

**Information Technology Department
Budget No. 112
House Bill Nos. 1021 and 1435**

	FTE Positions	General Fund	Other Funds	Total
2019-21 legislative appropriation	402.00	\$28,565,311 ¹	\$321,032,334	\$349,597,645
2017-19 legislative appropriation	344.30	20,532,334	224,566,988	245,099,322
2019-21 appropriation increase (decrease) to 2017-19 appropriation	57.70	\$8,032,977	\$96,465,346	\$104,498,323

¹This amount includes \$11,400,000 of one-time funding. Excluding this amount, the agency's ongoing general fund appropriation is \$17,165,311.

Item Description

FTE position changes - The 2019 Legislative Assembly authorized the Information Technology Department (ITD) a total of 402 FTE positions, an increase of 57.70 FTE positions from the 2017-19 biennium, as follows:

	FTE Increase (Decrease)
Removed undesignated FTE positions	(16.00)
Added cybersecurity FTE positions	8.00
Removed Center for Distance Education FTE positions	(29.80)
Removed Educational Technology Council FTE positions	(0.50)
Transferred 96 FTE positions from five agencies to ITD for the information technology (IT) shared services unification initiative	
Department of Trust Lands	2.00
Department of Human Services	48.00
Adjutant General - Department of Emergency Services	4.00
Parks and Recreation Department	1.00
Department of Transportation	41.00
Total	57.70

Status/Result

The 16 undesignated FTE positions and 0.50 Educational Technology Council FTE administrative assistant position have been removed. Of the undesignated FTE positions, ITD removed the following:

Title	FTE
Administrative assistant II	1.0
Administrative assistant III	1.0
Computer operator II	2.0
Customer technical support specialist III	2.0
Division team leader II	1.0
Enterprise database manager	1.0
Human resource director I	1.0
Programmer analyst II	2.0
Programmer analyst III	2.0
EduTech student IT specialist	1.0
Systems administrator II	1.0
Telecomm technician III	1.0
Total	16.00

Through March 2020, ITD has hired 5 of the 8 FTE cybersecurity positions and anticipates hiring the remaining 3 FTE cybersecurity positions by the end of the biennium. See the **Cybersecurity** section below.

The Center for Distance Education (CDE) positions were removed. Of the 29.80 FTE positions removed, 28.80 FTE were transferred to the Department of Career and Technical Education (CTE). See the **Center for Distance Education** section below in the analysis of CTE.

The FTE positions authorized as part of the IT shared services unification initiative have been transferred to ITD. See the **Shared services IT unification** section below.

See the **Geographic information system - Access to lands study**, **Cybersecurity**, and **Statewide interoperable radio network** sections below.

One-time funding - The Legislative Assembly appropriated \$136.55 million of one-time funding to ITD for the 2019-21 biennium. Of this amount, \$1.15 million is provided from the strategic investment and improvements fund for a geographic information system (GIS) statewide land parcel project and \$15.4 million is for cybersecurity operating expenses, of

which \$11.4 million is from the general fund and \$4 million is from the strategic investment and improvements fund. The remaining \$120 million was provided in House Bill No. 1435 for the statewide interoperable radio network (SIRN), of which \$20 million is from the strategic investment and improvements fund, \$80 million is from a Bank of North Dakota line of credit, and \$20 million is from Bank profits.

Line item transfers - Section 3 of House Bill No. 1021 authorizes OMB to make transfers of funds between line items of ITD as may be requested by the chief information officer as necessary for the development and implementation of IT projects.

Geographic information system - Access to lands study - Section 4 of House Bill No. 1021 identifies \$5.15 million from the strategic investment and improvements fund, of which \$4 million is for cybersecurity operating expenses (see the **Cybersecurity** section below) and \$1.15 million is for a GIS statewide land parcel project.

Section 6 of House Bill No. 1021 provides for a Legislative Management study of access to public and private lands for hunting, trapping, fishing, and related issues, including trespass violations and penalties. At the direction of the Legislative Management, before August 1, 2020, ITD and the Game and Fish Department are to establish an electronic posting and hunter access information system in up to three counties. The Information Technology Department and the Game and Fish Department may contract with a third party to assist with the electronic posting and hunter access information system development and operation.

