

SECRETARY OF STATE
STATE OF INDIANA
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August 24, 2018

Jason Dudich
Director
Indiana State Budget Agency
200 West Washington Street
Room 212
Indianapolis, IN 46204

Re: Indiana Secretary of State Budget for FY 2020 and FY 2021

Indiana State Budget Agency,

For your review and consideration, I respectfully submit my budget request for FY 2020 and FY 2021. Included, you will find a description of my office's efforts to protect Indiana elections and our success on the INBiz project.

I have also attached a copy of the Governor's Executive Council on Cybersecurity Election Committee's final report and our INBiz budget breakdown.

ELECTION SECURITY CAPITAL REQUEST

Since the 2016 elections, physical, logical and cyber security have been driving forces in Indiana's and America's push to strengthen public service security. On almost a daily basis, media seems to focus on Russian "meddling" in America's democracy. Among all of this, it is important to note that **no votes were changed in 2016**.

In 2015, the State Budget Agency and the Indiana General Assembly identified and supported the need for modernizing Indiana's Statewide Voter Registration System (SVRS). At that time, our focus was to shift our technology to a more tailored, private service hosting provider and add efficiencies to election night reporting, election management systems and county clerk features. At the same time, many other components of cybersecurity would be explored, including SVRS two-factor authentication. Like many legislative and budgetary priorities, at that time, Indiana led the nation in its focus on modernizing election technology.

This request is designed to establish Indiana as a national leader in election security by striking a delicate balance between election equipment that satisfies both voter convenience and the demand for security and auditability. In addition, the request seeks to properly support the requirements for successful program development, implementation and maintenance.

A. ELECTION INFRASTRUCTURE SUBSECTOR GOVERNMENT COORDINATING COUNCIL (EIS-GCC) EFFORTS

Indiana has served at the forefront of this national debate and international fight. During the most critical moments of this discussion, I served as president of the nonpartisan National Association of Secretaries of

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State (NASS). In addition, I served as a member of the Executive Committee of the Election Infrastructure Subsector Government Coordinating Council (EIS-GCC). The EIS-GCC is the body responsible for implementing and administering the critical infrastructure designation for elections.

The EIS-GCC was established in October 2017 and was first charged with improving communications between state and local officials and the federal government and to share resources. The EIS-GCC is comprised of 29 members, of which 24 are state and local election officials. This is the first group of its kind and helps us stay on the same page and share vital information.

The 2016 election cycle highlighted challenges in communication and the sharing of information between the U.S. Department of Homeland Security (DHS) and the states. To that end, in the summer of 2017, over six months since the 2016 elections, we learned that 21 state systems were scanned or probed leading up to November 2016 by foreign actors. Indiana was not one of the targeted states due to some of the activities listed above, most notably the State Budget Agency's and General Assembly's funding support to migrate SVRS to a private and confidential hosting provider.

B. ASSESSMENT OF INDIANA'S CYBERSECURITY PROFILE

Since the 2016 election, Indiana has been working to modernize and maximize security through the implementation of cybersecurity projects across SVRS and the election infrastructure. Indiana has partnered with DHS and Multi State Information and Analysis Center (MS-ISAC) to assess risk and vulnerabilities, develop best practices, and provide access to 24/7 security information, threat notifications, and security advisories. Additionally, the Indiana Executive Council for Cybersecurity was established by Governor Holcomb in January 2017 to form an understanding of Indiana's cyber risk profile, identify priorities, establish a strategic framework of Indiana's cybersecurity initiatives, and leverage strategic cybersecurity partnerships across the public and private sector.

