approximately \$3.2 million more than if the agency does not unify IT staff with ITD.

Recommendation

The committee recommends the 2021 Legislative Assembly continue the 2019-21 biennium IT unification pilot project and continue evaluating the advantages and disadvantages of potential future IT unification initiatives.

STUDY OF BLOCKCHAIN IN STATE GOVERNMENT

Background Information

The Legislative Management assigned the committee the responsibility of studying the potential benefit value of blockchain technology implementation and utilization in state government administration and affairs, including a comprehensive assessment of government areas in which blockchain technology can assist with agency affairs and administration, accounting and budgeting, transactions, creating necessary audit trails, authorizing a decision, authenticating authority, and establishing a system of record; and an analytical evaluation of implementing smart contracts to improve efficiencies in contract enforcement, the cost-effectiveness and increased security of utilizing a blockchain technology electronic voting system, and the exploration of other eGovernment services and applications, such as identity management, tax collection, land registry, distribution of benefits, and digital exchanges. (House Concurrent Resolution No. 3004 (2019))

In 2008 a new technology known as blockchain was created as an open, decentralized ledger that records transactions between two parties permanently without needing third-party authentication. Blockchain is a list of transactions called "blocks" that are shared between multiple parties in which new transactions are added at the end of the blockchain. The existing data is never changed or deleted when new data is added. If a portion of data is changed,

the entire blockchain will change, resulting in the user being able to detect the change in data. When a transaction is initiated, it is bundled into a block, which is then verified for legitimacy by the majority of the participants in the system and added to the blockchain. The blockchain contains a verifiable record of every transaction made in the system. Blockchain is intended to be a decentralized technology so the data can be hosted at multiple locations. If data is destroyed at one location, the data remains available at other locations.

Blockchain is a form of distributed ledger technology, which is a database containing replicated, shared, and synchronized digital data available to users at multiple sites, countries, or institutions without the use of a central administrator or centralized data storage.

Information Technology Department

The committee received information from ITD regarding the committee's study of blockchain in state government, including an explanation of blockchain and distributed ledger technology and the potential use in state government, examples of the use of blockchain and distributed ledger technology in other state governments, and examples of the use of blockchain and distributed ledger technology in the private sector.

Other states and countries have used blockchain for various purposes, including document archiving, voting and election systems, land registry, digital evidence, vital records, and health care data exchanges. Other uses of blockchain for North Dakota government include eTranscripts, driver's license services, WSI claims, land registry and county parcel services, and citizen identity needs. The private sector has started using blockchain for financial transactions, ownership of assets, supply chain processes, payments, health care, and customer engagement.

The Information Technology Department does not anticipate any new legislation is needed for ITD to pursue blockchain-related technologies and projects for state agencies because ITD is using blockchain in existing agency projects, including an insurance policy reporting project with the Insurance Department and a mobile application to verify citizen data.

Insurance Commissioner

The committee received information from the Insurance Commissioner regarding the Insurance Department's use of blockchain technology. The Insurance Department is using an open source blockchain with private sector vendors to obtain real-time data on insurance policies rather than receiving annual reports that contain data that is more than 1 year old. Because the blockchain is open source, ITD can access it and structure it to meet the needs of the Insurance Department. The ledger capabilities of blockchain technology can help the Insurance Department reduce the number of paper checks the department receives and deposits. Once fully implemented, North Dakota would be the first state to use blockchain for insurance information purposes.

University System

The committee received information from the University System regarding blockchain and distributed ledger technology initiatives and possibilities. Potential areas for University System blockchain implementation include student records and credentialing, digital rights protection and copyrights, and digital identity. Challenges of implementing blockchain technology include experiencing significant process changes, creating government regulations, and the creation and modification of technology standards. The University System has not analyzed potential government barriers to implementing blockchain technology for higher education campuses. The University System anticipates evaluating blockchain use in higher education during calendar year 2021.

Securities Department

The committee received information from the Securities Department regarding the potential for blockchain-related securities fraud and other regulatory concerns related to distributed ledger technology. Blockchain technology can be used to create and sell a digital asset through a transaction called an initial coin offering or security token offering, which is a new way for businesses to raise capital from investors. This type of transaction also is a new way for criminals to steal money from investors.

Distributed ledger technology and blockchain can be used in an initial coin offering or security token offering to create virtual coins or tokens, which can be purchased by investors with traditional currency like dollars or digital currency like Bitcoin. After virtual coins or tokens are issued, they may be resold on virtual currency exchanges or other secondary markets.

The primary violations associated with raising virtual currency using blockchain have been:

- Failure of a legitimate business to comply with federal or state security laws to register the currency offering or qualify for an exemption from registration; and
- Criminals committing fraud on the Internet by exploiting innovation, social media, and investor fears.

The committee was informed while the Century Code provisions appear adequate, five states have enacted legislation to exclude digital instruments not designed as investment contracts from security law regulations. No federal security laws have been approved which apply to initial coin offerings or security token offerings, but the federal Securities and Exchange Commission has issued guidance for businesses.

Department of Financial Institutions

The committee received information from DFI regarding regulations of virtual currencies and distributed ledger technologies. The benefits of virtual currency or blockchain regulation include requiring licenses and registration, net worth minimum and financial soundness, bond requirements, requiring permissible investments to cover outstanding liabilities, and implementing reporting requirements; all of which increase consumer confidence. The Century Code does not prohibit banks or credit unions from utilizing blockchain technologies. The Department of Financial Institutions provides guidance to financial institutions regarding blockchain cybersecurity. The Uniform Law Commission is working on the Uniform Money Services Act, which will provide guidance for money transmissions, including blockchain, and will provide consumer protection regulation, preserve public confidence, and prevent unlawful individuals from entering the money services industry.

The Uniform Money Services Act has not been released, but if available by 2021, DFI may request the 2021 Legislative Assembly to adopt the Uniform Money Services Act.

Recommendation

The committee makes no recommendation related to the study of blockchain in state government.

CYBERSECURITY

The Legislative Assembly approved Senate Bill No. 2110 (2019) to require ITD to advise and oversee cybersecurity strategy for all executive branch agencies, including institutions under the control of the State Board of Higher Education, counties, cities, school districts, and other political subdivisions. The Legislative Assembly approved 8 new cybersecurity FTE positions for ITD for the 2019-21 biennium. The Information Technology Department reported it is focusing on strategic, operational, and workforce components of cybersecurity. North Dakota is targeted by cyber attacks due in part to the state's energy, unmanned aircraft systems, agriculture research, military, and election system resources.