Cybersecurity - The 2019 Legislative Assembly appropriated \$17.7 million for cybersecurity initiatives, as follows:

	General Fund	Other Funds	Total
Salaries and wages	\$2,322,680		\$2,322,680
Operating expenses	11,400,000	\$4,000,000	15,400,000
Total	\$13,722,680	\$4,000,000	\$17,722,680

In May 2020, the Emergency Commission and Budget Section approved a request from ITD to increase the agency's federal funds spending authority by \$67,618,226 from a portion of the state's allocation from the federal Coronavirus Relief Fund. The request included funding for cybersecurity initiatives (\$17 million), telework software upgrades, hardware purchases, and to increase telework server capacity (\$23,868,226), and to establish an enterprise call center, automate manual processes, and to conduct a state government workflow assessment (\$26,750,000).

The additional funding for cybersecurity initiatives approved by the Emergency Commission and Budget Section results in a total of \$34.7 million available to ITD for cybersecurity during the 2019-21 biennium.

Through March 2020 no transfers between line items have been made. The department does not anticipate any line item transfers will be necessary during the 2019-21 biennium.

The Legislative Management assigned this study to the Natural Resources Committee. In January 2020, the committee learned Richland, Ramsey, and Slope Counties volunteered to participate in the land access pilot project.

The Information Technology Department awarded a contract for the project to Applied Geographics, Inc., in January 2020. The land access application is expected to be available for use by the three counties in June 2020. The deadline for landowners and operators to submit posting requirements in the application is July 15, 2020.

Through March 2020, ITD has spent \$7,000 on the GIS statewide land parcel project. Due to the Coronavirus (COVID-19) pandemic, the estimated amount to be spent during the biennium is unknown.

Through March 2020, ITD has spent \$11.5 million for cybersecurity operating expenses, primarily from the department's general fund appropriation. The department anticipates the entire general fund appropriation and nearly all of the appropriation from the strategic investment and improvements fund will be spent by the end of the biennium.

The department has purchased additional cybersecurity software, including purchasing licenses for an extended detection and response software (Traps from Palo Alto Networks) to monitor, investigate, and respond to cybersecurity threats on the state network and endpoint devices. Through March 2020, ITD has deployed Traps in executive branch agencies receiving desktop support services from ITD, as well as certain counties, cities, and school districts electing to participate. The department has also entered a \$2 million contract with Palo Alto Networks for assistance to ITD staff with cybersecurity software, tools, and licenses.

The department has indicated cybersecurity attacks on state systems have tripled since the beginning of the COVID-19 pandemic. The increase in cybersecurity attacks resulted in ITD requesting federal funding from the state's portion of the Coronavirus Relief Fund. The department intends to use the funding to contract with third-party cybersecurity professionals to assist ITD cybersecurity

Health information network expansion - In Section 1 of Senate Bill No. 2021 (2017), the Legislative Assembly appropriated \$43.6 million for the North Dakota Health Information Network (NDHIN) expansion project, a project designed to provide for the secure exchange of health information to enable clinical users such as providers, nurses, and clerical staff to easily and efficiently view information relating to a patient's electronic medical records.

Of the amount appropriated to ITD, \$40.5 million is from federal funds distributed by the federal Centers for Medicare and Medicaid Services to the Department of Human Services. Federal funds are available through a Medicaid advanced planning document and require a 10 or 15 percent match. The matching funds will be generated from billings to providers, payers, and from the electronic health information exchange fund. Funding will be available for the project through the 2021-23 biennium. The anticipated completion date is September 2021.

In Section 5 of House Bill No. 1021, the Legislative Assembly authorized ITD to continue the funding appropriated for the NDHIN expansion and care coordination project for the 2017-19 biennium into the 2019-21 biennium.

Shared services IT unification - During the 2017-18 interim, ITD began a shared services IT unification plan that includes consolidating IT services, such as desktop support, help desk services, and IT personnel in the Governor's cabinet of executive branch state agencies. The department intends to use the unification plan to improve IT productivity by establishing common systems and processes for communication and collaboration among executive branch agencies. The department reported the unification plan will focus on cost reduction and operational efficiencies and provide data hosting, storage, and archiving opportunities. The department believes the unification plan will reduce redundancies in executive branch agencies, decrease enterprise risk, improve IT investment success, and maximize cyber defense.

The 2019-21 biennium executive budget recommended the transfer of 145.5 FTE positions from 14 agencies for the unification plan. The 2019 Legislative Assembly authorized a shared services IT unification pilot project to consolidate IT resources in state government as follows:

	ITD Operating Service Fund
Salaries for 96 FTE positions transferred to ITD from five agencies	\$18,266,327
Temporary salaries	544,896
Operating expenses for transferred FTE positions	8,835,127
Total	\$27,646,350

staff defend state systems. The department will also use the funding to purchase additional software and licenses and to provide training for large scale cybersecurity incidents.