In 2017, we implemented many cybersecurity improvements, which included cybersecurity training at the county and state level that covered spear phishing, implementation of security enhancements to improve password protections, implementation of multifactor authentication protocols and migrated to a new hosting environment with added security features. Indiana expanded its cyber footprint in 2018 through the sharing of election cybersecurity best practices to local election officials, conducted a risk and vulnerability assessment across the election infrastructure and piloted a risk limiting audit in our state's largest county to validate optical scan voting tabulation systems. Indiana also partnered with MS-ISAC to install an Albert Sensor, a network monitoring solution that provides automated alerts of network threats enabling Indiana to respond quickly when data may be at risk.

Additional Indiana election security practices include mandatory public testing of voting equipment by local election officials before each election, required state laboratory testing and certification for the implementation and usage of voting system hardware and software. In 2018, Indiana became one of the first states to pass legislation to restrict the transfer of voting systems. The systems can only be sold or resold for official use, preventing hackers' access to machines, and permitting a county election board to apply to my office for reimbursement of expenditures to secure and monitor facilities where voting systems and electronic poll books are stored.

C. FEDERAL FUNDS FOR ELECTION SECURITY

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Indiana was pleased to receive \$6,600,000 via the federal Consolidated Appropriations Act of 2018, which fully funded the Help America Vote Act (HAVA) of 2002. This funding will help Indiana further prepare for elections by increasing cybersecurity, educating voters and much more. However, in light of Indiana receiving \$71,000,000 in 2002 when HAVA was initially funded and passed, which was used to replace punch card and lever machines, nearly 10% of this funding in 2018 is not enough to replace election equipment, which will be discussed below.

a. Planned Actions for Preparation of the 2018 Midterm Elections:

Since Indiana was already working to harden the election infrastructure, current investment costs total \$658,961, which exceeds Indiana's state match requirement by \$279,207. The following actions are planned or underway:

- i. Partner with the Indiana National Guard and Incident Response Cybersecurity Committee to establish incident response plans through table-top exercises and incident response plan testing;
- ii. Continue partnership with DHS to evaluate additional Albert Sensor installations at the county or state level and evaluate DHS Risk and Vulnerability Assessment findings in order to implement improvement opportunities;
- iii. Evaluate election purposed computers (laptops or desktops) or virtual machines to harden election system network connections and replace unsupported operating systems or internet browsers;
- iv. Assess technology and timing options to expand the Indiana multifactor authentication pilot project to all 92 counties, after piloting a token authentication project for ten counties in the 2018 Primary Election;
- v. Evaluate electronic poll book vendor controls, software and patch updates, and security protocols;
- vi. Conduct third-party penetration testing of SVRS, electronic poll books, and other related election system infrastructure;
- vii. Evaluate election night reporting systems to identify improvement opportunities for data entry authentication, data backups, and intrusion detection;
- viii. Implement SVRS security scans for file uploads for all users; and
- ix. Implement email encryption and digital signatures for file transfers and transmission of election data.

b. Planned Usage of the 2018 HAVA Elections Security Grant Funds in 2019:

Indiana will implement the following projects based on the system and evaluation outcomes identified in 2018, and the availability of the 2018 HAVA Elections Security Grant Funds:

- i. Statewide multifactor authentication expansion;
- ii. Replacement or additional purchases of computers with supported operating systems and internet browsers for county usage to election systems;
- iii. Implementation of electronic poll book vendor network security enhancements;
- iv. Deployment of auditable voting systems; and
- v. Election night reporting security enhancements.

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The office will develop a grant funding program to fund opportunities for local election officials for election systems upgrades and additional security needs. These funds can be used to:

- i. Enhance election technology and security by purchasing or upgrading election systems;
- ii. Reimburse counties for physical security improvements;
- iii. Facilitate cybersecurity training to state and county officials; and
- iv. Contract with cyber navigators who can conduct cybersecurity assessments and identify recommendations to counties for security improvements.