Information Technology Department's goals for cybersecurity for the 2021 legislative session are for the approval of IT unification, authority to hire 29 new FTE cybersecurity professionals, and the passage of proposed legislation requiring cybersecurity incidents to be reported to ITD.

Cybersecurity Insurance

The committee received information from ITD and the Risk Management Division of OMB regarding cybersecurity insurance. The state has a cybersecurity insurance policy that insures all state government agencies, except the Bank of North Dakota, which has its own cybersecurity insurance policy, in the event of a cybersecurity or ransomware attack. The policy does not cover counties, cities, school districts, or other political subdivisions. The Risk Management Division combined other state agency cybersecurity insurance policies into the combined state policy in February 2018.

The state cybersecurity insurance policy includes a \$250,000 deductible and provides coverage of up to \$5 million of damages in the event of a successful cybersecurity attack. Damages the policy covers include operational costs to reconnect systems and services, notifying impacted individuals or agencies of the attack, and the cost of affected individuals or agencies enrolling in credit monitoring services. The policy does not pay for the loss of data or value.

The state cybersecurity insurance policy provides an additional \$5 million of coverage if the state is held liable if other entities that rely on the statewide technology access for government and education network (STAGEnet) experience a successful cybersecurity attack. The policy cost for fiscal year 2021 is approximately \$146,000, which is paid from the risk management fund.

Political subdivisions are insured through the North Dakota Insurance Reserve Fund, which includes no deductible and covers costs associated with an information breach but does not cover damages from cybersecurity events.

Network Cybersecurity Requirements

The committee received information from ITD regarding cybersecurity and minimum security requirements for state and political subdivisions using STAGEnet. The Information Technology Department is establishing standards for government and educational entities to access STAGEnet, including default blocking of macros, removing unnecessary administrative rights on user devices, using multifactor authentication, ensuring proper data backups, using artificial intelligence to reduce ransomware risk, and requiring entities to report security events to ITD. The Information Technology Department is forming a cybersecurity steering committee for state agencies and political subdivisions,

which will include participation from the University System, City of Fargo, and representatives of other cities, counties, school districts, the legislative and judicial branches, and tribal entities.

The committee was informed ITD has strategic cybersecurity authority for political subdivisions but no authority to enforce compliance with ITD's cybersecurity requirements. The department provides guidance and documentation to political subdivisions regarding cybersecurity minimum standards and best practices for access to STAGEnet, but because ITD does not have the authority to enforce the standards and practices or monitor compliance with ITD guidance, political subdivisions may choose whether the requirements are implemented at the local level.

Proposed Cybersecurity Legislation

The committee received information from ITD regarding legislation ITD may request during the 2021 legislative session, including changes necessary for STAGEnet standards. The department may introduce legislation to request state and local government agencies be required to report major cybersecurity incidents to ITD.

The proposed legislation would require executive branch state agencies and political subdivisions to disclose to ITD all cybersecurity incidents that affect the confidentiality, integrity, availability, or ownership of computer systems or data upon discovery. The Century Code allows but does not require state agencies and political subdivisions to disclose cybersecurity incident information to ITD. The proposed legislation would allow the legislative and judicial branches to disclose cybersecurity incidents to ITD. The Information Technology Department would be required to provide consultation services and other resources to assist state agencies and political subdivisions in responding to and remediating cybersecurity incidents. The Information Technology Department would be required to report to the Legislative Management all disclosed cybersecurity incidents, including the status of the cybersecurity incident and any response or remediation to mitigate the cybersecurity incident.

Recommendation

The committee recommends the 2021 Legislative Assembly favorably consider legislation that may be introduced requiring executive branch agencies and political subdivisions to report cybersecurity incidents to ITD.

COVID-19 PANDEMIC FEDERAL RELIEF FUNDING

In May 2020, the Emergency Commission and Budget Section approved an ITD request to receive and spend federal funding of \$67,618,226 from the state's allocation from the federal Coronavirus Relief Fund, of which \$17 million is for cybersecurity, \$23,868,226 is for telework, and \$26,750,000 is for digital government. The committee received information regarding ITD's actual and planned use of the funding, including how ITD initiatives will affect state agency budgets and the estimated ongoing costs for the 2021-23 biennium. The committee was informed the amounts spent on cybersecurity, telework, and digital government initiatives may vary based on actual usage and need.

The schedule below summarizes ITD's cybersecurity, telework, and digital government projects and use of the funding approved from the Coronavirus Relief Fund resulting from the COVID-19 pandemic. The amount committed for the 2019-21 biennium is through September 30, 2020.

Project	Description	Expenditure Type	2019-21 Biennium Funding Available	2019-21 Biennium Funding Committed	Estimated 2021-23 Biennium Ongoing Costs
Cybersecurity					
Albert sensors	Purchase of network sensors to detect bad contact image sensors	Hardware	\$400,000	\$675,780	\$40,000
Jump box response and forensic tools	Increased ability to perform forensic activity and analysis	Hardware/Software	100,000	20,320	10,000
Threat intelligence management platform	Licenses for security orchestration, automation, and response software	Software	1,467,529	1,467,529	2,800,000
Cybersecurity customer dashboard	Purchase of software to detect device vulnerabilities and development of a dashboard to track vulnerabilities	Software	250,000	0	100,000
Security laboratory and staging environment	Purchase of software for incident response	Software	100,000	0	20,000
PhishER - Artificial intelligence phishing	Phishing indicator enhancement	Software	165,000	117,018	80,000
Third-party risk management	Assess the state's security posture	Service	2,000,000	0	1,000,000
Security assessment and continuous monitoring	Identify system boundaries and providing ongoing risk assessment	Service	2,000,000	902,855	1,000,000