Through March 2020, ITD has spent a total of \$11.4 million on the NDHIN expansion project, including \$3.5 million during the 2019-21 biennium. The NDHIN includes more than 240 signed participation agreements representing more than 400 health care facilities in the state.

The state currently has seven service management systems and four application development models. The department intends to use the unification plan to reduce the number of management systems and development models to one each. Currently, ITD focuses 91 percent of IT FTEs and resources to running operations, 9 percent to growing IT, and 0 percent to transforming IT. The department believes the unification plan will allow state IT employees and resources to be allocated 50 percent to running operations, 30 percent to growing IT, and 20 percent to transforming IT. The department estimates the unification plan will provide a 15 to 22 percent increase in IT work efficiency within 4 years of the entire unification plan being implemented.

The unification plan included a reorganization of upper management positions in ITD, including the establishment of five positions that will report directly to the chief information officer--chief operations officer, chief data officer, chief technology officer, chief reinvention officer, and chief information security officer.

The Legislative Management assigned the responsibility for the IT unification study to the Information Technology Committee. The department reported to the committee the IT unification pilot project will be evaluated internally by reviewing IT mission alignment, cost management, and risk containment. The department intends to use the pilot project to evaluate processes, tools, contracts, FTE positions, costs of units of service, and volume purchasing efficiency. At the time of this report, the committee's study of IT unification is ongoing.

During the 2021 legislative session, ITD intends to request the transfer of IT-related FTE positions in the Governor's cabinet executive branch agencies not

Section 7 of House Bill No. 1021 provides for a Legislative Management study of ITD's transition to the run-grow-transform model and IT unification. The study must include a review of changes in fees, services, operations, processes, and systems.

Section 8 of House Bill No. 1021 provides legislative intent that ITD provide direction to the executive branch agencies in the Governor's cabinet not included in the IT unification pilot project regarding IT strategic planning and operations. It is further the intent of the 66th Legislative Assembly that the 67th Legislative Assembly implement the findings and recommendations resulting from the IT unification pilot project.

Statewide interoperable radio network - In Section 1 of House Bill No. 1178 (2017), the Legislative Assembly established a SIRN fund for the development and maintenance costs related to SIRN.

Section 4 of the bill amended Section 57-40.6-02 to require political subdivisions to add a fee of \$0.50 to the fee imposed on assessed communication services. The additional \$0.50 per communication connection must be remitted to the State Treasurer for deposit in the SIRN fund.

Section 7 of the bill authorized ITD to obtain a loan of \$15 million from the Bank of North Dakota and appropriated the funds to ITD for SIRN. The term of the loan may not exceed 6 years and must be repaid from funds available in the SIRN fund.

In Senate Bill No. 2021 (2017), the Legislative Assembly authorized special fund spending authority of up to \$13.7 million related to SIRN during the 2017-19 biennium. Of this amount, the department estimated \$9.6 million would be collected during the 2017-19 biennium from the additional \$0.50 imposed on assessed communication services. The department's total appropriation for SIRN for the 2017-19 biennium was \$28.7 million; however, the department estimated only \$24.6 million of this amount would be available during the 2017-19 biennium.

In House Bill No. 1021, the Legislative Assembly appropriated \$12.33 million from the SIRN fund to ITD for the SIRN project for the 2019-21 biennium.

In Section 3 of House Bill No. 1435, the Legislative Assembly amended Section 37-17.3-03 to require the chief information officer to establish a process to register and audit users of SIRN and to allow ITD to provide a state cost-share for each SIRN radio. The state cost-share for each radio is \$1,500, unless the cost of the radio is less than \$1,500, in which case the state cost-share is the cost of the radio.

Section 8 of House Bill No. 1435 appropriates one-time funding of \$120 million to ITD for SIRN, of which \$20 million is from the strategic investment and improvements fund, \$80 million is from a Bank of North Dakota line of credit, and \$20 million is from Bank profits. The department is required to repay the line of credit from funds available in the SIRN fund or other funds over a period not to exceed 20 years from the date of issuance of

already unified to ITD. This request may include up to 50 FTE IT positions. The department reported the Bank of North Dakota has volunteered to be included in the 2021-23 biennium IT unification plan, if approved by the Legislative Assembly.