D. THE 2018 ELECTION CYCLE AND BEYOND - SECURING ELECTIONS AND RESTORING VOTER CONFIDENCE

In Indiana, we have migrated voter registration data to a private firm, which provided more tailored services as a result of our unique election needs. Our outward facing websites and electronic poll books work on a mirror of the actual database, thereby mitigating and limiting potential for damage as a result of unauthorized access. We have also taken advantage of free services offered by DHS including cyber hygiene, risk and vulnerability testing and penetration testing. We have conducted internal phishing campaigns to educate staff and counties. Earlier this month, we did our first risk-limiting audit in Marion County, which includes Indianapolis. The pilot went well and we are working to develop audits in each county. On Primary Election Day, we had cyber teams in place monitoring activity. I am pleased to report we did not see anything suspicious.

In doing so, we are considering virtual private networks for our ePollBook connections and county based Albert monitoring sensors. As emphasized by the FBI in 2016, multi-factor authentication is one of the most critical tools of cyber defense. As a result, this spring, we conducted a two-factor authentication pilot with 10 of Indiana's 92 counties. The pilot introduced a physical USB token and a unique identifier to access the Statewide Voter Registration System. Additionally, the pilot restricted access to working hours for each employee, which could be adjusted by county administrators. We learned a lot from this program and have expanded it to half of Indiana's counties. The remaining counties will be required to use traditional two-factor authentication protocols to access SVRS. Furthermore, counties will work within default time zones of access, which the county clerk can modify, since most cyber-attacks occur during non-working hours. This safeguard is designed to further restrict potential vulnerabilities to SVRS, which mimic vulnerabilities of any database.

Additionally, through the work of the EIS-GCC, a number of states participated in a pilot program to share election-specific threat indicators. From that pilot, with Indiana being one of the first participants, a full Election Infrastructure Information Sharing and Analysis Center (EI-ISAC) has become operational. States have the option to put monitors on their election-networks to track traffic, detect anomalies and share with other states. Indiana was one of the first states to fund and install this monitoring service.

E. ELECTION & SECURITY EQUIPMENT

In 2002, HAVA replaced lever and punch card voting machines. With that federal funding, counties use two types of technology for tabulation: optical (or digital) scanners (OPSCAN) or Direct-Recording Electronic (DRE) machines. 58 counties use direct record electronic (DRE) machines, while the remaining 34 counties use OPSCAN. While no votes have ever been changed in either type of machines, Congress

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has paid special attention to the theoretical vulnerabilities in the DRE supply chain, manufacturing and programming processes.

OPSCAN devices tabulate paper ballots, which are marked by the voter and may either be scanned on precinct-based optical scan systems in the polling place or collected in a ballot box to be scanned at a central location.

DRE voting machines allow a direct vote on the machine by the manual touch of a screen. A DRE records the individual votes and vote totals directly into computer memory, which does not require the use of a paper ballot. There is however, a paper trail within the DRE. More specifically, a DRE's paper trail looks like a rolling receipt where voter's choices are indicated; however, the voter cannot see this documentation. Studies show that most voters do not review their choices on DREs, and therefore typically do not take that extra step of verifying that their vote was recorded correctly.

That said, counties and voters enjoy the convenience and efficiency of DREs. Furthermore, DREs prevent errors or inform the voter of an error before a ballot is cast, thereby preventing over votes, for example.

Congress has spent a considerable amount of time focusing on the potential vulnerability in the lack of a paper trail for purposes of confirming the voter's intent. In essence, the theoretical claim, despite no evidence in support of the vulnerability, is that a DRE could potentially change a vote since it lacks a paper copy of the voter's selections, which could be later used in an audit or recount.

The heart of this budgetary request is to request support to migrate DRE counties to a hybrid model. Since DREs do not generate a paper ballot, the proposal is designed to purchase and/or fund current or new equipment with Voter Verifiable Paper Trail (VVPT) DREs, which allows the voter to verify that their vote was recorded correctly.

VVPT DRE's functionality meets the threshold of what we expect to be a new federal requirement in the Secure Elections Act. Under the current bill's framework, the Secure Elections Act would require equipment to have a VVPT function, which may indicate that either the voter be presented with the option to verify their selections on a paper ballot or require a sample of voters to do so.