Project	Description	Expenditure Type	2019-21 Biennium Funding Available	2019-21 Biennium Funding Committed	Estimated 2021-23 Biennium Ongoing Costs
Vulnerability management program	Provide training to cybersecurity infrastructure team and consultant hours to create dashboards	Service	200,000	0	100,000
Fraud detection	Fraud detection for JSND	Staff support	100,000	100,000	0
Cortex XDR managed threat hunting infrastructure	End point vulnerability analysis	Staff support	557,471	412,890	0
System on a chip development	Consulting for workshops, assessments, tabletops, mentoring, and project management	Staff support	1,000,000	1,002,167	0
Resident engineering restructuring	Realignment for organizational units, including K-12 and intrastate cyber support	Staff support	6,160,000	6,160,000	0
Outreach	Public outreach for cybersecurity issues	Staff support	500,000	0	50,000
Staff augmentation	Funding to reduce incident backlog	Staff support	1,000,000	1,000,000	0
SANS Institute education	Funding for 100 courses and 50 cybersecurity global information assurance certifications from the SANS Institute	Training	500,000	290,000	200,000
Udemy, Inc.	Udemy, Inc. access for ongoing training	Training	500,000	471,107	200,000
Cybersecurity subtotal			\$17,000,000	\$12,619,666	\$5,600,000
Telework					
Desktop replacements	Desktop replacements	Hardware	\$6,000,000	\$5,053,969	\$1,249,500
Server and switch infrastructure upgrade	Upgrade server and switch infrastructure	Hardware	1,285,972	737,792	0
Conference room upgrades	Conference room upgrades	Hardware/ Software	3,232,500	1,524,337	650,000
Microsoft Office 365 E5 productivity suite upgrade	Upgrade current E3 licenses	Software	1,650,000	1,650,000	3,300,000
Enterprise asset and configuration management	Additional enterprise service management deployment	Software	600,000	646,178	0
Enterprise service management service catalog	Additional enterprise service management deployment	Software	600,000	359,859	0
AlgoSec	Network security policy management software	Software	41,400	41,400	0
Telework licensing and implementation	Microsoft Azure premium and PowerBI expansions and remote support toolset purchases	Software	2,455,200	781,319	1,015,200
Windows deployment enablement	System deployments in virtual environments	Software	821,000	821,000	0
Azure business to business active directory	Authentication system	Software	113,000	113,000	0
Business support professional services	Business partner support	Service	1,981,400	1,545,587	0
Continuity of government strategic assessment	Determine secondary and tertiary impacts to state government and create responses to minimize risks of the COVID-19 pandemic	Service	2,416,500	2,871,000	0
Continuity of government project management and oversight	Project management consulting and oversight for continuity of government and the COVID-19 pandemic	Staff support	205,660	205,660	0
Strategic health task force project management	Project management support for health task force deployments	Staff support	206,625	206,625	0
Telework toolset training	Telework toolset training	Training	747,000	0	0
Organizational change management	Organization change management training	Training	2,200,000	1,059,000	0
Telework subtotal			\$24,556,257	\$17,616,726	\$6,214,700

Project	Description	Expenditure Type	2019-21 Biennium Funding Available	2019-21 Biennium Funding Committed	Estimated 2021-23 Biennium Ongoing Costs
Digital government Call center solution	Establish an enterprise call center with Microsoft Teams Voice to replace individual agency specific call centers	Hardware/ Software	\$5,250,000	\$0	\$250,000
Modern data culture data lake	Development of a COVID-19 unified data platform	Hardware/ Software	6,000,000	981,816	2,000,000
Grant application	Department of Commerce grant application process and receipt management for small and medium business	Software	218,560	227,560	0
Staff augmentation for business process improvement and automation opportunities	Business analyst resources to identify challenges with manual workflows and to assist with automation	Software/ Staff support	12,000,000	846,812	0
Modern data culture data environment assessment	Assess current data environment and develop an approach to data governance for a data science ecosystem, including for DOH contact tracing	Staff support	240,000	625,000	0
Digital services	Unifying design of websites to allow users to better find services	Staff support	2,353,409	0	0
Digital government subtotal			\$26,061,969	\$2,681,188	\$2,250,000
Total			\$67,618,226	\$32,917,580	\$14,064,700

VENDOR LIABILITY

The committee received information from the Risk Management Division of OMB regarding proposed legislation related to vendor liability. Section 32-12.2-15 authorizes state agencies to contractually limit the liability of a vendor for indirect loss resulting from the purchase or lease of certain products and services. State agencies must consult with the Attorney General and OMB regarding any contractual provisions and potential risk of loss to the state.

The proposed legislation would require if the potential direct loss is unknown, direct liability to the state must be set to twice the value of the contract unless all parties to the contract agree to an alternative amount. Exceptions to this requirement include breach of data confidentiality obligations and personal injury or property damage. Any agreed upon amount less than twice the value of the contract must be approved by the director of OMB.

The committee was informed if direct liability is not limited, the number of vendors that submit bids for state IT requests for proposals may decline.

Recommendation

The committee recommends the 2021 Legislative Assembly favorably consider legislation that may be introduced related to limiting vendor liability in state contracts.

EMERGENCY SERVICES COMMUNICATIONS COORDINATING COMMITTEE

The Legislative Management assigned the committee the responsibility to receive a report from the Emergency Services Communications Coordinating Committee (ESC3) regarding changes to the operating standards for emergency services communications pursuant to Section 57-40.6-12. The Emergency Services Communications Coordinating Committee was established in 2001 and is composed of two state and two local government representatives. The primary responsibility of ESC3 is to implement technologies that will efficiently and cost-effectively deliver 911 calls to 1 of the 21 North Dakota public safety answering points (PSAP). The primary funding source to provide 911-related services is through an emergency services communications system fee levied on telecommunication services in the state. All 53 counties and 1 city impose this fee. The Emergency Services Communications Coordinating Committee reported as of September 2020, 35 county and city jurisdictions charge the maximum \$2.00 fee on assessed communication services while 19 jurisdictions charge a \$1.50 fee. The telecommunication tax revenue totaled \$17.7 million in 2019, which is 64 percent of the \$27.5 million needed annually to support emergency communications in the state. The remaining amount needed for emergency services is collected primarily from property taxes.

The Emergency Services Communications Coordinating Committee presented proposed legislation providing technical corrections and updated terminology to Chapter 57-40.6 regarding emergency services communication systems.

Recommendation

The committee recommends the 2021 Legislative Assembly favorably consider legislation that may be introduced updating terminology relating to emergency services communications.

MAINFRAME MIGRATION

In October 2019, the committee toured the ITD data center in the Capitol. The committee observed state agency servers and the IBM mainframe while learning the history and usage of the data center, including the effect of cloud computing on data centers and computing power.

The committee received information from ITD regarding state mainframes, including training needs and costs to maintain the mainframes and efforts to transition state agency applications and systems off mainframes to newer technology. The state has four mainframes, including an AS/400 model, an AIX model that hosts the DHS Medicaid management information system, the JSND Unisys mainframe, and the primary IBM mainframe that hosts several large applications, the largest of which are for DHS and DOT.

