



Technology Results Fiscal Years 2017 and 2018

Contents

Thank You	4
Goals	4
Computing.....	7
Network	8
Applications.....	9
Cybersecurity and Data.....	9
Energy - Smart and Sustainable	11
Governance	12
Business Continuity and Disaster Recovery	13
Data-driven Government	14
Policies and Best Practices	16
Finance, Administration, Procurement and Human Resources Management	16
Public Safety, Emergency Management, Criminal Justice, and Corrections	18
Transportation and Motor Vehicles.....	21
Licensing Systems.....	22
Commerce, Labor and Taxation.....	23
Natural Resources.....	24
Open and Transparent Government.....	26
Digital Government Services	27
Experience Strategies.....	29
Citizen Feedback.....	30
How We Align with the Enterprise Goals	31
Emerging Technologies/Innovation.....	32
Collaboration	32
Our Biggest Accomplishment	33

Thank You

The Office of the Chief Information Officer would like to thank the staff across state government that provided feedback about their accomplishments and plans for the future.

Goals

Lt. Governor, Kim Reynolds, became Governor when Governor Branstad left Iowa in May of 2017 to serve as the U.S. Ambassador to China. Governor Reynold's agenda focuses on unleashing opportunities in the areas of 1) COMPETITIVE BUSINESS ENVIRONMENT 2) TRAINING IOWANS 3) EDUCATING OUR CHILDREN and 4) INNOVATIVE ENERGY POLICY. You can view these goals on the Governor's website <https://governor.iowa.gov> Governor Branstad had similar goals with the addition of a goal to 5) REDUCE GOVERNMENT SPENDING by 15%. Both Governors Branstad and Reynolds have had strong support for 6) IMPROVED BROADBAND ACCESS in the state as promoted in the Condition of the State address: <https://governor.iowa.gov/2018/01/gov-reynolds-delivers-condition-of-the-state-address>

The efforts by Governors Branstad and Reynolds to manage investments and support the technology solutions to achieve their goals have resulted in Iowa being named the number one state in the nation by U.S. News and World Report. <https://www.usnews.com/news/best-states/articles/2018-02-27/iowa-claims-no-1-spot-on-2018-best-states-rankings-through-strong-infrastructure-health-care-and-education>

1. IT is supporting the goal to create a COMPETITIVE BUSINESS ENVIRONMENT by:
 - 1.1. Expanding BROADBAND ACCESS with tax credits for 54 projects representing a \$114M investment by industry. New projects constructed by Iowa's Broadband providers brought the potential to deliver high speed service to over 4,000 homes and 700 businesses in previously underserved areas of the state. This effort impacted more than 20 counties and was supported by 14 Iowa-based broadband service providers. While these providers saw a combined \$7 million in property tax relief, they installed over 550 line miles of fiber and invested over \$16 million in new projects in rural communities. <https://www.arcgis.com/apps/webappviewer/index.html?id=950f6119b89243fb9a6ebce3d07f0b8e&extent=-10917254.2001%2C4641142.2688%2C-9680808.8306%2C5626874.1856%2C102100>
 - 1.2. Providing access to data about affordable housing in Iowa

communities with the new Iowa Finance Authority “Iowa Profile” tool which allows community planners to enhance their planning capability and make data-driven decisions as they assess future housing needs. <http://westernes.com/iowa/>

2. IT is supporting the goal to TRAIN IOWANS for jobs of the future through cybersecurity training and apprenticeships.
 - 2.1. Iowa participated in the Cyber Start initiative sponsored by the SANS Institute. <https://governor.iowa.gov/2018/01/gov-reynolds-announces-new-cyber-training-partnership-for-young-women> The SANS institute recognized the number one ranked high school participant in the country as a 16-year-old from Waukee, Iowa. Five Iowa high school and college students were in the overall top 50 winning scholarships for more advanced education in cybersecurity.
 - 2.2. Iowa expanded the registered apprenticeship opportunities through a dedicated website for employers to offer opportunities and Iowans to seek and find apprenticeships. <https://www.earnandlearniowa.gov/> The number of apprenticeship applications increased by 30% in the first quarter of the new website. The site experienced over 10,000 visitors per month.
 - 2.3. Iowa supports apprenticeships and job opportunities for veterans with the Home Base Iowa program. <https://www.homebaseiowa.gov/> In April of 2017 Home Base Iowa launched enhancements to its website to allow Home Base Iowa businesses and communities to view veteran profiles and resumes. In addition, businesses and communities receive email notifications when a veteran profile matches their profile. In 2017 1,800 businesses pledged over 8,000 jobs. Users of the site increased 63% and page views were up 83%. The site features success stories like this - I was contacted by the Ottumwa IowaWORKS center letting me know they had my resume and asked if I minded them taking it to a local business that was looking for supervisors. I gladly agreed and within two months landed a job paying almost double what I was making previously.
3. IT is supporting the goal to EDUCATE OUR CHILDREN through:
 - 3.1. Improving student achievement by strengthening instruction with the Teacher Leadership and Compensation (TLC) system. IOWA IS THE ONLY STATE IN THE NATION TO HAVE 100% OF OUR SCHOOL DISTRICTS PARTICIPATING IN THE PROGRAM. While the TLC effort started in 2013 the majority of the school districts implemented during the 2016-2017 school year. School districts apply for funding through the use the statewide enterprise grant system <https://www.iowagrants.gov>

This grant management system is used by many agencies to post and manage their grants. The grant system allows a non-profit organization or local government to easily identify state grant funding opportunities. The collection of TLC grant compliance information has been facilitated by the use of Google Forms data collected through the Google Forms is easily shared with State educational management for collaboration.