While our exact valuation continues through September, we estimate a large scale migration of current DRE equipment to VVPT to cost at most \$75,000,000. Furthermore, we expect this estimate to be reduced as a result of early fall discussions with DRE vendors. Also included in this request is funding required to implement the Election Committee's plan under the Governor's Council on Cybersecurity.

Additional proposals under the request include deployment and ongoing maintenance of Albert Sensors for counties. Traffic coming from the counties presents a clear and present vulnerability to SVRS. A 92 county implementation will require \$750,000, with a cost of \$1,000 per county per month to maintain and monitor the sensor. After implementation, total annual statewide cost are expected to be \$1,100,000 per year.

The Voting System Technical Oversight Program (VSTOP), hosted by Ball State University, advises the Secretary and the Indiana Election Commission on the certification of voting machines and electronic poll books in Indiana. VSTOP helped pioneer first-in-the-nation legislation authorizing the certification and testing of electronic poll books before they are permitted to be used in elections in Indiana. The project also

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entails the creation of a database containing all voting machines used in Indiana as well as a report on the best practices of poll worker training.

Similar to the longstanding and valuable partnership with VSTOP, the capital request seeks to establish a cybersecurity program at Indiana University's Center for Applied Cybersecurity Research, which is a national leader in the application of risk management, privacy, policy, and technology research to enhance operational cybersecurity. In fact, IU's Center for Applied Cybersecurity Research serves the Big Ten in a multitude of cybersecurity initiatives and hosting services. Similar to VSTOP, we need programmatic leadership, resources and counsel as the field is constantly evolving. The reality is, the field's evolution exceeds the resources of our current staffing levels and capabilities. We continue to assess the costs associated in establishing this program and expect to finalize our package by the end of September.

INBIZ CAPITAL REQUEST

A. INBIZ PROJECT BACKGROUND AND SUCCESS

In 2013, the Legislature appropriated \$9,200,000 in capital funding to support the development of a Business One Stop system for Indiana. Now known as INBiz, the system launched in April 2016 and has nearly 330,000 users as of August 24, 2018.

SOS has leveraged the original capital appropriation with ongoing Enhanced Access funding to amplify the work effort, allowing INBiz to develop far more functionality than contemplated. As the attached INBiz education document illustrates, INBiz has developed deeper functionality for the original INBiz agencies of Secretary of State, Department of Revenue, and Department of Workforce Development while also adding Professional Licensing, and Attorney General capabilities along with identified scopes for several additional agencies such as Administration, Hoosier Lottery, and Environmental Management.

An exciting development has been partnerships with Evansville and Greenwood to pilot local permit filing through INBiz, streamlining Hoosier business interactions by leveraging the information already captured in INBiz to facilitate site planning, new construction, and remodel permit applications. Additionally, INBiz is in early conversations with the Department of Local Government Finance and the County Assessors Association to file Business and Personal Property Tax (BPPT) through INBiz, further streamlining services for businesses while ensuring even higher uniformity and compliance levels throughout local and State governments.

Additionally, INBiz has received several major awards:

- i. 2017 Digital Government Experience Award from the Center for Digital Government;
- ii. 2017 Merit Award from the International Association of Commercial Administrators (IACA);
- iii. 2017 "Best Application Serving the Public" from Government Technology / eRepublic; and
- iv. 2018 "Digital Government, Government to Business Category" award recipient from the National Association of State Chief Information Officers.

B. FY 2020 AND FY 2021 INBIZ CAPITAL APPROPRIATION

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Ongoing INBiz operations will be supported through our existing Enhanced Access fund. INBiz will use an additional capital appropriation to respond to the request of Hoosier businesses and communities to further streamline and simplify interaction with State and local government. The primary effort will be to extend to additional jurisdictions the aforementioned ability for businesses to file local permits. Based on input from communities, we anticipate adding two communities and one state agency each year during this biennium. Additionally, we expect to build out BPPT filings over the biennium as mentioned above.