The committee was informed ITD employs 3 FTE core system administrator positions and contracts with a vendor to maintain mainframe technology. An additional 18.5 FTE positions assist with mainframe work when needed. The cost to maintain state mainframe technology is approximately \$7.8 million each biennium, of which \$1.6 million is for salaries and wages and \$6.2 million is for operating expenses.

The first attempt to transition state applications and systems off mainframe technology was during the 2005-07 biennium. The Information Technology Department plans to transition all state agency applications off the primary IBM mainframe by the end of the 2025-27 biennium. The total estimated cost of transitioning all applications off the IBM mainframe is \$100.7 million, of which \$82.7 million is from the general fund and \$18 million is from federal funds.

Of the \$100.7 million estimated total, \$53 million may be requested for the 2021-23 biennium, including \$35 million from the general fund and \$18 million from federal funds. The estimated 2023-25 biennium and 2025-27 biennium general fund totals are \$36.6 million, and \$22.2 million, respectively. Of the \$100.7 million estimated total, \$88.4 million relates to DHS applications, \$8.3 million relates to DOT applications, and \$4 million relates to other state agency applications. The Department of Transportation driver's license program will be removed from mainframe technology during the 2019-21 biennium.

Recommendation

The committee encourages ITD to transition all state agency applications off the primary IBM mainframe by the end of the 2025-27 biennium.

INFORMATION TECHNOLOGY DEPARTMENT STRATEGIC PLAN AND ANNUAL REPORT Strategic Plan

Section 54-59-06 requires ITD to develop and maintain a business plan and Section 54-35-15.2 requires the committee to review the plan. Pursuant to that directive, ITD prepared a strategic business plan for the 2021-23 biennium. The 2021-23 biennium strategic and business plan includes goals of automating 20 percent of all state government work; decreasing FTE position requirements by 20 percent and reallocating salaries and training for staff; building new architecture to secure data and allow for comprehensive transformation of state IT; reinventing people, processes, and experiences; exploring alternate funding and operating models so ITD does not need funding from state agencies or the general fund; and unifying all IT services to the extent possible in state and local government. At the time of this report, the strategic plan is being finalized with the statewide IT plan, which is scheduled to be completed in November 2020.

Annual Report

Section 54-59-19 requires ITD to prepare an annual report on IT projects, services, plans, and benefits and to provide the report to the committee. Pursuant to the directive, ITD prepared and presented a report for fiscal year 2019, which included an executive summary, accomplishments, financial metrics and financial statements, and performance measures. The report indicated ITD accomplishments during fiscal year 2019 included the IT unification of six state agencies; increases in cybersecurity policy, personnel, and tools; increased usage of the North Dakota Health Information Network (NDHIN); the K-20W Initiative, which is a workforce cybersecurity education initiative; and internal service delivery, automation, and cross-agency collaboration.

The fiscal year 2020 report was not yet available when the committee completed its interim responsibilities.

INFORMATION TECHNOLOGY STANDARDS AND STATEWIDE PLAN

Information Technology Policies, Standards, and Guidelines

Section 54-59-09 requires ITD to develop statewide IT policies, standards, and guidelines based upon information received from state agencies and institutions. Except institutions under the control of the State Board of Higher Education, each executive branch agency and institution is required to comply with the policies and standards developed by ITD. Information technology policies, standards, and guidelines must be reviewed by SITAC. The department has adopted policies, standards, and guidelines in several areas and continues to update and adopt new policies, standards, and guidelines as necessary.

Statewide Information Technology Plan

Section 54-59-11 requires every executive branch agency, except institutions under the control of the State Board of Higher Education, to prepare an IT plan unless the CIO grants an exemption. Section 54-35-15.2 requires the committee to review the plan. The plan must be prepared based on guidelines developed by ITD and must be submitted to ITD by August 15 of each even-numbered year unless the CIO grants an extension. The Information Technology Department is required to review each entity's plan for compliance with statewide IT policies and standards or to resolve conflicting directions among plans. Agencies of the judicial and legislative branches are required to file IT plans with ITD by August 15 of each even-numbered year. Based on the IT plans, ITD must prepare a statewide IT plan. The statewide IT plan must be developed with emphasis on long-term strategic goals, objectives, and accomplishments.

Due to the COVID-19 pandemic, several agencies were given extensions for submitting agency IT plans to ITD. The department anticipates finalizing the statewide IT plan for the 2021-23 biennium in November 2020.

LARGE INFORMATION TECHNOLOGY PROJECTS

The committee is authorized to review any IT project or IT plan. If the committee determines a project or plan is at risk of failing to achieve its intended results, the committee may recommend OMB suspend the expenditure of money appropriated for the project or plan. In addition, the committee may review a project startup and project closeout report for any large IT project. A large IT project is defined in Section 54-35-15.2 to be an executive, judicial, or legislative branch project with a cost of \$500,000 or more or a higher education project that impacts the statewide wide area network, impacts the statewide library system, or is an administrative project.

Review of Large Information Technology Projects

For major IT projects in progress during the 2019-20 interim, the committee received and reviewed quarterly status reports compiled by ITD, project startup and project closeout reports, and other information regarding specific IT projects. The committee was informed no large projects were canceled as a result of the COVID-19 pandemic, but 12 of the 29 large projects active from March 2020 through September 2020 were given new budget or schedule baselines. Below is a summary of the project startup and project closeout reports and the iterative project reports received by the committee.

Project Startup Reports				
Agency	Project Name	Project Description	Estimated	
			Cost	Completion Date
Secretary of State	Elections program	Replacement of statewide voting system and implementation of statewide electronic pollbooks	\$8,628,516	January 2021
DTL	Unclaimed property project	Replacement of DTL unclaimed property system	\$273,700	May 2019
DOH	Electronic Women, Infants, and Children project	Implementation of an electronic system to replace paper processes	\$2,407,435	October 2020
Department of Environmental Quality	Environmental regulatory software system	Implementation of reporting and notification software for Quad O and Quad Oa federal air pollution programs	\$704,500	January 2021
DHS	Budget planning and forecasting system	Implementation of Oracle planning and budgeting cloud service and Oracle enterprise performance reporting cloud service for annual budget planning and forecasting	\$847,931	June 2020
DHS	Electronic visit verification system	Automation of manual and paper processes for personal care and home services	\$1,416,748	August 2021