In January 2019, ITD awarded the SIRN contract to Motorola to provide a single, statewide solution for North Dakota public safety systems. The department has negotiated a 10-year contract with Motorola for the maintenance of the SIRN system, including software support and upgrades. Infrastructure, devices, and equipment upgrades are not included in the maintenance agreement, although ITD has negotiated pricing for these items.

The total estimated cost of the SIRN project is \$207.1 million, of which \$206 million has been contracted with Motorola for SIRN core infrastructure and public safety answering points (\$9 million), the SIRN network (\$97 million), and subscriber devices (\$100 million). Network construction costs not contracted with Motorola are expected to total \$1.1 million. The estimated annual operating expenditures of SIRN are \$5 million to \$10 million. The SIRN project is estimated to be a 5-year project.

During the 2017-19 biennium, \$8.1 million was deposited in the SIRN fund from revenue collected from the additional \$0.50 fee imposed on assessed communication services. The department spent \$825,688 on SIRN and did not borrow any funds from the Bank of North Dakota.

In December 2019, \$20 million was transferred from the strategic investment and improvements fund to the SIRN fund. Through March 2020, \$3 million from revenue collected from the additional \$0.50 fee imposed on assessed communication services has been deposited during the 2019-21 biennium. Through March 2020, ITD has spent \$7.5 million on SIRN during the 2019-21 biennium. Due to travel restrictions as a result of the COVID-19 pandemic, the estimated amount that will be spent on SIRN during the 2019-21 biennium, including the amount of funding used from the Bank line of credit, is unknown.

Through March 2020, ITD has not spent funding to provide personal and vehicular radios to local public safety entities. Local public safety entities may purchase radios between April 2019 and January 2024, but it is anticipated most entities will likely purchase radios during the 2021-23 biennium.

the line of credit, as appropriated by the Legislative Assembly. The Bank may not transfer any profits until ITD uses \$25 million of the line of credit.

Cloud computing initiatives - During the 2017-18 interim, ITD began transitioning state government systems and applications from current data centers to cloud-based platforms because the department believes the current on-premise technologies are becoming obsolete and many new systems are cloud-based. The department has stated the transition will provide security, operational, and cost advantages while increasing data storage capabilities and improving system up-times and backups.

Distributed ledger technologies pilot project - In House Bill No. 1048 (2019), the Legislative Assembly added a new section to Chapter 54-59 to require ITD to research and develop the use of distributed ledger-enabled platform technologies, such as blockchains for computer-controlled programs, data transfer and storage, and program regulation to protect against falsification, improve internal data security, and identify external hacking threats. Research must include efforts to protect the privacy of personal identifying information maintained within distributed ledger programs. The department is required to select a state agency, upon the request of the state agency, to serve as a pilot program for the implementation and use of distributed ledger-enabled platform technologies.

Campus housing IT services - In Senate Bill No. 2318 (2019) the Legislative Assembly provided intent that ITD enter a contract to provide a solution to improve wired or wireless internal local area network service infrastructure in student housing facilities on higher education campuses.

The department has shifted from a "cloud first" strategy to a "cloud smart" strategy, meaning new agency applications are evaluated for use in the cloud, but are not automatically placed in the cloud unless that is the most efficient and effective decision for the agency and application.

The department has contracts to allow the purchase of cloud services from Microsoft, Amazon, IBM, and Oracle. The contract with Microsoft was renewed in March 2020 and the Amazon contract was renewed in July 2017. The department also negotiated with Microsoft to consolidate 60 state contracts for 57 executive branch agencies for Microsoft Office licenses. The contracts were consolidated to 13 contracts with a goal of further negotiating to 2 contracts.

On average, ITD spends approximately \$1.1 million during a biennium for cloud-related costs, including computing, storage, networking, and other operating expenses associated with hosting applications in the cloud. The department reported nearly all state agencies have at least one application hosted in the cloud. With the exception of the judicial branch, all state agencies are using Microsoft Office 365, which is hosted in the cloud, using more than 8,000 licenses.

The Information Technology Department and the Department of Public Instruction (DPI) are working on a request for proposal to select a vendor to implement identity management and e-transcript blockchain for the statewide longitudinal data system. In August 2019, DPI received a \$200,000 federal grant for the pilot project. The pilot project is estimated to be completed by the end of the 2019-21 biennium.

The department and the North Dakota University System collaborated to award a contract to Dakota Carrier Network to improve local area network services on higher education campuses. Through March 2020, higher education campuses have attempted to resolve local area network services individually rather than utilize the contract with Dakota Carrier Network.