GENERAL FUNDING REQUEST

A. ELECTION & SECURITY PERSONNEL

Although not budgeted or appropriated, we have, thus far, been able to absorb the funding requirements to acquire and retain technology personnel. In addition, the long-term sustainability in maintaining election cybersecurity requires the addition of a Chief Risk Officer. An industry best practice is to structure and manage risk in a position separate from the administrative technology personnel. Under this plan, the Chief Risk Officer will report to the Chief of Staff, in parallel with, but separate from the Information Technology Director.

INBiz and election security have changed the requirements of the office's personnel. Four years ago, our technology department consisted of a director and a computer analyst. On staff today is our Information Technology Director, an Assistant Director of Information Technology, and two System Administrators. In addition, in an effort to attract and retain this talent, we have compensated staff according to similarly situated positions of the Executive Branch. We have absorbed these requirements with the use of dedicated funds, but this path is unsustainable unless major program changes and INBiz scope reductions are implemented. Thus, this request seeks to acquire the general funding necessary to sustain these personnel requirements, in addition to adding the important risk manager position.

This general funding request does not fully eliminate our reliance on dedicated revenues; however, we feel a split in general fund support with the continued investment by our office with dedicated revenue, strikes an appropriate balance.

It is important to note, we have had a long standing policy to prohibit investigative or enforcement staff funding with dedicated revenue, as doing so could create an actual or perceived conflict of interest.

B. AUTO DEALER SERVICES DIVISION

The Auto Dealer Services Division (ADSD) is the last of our divisions to acquire full funding necessary to support the community. Subject to funding availabilities, the Indiana Bureau of Motor Vehicles plans to shift regulatory responsibilities for transport operator plates. Transport operator plates are issued to persons who are in the business of vehicle delivery. This includes transporting vehicles from a dealership to an auction, or from a dealer or manufacturer to the purchaser. Transport operator plates are frequently used to deliver recreational vehicles. The person that holds transport operator plates generally does not play any other role in the vehicle sale transaction. In order to absorb these responsibilities, we need to add a clerk to assume these tasks. Our current staffing capacities have more than exceeded their original responsibility thresholds.

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The auto dealer community, including the salvage industry, has long fallen victim to fraud and abuse. These cases are worthy of investigation and prosecution, however county prosecutors do not have the capacities or the knowledge to adequately pursue these criminals. Similar to our Securities Division's Prosecution Assistance Unit (PAU), which is comprised of several attorneys and staff, this proposal seeks to create a PAU in the ADSD.

Our current Securities PAU investigates complex securities crimes and presents the exhibits, witness statements and other essential evidence to county prosecutors. Since county prosecutors often lack the time and resources to prosecute these crimes, our investigation is critical to assist in prosecution. Even more valuable, should a county prosecutor choose to do so, they can deputize our attorneys to prosecute the case on their behalf. We have an impeccable track record in these cases.

Similarly, this proposal seeks to create the same for auto dealer and salvage cases, which can include technical components of title delivery, lien and loan fraud and even taxation issues. Again, these matters are often so complex, prosecutors often fail to pursue charges in light of their staff and resource limitations. However, for purposes of the ADSD PAU, we expect a single attorney can absorb these responsibilities. This request seeks funding for that attorney.

It bears repeating, for clarity's sake, we had a long standing policy to prohibit investigative or enforcement staff funding with dedicated revenue, as doing so could create an actual or perceived conflict of interest.

C. OPERATIONS

In an effort to sufficiently support the Indiana Election Division, we have hired an operations specialist to relieve some of the historical reliance on the State Budget Agency's fiscal analyst. We understand the limitations on SBA's fiscal analyst, in light of the unique and frequent demands of the Indiana Election Division. As a result, this proposal seeks to alleviate that pressure and retain some of these responsibilities in an operations specialist. This proposal seeks funding for that staff member.