Project Startup Reports				
Agency	Project Name	Project Description	Estimated	
			Cost	Completion Date
Industrial Commission	Oil and gas regional database management systems program - Release 1	Implementation of the bond management, entity management, and general module portions of the upgrade of the oil and gas risk-based data management system from a legacy platform to a web-enabled platform	\$1,285,115	May 2019
Industrial Commission	Oil and gas regional database management systems program - Release 2	Implementation of the transfer and well management module portions of the upgrade of the oil and gas risk-based data management system from a legacy platform to a web-enabled platform	\$2,433,555	January 2020
DOT	Driver's license project	Upgrade of driver's license and motor vehicle systems from mainframe technology to modern technology	\$22,500,000	March 2020
ITD	Palo Alto toolset implementation	Technology and core cybersecurity initiative to allow ITD to secure, defend, and respond to cyber attacks	\$11,314,834	June 2020
ITD	Statewide interoperable radio network (SIRN) project - Phase 1, Group 1	Establish the network core and five PSAP equipment replacements to provide interoperable radio communication for public safety personnel	\$5,741,102	June 2020
DPI	ND Foods 4.0	Improve decisionmaking capabilities, staff efficiencies, and reporting processes, and align the system with federal regulations	\$562,394	September 2019
JSND	Unemployment insurance modernization project - Claimant portal - Phase 1	Replacement of unemployment insurance system and transition from Unisys mainframe technology	\$1,150,330	December 2019

Project Closeout Reports				
Agency	Project Name	Project Description	Actual	
			Cost	Completion Date
DTL	Unclaimed property project	Replacement of DTL unclaimed property system	\$205,987 (Budget of \$273,700)	4 months - Same as scheduled
DOH	Medical marijuana system	Implementation of a medical marijuana program for production, processing, sale, and dispensable medical marijuana	\$213,463 (Budget of \$231,050)	4 months - Same as scheduled
DHS	New Medicaid card	Update to the health enterprise Medicaid management information system to comply with Centers for Medicare and Medicaid Services (CMS)	\$1,950,380 (Budget of \$2,513,200)	8 months - 2 months ahead of schedule
DHS	Budget planning and forecasting system	Updates of budget planning and forecasting system to reduce data entry needs of staff	\$820,961	11 months - 2 months behind schedule
Secretary of State	File 2.0 project	Implementation of software to replace mainframe central indexing system and business services system for business registration and information, licensing, notary, and administration	\$6,518,874 (Budget of \$7,895,739)	88 months - Same as scheduled
DPI	ND Foods 4.0	Improve decisionmaking capabilities, staff efficiencies, and reporting processes, and align the system with federal regulations	\$194,321 (Budget of \$562,394)	10 months - Same as scheduled

Iterative Project Reports

WSI - Claims and policy system (CAPS) replacement project

Replacement of core business applications related to claims and policies to improve customer service. The total estimated project cost is \$29.6 million.

Release	Actual Costs	Budgeted Costs	Completion Dates
• Releases 0-1 - Forms and database consolidation	\$1,292,069	\$1,630,288	April 2016
• Release 2 - Work management core functionality	\$1,332,631	\$1,640,320	September 2016
• Release 3 - Work management part 2	\$1,115,716	\$1,355,629	February 2017
• Release 4 - Policy registration	\$1,660,615	\$1,873,410	November 2017
• Release 5 - Policy maintenance part 1	\$1,638,705	\$1,835,649	July 2018
• Release 6 - Policy maintenance part 2	\$2,568,372	\$2,698,860	July 2019
• Release 7 - Policy maintenance part 3	\$2,389,227	\$2,502,194	August 2020
• Release 8 - Payroll reporting	Unknown	\$2,658,946	June 2021 (Estimated)
• Releases 9-20 - Claims	Unknown	Unknown	2025-27 Biennium (Estimated)

WSI - myWSI enhancement

Creation of a secure extranet portal for injured workers, employers, and medical providers.

Release	Actual Costs	Budgeted Costs	Completion Dates
• Releases 1-2 - Enabling employers to review information and reports	\$983,891	\$1,032,409	September 2019
• Release 3 - Electronic forms and workflows	\$540,249	\$599,312	July 2020
• Release 4 - Online payroll reporting and external forms	Unknown	\$303,350	June 2021 (Estimated)

DHS - Self-service portal and combined eligibility system

Replacement of eligibility systems with a single system to comply with requirements of the Patient Protection and Affordable Care Act.

Release	Actual Costs	Budgeted Costs	Completion Dates
• Release 1 - Convert systems that determine eligibility under the federal Affordable Care Act	\$49,842,739	\$50,943,770	February 2016
• Release 2 - Planning for conversion of other system components	\$102,743,168	\$108,469,338	March 2019
• Release 3 - Eligibility coverages for aged, blind, and disabled individuals	Unknown	\$9,401,330	August 2020
• Release 4 - Implementation of the low-income home energy assistance program	Unknown	Unknown	August 2021 (Estimated)

ITD - NDHIN

Creation of a secure exchange of health information that enables clinical users, such as providers, nurses, and clerical staff to easily and efficiently view information relating to a patient's electronic medical record. The total estimated project cost is \$12.5 million.

Phase	Actual Costs	Budgeted Costs	Completion Dates
• Phase 1 - Upgrade of NDHIN platforms	\$5,706,806	\$5,937,118	June 2019
• Phase 2 - Additional functionality for NDHIN utilization reports, notification alerts, analytics and coordinate modules, and training	Unknown	\$3,051,000	Unknown
• Phase 3 - Multiple assessments, including on sustainability, notifications, and alerts	Unknown	\$602,500	March 2021 (Estimated)
• Phase 4 - Participant database	Unknown	\$79,000	Unknown
• Phase 5 - Infrastructure assessment	Unknown	\$186,000	Unknown
• Phases 6-8 - Technology assessment and expand capabilities	Unknown	Unknown	Unknown

Department of Human Services - Medicaid Management Information System

The committee received information from DHS regarding the Medicaid management information system project. The primary function of the system is the payment of Medicaid claims from health care providers for individuals enrolled in the Medicaid program. The project started in June 2006 and was substantially completed in October 2015. In February 2019, CMS performed a certification review of the system. In June 2019, DHS received notification from CMS that the system was certified, and CMS approved a 75 percent federal financial participation for costs associated with the operation of the system retroactive to the system's implementation on October 5, 2015. This resulted in DHS receiving \$17.5 million of federal funding from CMS for costs the department has incurred since October 5, 2015, related to the system. During fiscal year 2019, 4,072,184 Medicaid claims were processed through the system, averaging 339,349 claims per month.

Department of Transportation - Driver's License Project

The committee received information from DOT regarding the driver's license project. The business process modeling portion of the project was completed in March 2020, at a cost of \$216,350, which will reduce waiting and processing times and increase availability of services. The motor vehicle and driver's license system implementation project budget was increased from \$22.5 million to \$28.7 million, an increase of \$6.2 million of federal funding related to COVID-19 technology costs. The project will include the purchase and distribution of 52 self-service kiosks throughout the state and the creation of a motor vehicle and driver's license mobile application.

Information Technology Department - Statewide Interoperable Radio Network

The committee received information from ITD regarding the SIRN project, which consists of three phases. Phase 1 relates to the SIRN core and PSAPs and includes two groups. Phase 2 relates to the SIRN network and towers and includes two groups--one for state towers and one for leased towers. Phase 3 relates to SIRN devices and radios.

The Information Technology Department indicated the COVID-19 pandemic delayed the SIRN project due to travel restrictions, equipment supply delays, and postponement of legal review. Phase 1, group 1 is expected to be completed in October 2020. Phase 1, group 2 is estimated to be completed in the 1st quarter of 2021. Phase 2, group 1 related to state towers is estimated to be completed in the 3rd quarter of 2023. Phase 2, group 2 related to leased towers is estimated to be completed in the 2nd quarter of 2021. The estimated completion date for the entire project is during the 2nd quarter of 2024.

Through September 2020, \$76.9 million has been obligated for the SIRN project, of which \$71.4 million is from state funds and \$5.5 million is from local funds. Seven political subdivisions have been reimbursed \$320,000 from the state for the purchase of personal and vehicular radios through September 2020. The Information Technology Department may introduce legislation to clarify which political subdivisions may receive radio reimbursement from the state.

The committee was informed many counties and cities planned to use funding from state oil and gas tax revenue allocations to pay for the local cost of SIRN radios. Due to the decrease in oil and gas tax revenue collections during the 2019-21 biennium, those sources of revenue likely will not be available. Motorola is offering counties and cities a 3- to 4-year, 0 percent interest loan to pay for the local cost of SIRN radios.

Department of Trust Lands Information Technology Project

The committee received information from DTL regarding the department's IT project pursuant to Section 10 of House Bill No. 1013 (2019). The 2017 Legislative Assembly appropriated \$3.6 million for an IT system replacement project. The current IT system includes data management systems no longer supported by vendors. The IT project includes the replacement of all department software and IT equipment, which is being done in coordination with ITD and OMB.

The major components of the IT project include unclaimed property, financial management and accounting, and land management. The unclaimed property system go-live date was April 29, 2019. In July 2020, the committee was informed the financial management and accounting system replacements would be completed by the end of July 2020. The land management system is estimated to be complete in 2022.

The cost of the unclaimed property system replacement was \$66,956. The cost of the financial management and accounting system replacement was \$1,816,657 through June 2020. The estimated cost of the land management system replacement is \$2,558,085, excluding unknown costs from ITD. The department estimates an additional \$1.6 million is needed to complete the land management system replacement.

Large Information Technology Project Ongoing 2021-23 Biennium Funding

The committee received information from ITD regarding large IT project funding projected to not be spent during the 2019-21 biennium and continued into the 2021-23 biennium, including the amount approved, amount to be continued, and funding source for each project. The Information Technology Department anticipates eight projects will need 2019-21 biennium funding continued into the 2021-23 biennium. The total budget for the eight projects is \$195 million during the 2019-21 biennium, of which \$11.7 million is from the general fund, \$55.7 million is from federal funds, and \$127.6 million is from special funds. The estimated funding needed to be continued into the 2021-23 biennium for these projects is \$105.6 million, of which \$9.9 million is from the general fund, \$3.6 million is from federal funds, and \$92.1 million is from special funds. The projects are for ITD, DHS, DPI, and the Retirement and Investment Office.

PRIORITIZATION OF PROPOSED MAJOR COMPUTER SOFTWARE PROJECTS

Section 54-59-02.1 requires ITD to submit information regarding proposed major IT projects over \$500,000 for executive branch state agencies, excluding institutions under the control of the State Board of Higher Education and agencies of the judicial and legislative branches, to SITAC. The State Information Technology Advisory Committee is required to review and rank the projects. The CIO is required to submit SITAC recommendations to the Information Technology Committee, OMB, and the Appropriations Committees of the Legislative Assembly. The judicial and

legislative branches must notify the committee each biennium on major IT projects and priorities. Section 54-35-15.2(13) requires the CIO to provide a report to the Information Technology Committee regarding the prioritization of major IT project recommendations.

Due to the COVID-19 pandemic, many agencies continue working on 2021-23 biennium budget requests and have not submitted requests to ITD for prioritization of major IT projects at the time of this report. The State Information Technology Advisory Committee intends to meet in November 2020 to prioritize major computer software projects and to publish the prioritized list in December 2020. During the final meeting of the interim on September 30, 2020, the Information Technology Committee received information regarding ITD, DOT, and WSI major IT projects expected to be requested for the 2021-23 biennium. The list of nonprioritized IT projects received as of September 30, 2020, includes:

Agency	Project Name	General Fund Request	Other Funds Request	Total Request
ITD	Cybersecurity forensic laboratory	\$750,000		\$750,000
ITD	Cybersecurity process automation	500,000		500,000
ITD	Technical debt reduction	60,000,000		60,000,000
ITD	Business process improvement/Organizational change management/Automation	40,000,000		40,000,000
WSI	CAPS Release 9 - Policy stabilization		\$912,285	912,285
WSI	CAPS Release 10 - Claim registration		1,906,630	1,906,630
WSI	CAPS Release 11 - Claim parties and claim maintenance - Part 1		1,905,090	1,905,090
WSI	CAPS Release 12 - Claim parties and claim maintenance - Part 2		2,045,010	2,045,010
WSI	CAPS Release 13 - Wages and reserves		1,510,465	1,510,465
WSI	myWSI Release 5 - Site reorganization/Employer dashboard/Enterprise identify management integration		923,450	923,450
WSI	myWSI Release 6 - Employer online application/Provider dashboard/Forms foundation		923,450	923,450
WSI	myWSI Release 7 - Provider forms submission/Medical records/Safety and ergo refactor		858,331	858,331
WSI	myWSI Release 8 - Injured employee dashboard/Claim file access/Forms submission		655,213	655,213
DOT	Automate vehicle location hardware and software expansion	1,745,000	1,745,000	3,490,000
DOT	Construction and materials management system	3,800,000		3,800,000
DOT	Agency website Drupal uplift and enhancements		500,000	500,000
DOT	Roadway inventory management system replacement	5,860,000		5,860,000
DOT	Traffic counting program modernization		3,000,000	3,000,000
DOT	Traffic data estimating and analysis replacement		500,000	500,000
Total		\$112,655,000	\$17,384,924	\$130,039,924