Thank you for your time and consideration.

Sincerely,

Connie Lawson
Indiana Secretary of State

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November 2, 2018

Jason Dudich
Director
Indiana State Budget Agency
200 West Washington Street
Room 212
Indianapolis, IN 46204

Re: Revisions to Indiana Secretary of State Budget for FY 2020 and FY 2021

Indiana State Budget Agency,

This letter is submitted to modify Secretary Lawson's election security capital request, which was submitted on August 24, 2018. All other budgetary requests, which include INBiz, personnel and general fund support remain intact.

In summary, Secretary Lawson has considered alternatives in recognition of what she understands to be considerable pressures placed on the biennial budget. The Secretary's original request contemplated a one-to-one supplement of our county direct record electronic (DRE) tablets with voter verifiable paper trail (VVPT) equipment. As a result, and for purposes of this biennium, **the Secretary reduces her election security capital request by nearly 86%.**

Secretary Lawson believes we can offer greater public confidence and develop the necessary investigative tools by conducting risk limiting audits (RLA) on 10% of Indiana elections. As was discussed in further detail in the August 24th submission, RLAs are a likely requirement of the federal Secure Elections Act. While we have emphasized the importance of not passing unfunded mandates, if funding were to be appropriated, we do not expect funds to be available in time for VVPT equipment testing, state and federal certification and county implementation – all before the 2020 presidential elections.

While election cybersecurity is a race without a finish line, we are racing toward the 2020 elections as we expect foreign influence and interference campaigns to exceed that which was experienced in 2016 and 2018. Indiana's ongoing preparation activities are more fully reflected in our August materials.

While we will propose counties begin a multi-year strategy to supplement their DRE equipment with a VVPT, Secretary Lawson believes we should support this initial and unscheduled investment, especially in light of the limited time that remains before 2020.

Since the Secretary proposes to replace or equip 10% of the state's DRE tablets with a VVPT, **Secretary Lawson reduces her election capital request from \$75,000,000 to \$10,000,000.** This equipment will allow us to conduct risk limiting audits, which are designed to sample a set of ballots to determine the level of consistency the sample has with the overall outcome. If the audit exceeds the risk tolerance, this provides a cost effective investigative tool designed to detect the potential for a larger interference campaign.

We value 10% of DRE equipment upgrades at approximately \$6,000,000. Also captured in the refined capital request includes project management services by our long-term elections partner, Baker Tilly. We have retained \$3,000,000 in state and county intrusion detection monitoring equipment (Albert sensors) and

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services. In addition to the enhanced prioritization of cyber security at the county level, we plan to leverage risk and vulnerability assessments and cyber hygiene scans, which are available from the federal Department of Homeland Security.

Finally, \$1,000,000 in cybersecurity support programs and development with Ball State University's Voting System Technical Oversight Program and Indiana University's Center for Applied Cybersecurity Research. More specifically, both programs are necessary to assist in the development and execution of risk limiting audits, assess constant changes in our emergency response capabilities and remediation activities, build regulatory control requirements into election equipment supply chains and develop new testing standards that reflect current threats.

Indiana cannot sufficiently meet the threat posed by Russia, North Korea, China, Iran and others without the support and prioritization of Governor Holcomb and the Indiana General Assembly. In years past, Indiana has served as a national leader in election technology. In that time, Indiana's leaders have taken the necessary incremental steps to ensure Hoosiers are well-protected. This investment will advance Indiana's security posture well into the future and leave a lasting legacy on election security and integrity.

Supporting this investment will take Indiana's election infrastructure to the **Next Level**.

Thank you for your time and consideration.

Sincerely,

Brandon Clifton
Chief of Staff & Deputy Secretary of State
o/b/o

Connie Lawson
Indiana Secretary of State