EDUCATION University System

The committee received information from the State Board of Higher Education regarding higher education IT activities pursuant to Sections 15-10-44 and 54-35-15.2. The report indicated the University System had the following major IT initiatives for the 2019-21 biennium:

- The facilities asset management information system cloud project was completed during the 4th quarter of 2019. The project was completed at a cost 20.2 percent more than the original baseline and 0.5 percent more than the revised baseline. The project was completed 81.7 percent behind the original baseline schedule and 63.1 percent behind the revised baseline schedule.
- The Online Dakota Information Network, or "ODIN," replacement project, also known as the academic library management system, was completed during the 3rd quarter of 2020 on schedule and 13.7 percent under budget.
- The Novelution electronic grants administration project was in green status during the 3rd quarter of 2020. The project was 31.4 percent under budget and 0.1 percent behind schedule compared to the project revised baseline. The North Dakota State University (NDSU) and the University of North Dakota (UND) went live with the first project module in November 2019 and January 2020, respectively. The project is a modular-based electronic grants administration application to provide a central repository for researchers to monitor projects and improve accuracy.
- The University System worked with UND and NDSU on a mobile application pilot project called Target - X, which replaced the previous mobile application for course registration. The University System has deployed the application to all campuses.

- UND is deploying a new facilities management software to replace the current facilities asset management information system. The project was in the planning stage during the 3rd quarter of 2020 and a contract has been signed with a vendor.

Elementary and Secondary Education

The committee received information from EduTech regarding IT initiatives for elementary and secondary education. EduTech provides IT services and professional development to North Dakota elementary and secondary schools, manages PowerSchool application upgrades, and assists faculty and staff with the implementation of Microsoft Office 365 in schools. The committee was informed ITD and EduTech combined the organizations' separate help desks into one IT Help Desk system for state government and K-12 education.

OTHER INFORMATION

Information Technology Coordination of Services

Section 54-59-12 provides for the review and coordination of IT between ITD, higher education, and political subdivisions. In addition, Sections 15-10-44 and 54-35-15.2 provide the Information Technology Committee is to receive information from the State Board of Higher Education regarding higher education IT planning, services, and major projects.

The committee received information from ITD and the University System regarding coordination of services. The committee was informed ITD has frequent discussions with the University System and political subdivisions regarding IT needs of state and local government agencies. The University System and ITD have weekly interactions with network teams and frequent meetings with executive teams.

Information Technology Department Service Rates

The committee received information from ITD regarding the results of ITD's review of service rates charged to state agencies, including rate structure and agency billing pursuant to Section 9 of House Bill No. 1021 (2019).

The Information Technology Department sets rates for services provided to state agencies in April of each even-numbered year for the subsequent biennium. The rates are effective July 1 of the following year. The committee was informed the revenue received from state agencies for services provided has historically originated equally from the agencies' general, federal, and special fund appropriations. The department charges an overhead rate of 4.9 percent for services provided to state agencies.

The Information Technology Department reported ITD rate changes for the 2021-23 biennium will result in an overall reduction of expected state agency billings of approximately \$825,000. Costs related to staffing and maintaining the mainframe will increase approximately \$600,000. A technology fee change will result in network rates increasing state agency billings by approximately \$350,000. The committee was informed 2021-23 biennium rates are expected to decrease state agency billings for general disk and server hosting services by \$1.2 million, ConnectND hosting by \$250,000, and telephone services by \$450,000.

Information Technology Department Building

The committee received information from ITD regarding ITD's leased building located on Normandy Street in Bismarck. The department vacated the building in August 2019 due to quality of construction and structural integrity concerns related to the building foundation, floors, and other areas. The committee was informed ITD would continue to pay for the lease of the building, but the building landlord agreed to pay all construction expenses to fix the building, any costs to relocate ITD staff to new locations, and any rent expenditures incurred by ITD as a result of the relocation. The Information Technology Department reported there would be no additional costs to the state while the building was under repair.

The building was available to resume occupancy in late July 2020 but due to the COVID-19 pandemic, most of ITD's staff was working remotely. As a result, ITD chose not to reoccupy the building, instead opting to have employees work remotely permanently. The department started occupying the building in 2015 and the lease will expire in 2025. The Information Technology Department reported telework has resulted in various efficiencies, resulting in ITD exploring options to terminate the building lease. Until the lease is terminated, ITD will continue to pay rent for the building regardless of whether ITD staff occupy the building.

Employee Bonuses

Section 54-06-30 allows state agencies to pay performance bonuses of up to \$1,500 each fiscal year to an employee. Section 54-06-31 allows state agencies to develop programs to provide bonuses to recruit or retain employees in hard-to-fill occupations. There are no statutory limitations on the amount of retention or recruitment bonuses a state employee may receive. Funding for bonuses must be provided from within each agency's salaries and wages budget.

The committee received information from ITD regarding bonuses provided to ITD employees in fiscal year 2020 and the methodology used to determine the bonuses provided. The committee was informed the COVID-19 pandemic caused ITD staff to work overtime to meet demand for telework and other IT services. From March 2020 through July 2020, ITD reported its staff worked 16,849 hours of overtime.

Because ITD staff are not eligible to be compensated for overtime worked, ITD chose to provide bonuses to certain employees. To be eligible for a bonus, an individual had to have worked a minimum of 20 hours of overtime related to the COVID-19 pandemic each month during March 2020 and April 2020. The bonuses provided to staff were paid based on a formula that considered the employee's hourly wage and 75 percent of overtime hours worked in excess of the first 20 overtime hours worked during March 2020 and April 2020. The Information Technology Department awarded performance bonuses to 15 employees during fiscal year 2020, totaling \$3,000, or an average of \$200 per employee. The department awarded retention bonuses to 75 employees during fiscal year 2020, totaling \$169,959, or an average of \$2,266 per employee. The department awarded recruitment bonuses to 6 employees during fiscal year 2020, totaling \$15,500, or an average of \$2,583 per employee. Bonuses provided to ITD staff in fiscal year 2020 were paid using special fund salaries and wages funding available due to vacant position savings within the department.

Employees Working Out of State

The committee received information from ITD regarding the number of ITD employees working outside North Dakota. Of ITD's 402 FTE positions, 17 FTE positions, or 4 percent, were working permanently out of state as of August 2020. The Information Technology Department reported difficulty recruiting IT and cybersecurity employees in North Dakota due to low salaries offered at the state and North Dakota IT professionals lacking certain IT skills. Providing the option to telework from other states allows ITD to attract IT and cybersecurity professionals. The Information Technology Department reported it is more cost-effective for ITD to allow certain employees to work outside North Dakota rather than contracting with a vendor to perform the work.

2021-23 Biennium Budget Request

The committee received information from ITD regarding the department's 2021-23 biennium budget request, which will focus on IT unification, cybersecurity, modernization of technology, and NDHIN. The department's 2021-23 biennium base budget request totals \$211.3 million, of which \$15.4 million is from the general fund, \$193.8 million is from special funds, and \$2.1 million is from federal funds. The request includes a 10 percent reduction from the 2021-23 biennium base budget to comply with the Governor's budget guidelines.

The department's 2021-23 biennium budget request, including optional requests, totals \$377.8 million, of which \$155.6 million is from the general fund, \$220.1 million is from special funds, and \$2.1 million is from federal funds. The optional requests are \$166.8 million more than the 2021-23 biennium base budget, of which \$140.5 million is from the general fund and \$26.3 million is from special funds. The \$166.8 million of optional requests includes a special fund decrease of \$5.6 million for cybersecurity initiatives and increases of:

- \$60 million from the general fund for the replacement of old technology, including mainframe, flat file databases, crystal reports, Lotus Notes, and client server technologies;
- \$40 million from the general fund for business process improvement and organizational change management to replace manual, repeatable processes with automated processes;
- \$25.9 million from the general fund for 29 new FTE cybersecurity positions;
- \$6.8 million from the general fund for NDHIN; and
- \$31.9 million from special funds for the transfer of 66 FTE IT positions in other state agencies, including 50 FTE positions in the Governor's cabinet agencies and 16 FTE positions from the Bank of North Dakota as part of ITD's 2021-23 biennium IT unification initiative.

Health Information Technology

The committee received information from ITD regarding the continued development of NDHIN. The North Dakota Health Information Network is a public-private partnership for the secure exchange of health information that enables clinical users, such as providers, nurses, and clerical staff to easily and efficiently view information relating to a patient's electronic medical record. The North Dakota Health Information Network expansion project will establish health information network infrastructure, provide medication information and registry connections, and allow for administrative process automation and simplification.

The committee was informed federal funding available for health IT initiatives is anticipated to be reduced for the 2021-23 biennium. The federal matching funds percentage for health IT was scheduled to decrease from a 90 percent match to a 75 percent match but due to a new federal funding model being adopted based on state population, the

federal match will be reduced to 20 percent. As a result, ITD anticipates requesting a general fund appropriation of \$6.8 million for health IT during the 2021-23 biennium, primarily for the continued expansion of NDHIN.

Distributed Ledger Technology Report

The committee received information from ITD regarding the implementation of distributed ledger technologies pursuant to Section 54-59-02.2. The department has identified multiple potential uses of blockchain technology in state government and has built a proof of concept application that allows for citizen data to be verified using blockchain in a mobile application. The mobile application could be used for licensing, such as driver's licenses or fishing licenses, and human services programs, such as the supplemental nutrition assistance program.

Statewide Longitudinal Data System Initiative

The Legislative Management assigned the committee the responsibility to receive a report from the Statewide Longitudinal Data System Committee on the status of SLDS pursuant to Section 54-59-36. The committee received information from ITD regarding the status and development of SLDS. During the 2019-20 interim, a new SLDS educators' portal was developed that includes interactive dashboards, application presentations, and reports. The Statewide Longitudinal Data System Committee received federal funding of \$200,000 which allows the SLDS e-transcripts system to publish high school transcripts to a website and mobile wallet for each student to view. The e-transcripts system will allow students to share transcripts with schools and employers.

Higher Education Local Area Network Services

The committee received information from ITD regarding a report of local area network services provided in student housing facilities on higher education campuses and any contracts entered pursuant to Section 1 of Senate Bill No. 2318 (2019). In November 2019, a contract was executed with Dakota Carrier Network to provide local area network services on higher education campuses. Through August 2020, none of the higher education institutions utilized the contract.

Vital Records Report

The committee received information from DOH regarding an electronic access to vital records report pursuant to Section 7 of House Bill No. 1004 (2019). The intent of the section was for DOH to implement a program to expand access to vital records either through web access or by kiosks located in at least eight different locations in the state.

The committee was informed vital records requests are received through DOH's secure web application (51.6 percent), mail (32.5 percent), or in-person (15.9 percent). The State Department of Health reported allowing county issuance would add costs to the DOH budget and indicated training county staff would increase security risks related to vital record documents compared to providing services with limited staff in a controlled and secure location in Bismarck. The State Department of Health indicated the most efficient and inexpensive option to increase access to vital records is to expand online ordering. The department is working with ITD to identify ways to improve online processes for vital record requests, including adding mobile capabilities to DOH's online records system.

State Auditor's Information Technology Department Operational Audit

In August 2019, the committee received information regarding the State Auditor's operational audit of ITD for the 2-year period ending June 30, 2018, including ITD's inventory system, the status of the unallocated assets identified in the report, and plans to improve the inventory system. The audit reported 217 devices were unaccounted for, of which 24 were considered sensitive devices with an original value of \$92,000. The Information Technology Department reported all devices noted in the audit were managed in an old inventory system and that a new inventory system was implemented in May 2019. Of the sensitive devices identified in the audit report, ITD found all but 10 and the remaining devices have a total book value, after accounting for depreciation expense, of \$0. The remaining items have been appropriately surplus but were not reflected in the ITD inventory system. The committee was informed the risk of sensitive information from these devices being available to unauthorized individuals is minimal.

Information Technology Security Audits

In September 2020, the committee received information from the State Auditor regarding an update of IT security audits of ITD and the University System. Senate Bill No. 2004 (2019) included funding of \$450,000 for the State Auditor's office to contract with consultants to test IT system security of ITD and the University System. The State Auditor's office planned to contract with ManTech International Corporation to conduct the audits of ITD and University System IT systems but due to the COVID-19 pandemic, ManTech was not able to conduct the audits. In August 2020, the State Auditor's office entered a contract with one of ManTech's subcontractors to conduct the audits. The audit reports are expected to be completed by the end of January 2021. A public report and a confidential report will be produced.