- 3.2. Promoting career planning and job skill educational opportunities through the Future Ready Iowa program and website.
<https://www.futurereadyiowa.gov/>
4. IT supported the goal for an INNOVATIVE ENERGY POLICY by allowing for the online submission of applications for an energy tax credit. Please refer to section Energy – Smart and Sustainable for more information.
5. IT supported the goal to REDUCE GOVERNMENT SPENDING with the implementation of Google for Government as the enterprise messaging and collaboration system. The implementation of Google in December of 2016. THE STATE SAVED OVER \$800,000 IN FY17. This anticipated annual savings continue to grow as agencies move files to Google Drive. During FY17 5,792 video sessions were held and over 4.8M documents were shared. Agencies leveraging Google forms for interactions with citizens have been able to increase engagement without additional software costs. The Board of Nursing (BON) conducted a Google form based survey to 60,000 participants for a project cost at 4% of the proposed cost by another vendor. BON saved \$6,447 for this one survey!
6. IT has supported the goal to INCREASE BROADBAND ACCESS as OCIO facilitated the identification of areas eligible for tax credit investment to build out improved broadband access. The website allows investors to view eligible areas and apply and citizens to see where the investments are being made. <https://ocio.iowa.gov/broadband-background> 54 projects have been qualified for the tax credit and the build out of improved access is underway.

Computing

Consolidation, Virtualization and Cloud Migration align with the goal to REDUCE THE COST OF GOVERNMENT.

1. Consolidation - The State continues to consolidate IT services on a selective basis where agencies need assistance. During the last two years the State Public Defender and Iowa Veterans Home consolidated all IT services with the Office of the Chief Information Officer.
 - 1.1. Implemented Cisco Meraki firewalls and switches in 61 sites for 11 agencies. Service and performance improvements include network stabilization and the ability better identify network and bandwidth issues at remote locations. In several sites we upgraded very old Internet connections to higher bandwidth service at a reduced cost.
 - 1.2. In the last two years we retired three storage systems, two backup systems, multiple SCCM servers.
2. Virtualization - OCIO implemented VMWare for a virtual desktop platform. This platform has been able to be leveraged with Chromebook implementations, reducing the workstation licensing costs.
3. Cloud Migration -
 - 3.1. On premise virtual servers peaked in the OCIO datacenter in December of 2016. SINCE THAT TIME 13% OF OUR WORKLOAD HAS MOVED TO AWS.
 - 3.2. Two agencies which had their own server environment have also migrated to the cloud. Public Health has migrated 60% of their workload to AWS. Economic Development has moved 80% of their server environment to Azure.
 - 3.3. As the State looks to replace applications we are seeking SaaS solutions providing cloud hosting. We were able retire two servers and move over a terabyte of location data to the cloud with the creation of State mapping portal GeoData.iowa.gov Building the portal meant better exposure to available data sources and greater data visualizations. Featured content includes legislative districts, wind energy, and commuter concentrations. THIS MIGRATION RESULTED IN A SAVINGS OF \$7,325 IN STORAGE COSTS.
 - 3.4. The Google implementation has provided a platform for agencies to move file storage to the Google Cloud. PUBLIC HEALTH MOVED 4TB OF FILES REDUCING THEIR ANNUAL STORAGE COST FROM \$34,000 TO \$4,700.

Network

The Iowa Communications Network (ICN) provides network services to local government, schools and hospitals. Fast and stable network services are the foundation for the goal to EDUCATE OUR CHILDREN. Background on ICN accomplishments can be found in their FY17 Annual Report.

<https://icn.iowa.gov/sites/default/files/documents/2017-ICN-Annual-Report.pdf>

ICN supports:

- 311 education facilities (Public and Private K-12, AEA's, and Community, Private and State Colleges) = 9% INCREASE OVER FY15.
- 75 government users (State, Federal, City of Des Moines)
- 356 healthcare locations (hospitals, clinics, & other providers) = 75% INCREASE OVER FY15.
- 185 public safety locations = 86% INCREASE OVER FY15.

NETWORK - Iowa Communications Network (ICN) continues to meet rising user demands for more bandwidth, IP technology, and security. The current network core upgrade will provide 100 Gb capacity on the network backbone, upgradeable to 200 Gb.

VOICE OVER IP & UNIFIED COMMUNICATIONS - ICN partners with CenturyLink to provide a managed Voice (VoIP) solution, bundled with the additional voice efficiency and productivity enhancements of unified communications. Since May 2018, over 3,500 phones have been installed. When fully implemented, the VoIP services will **REDUCE COSTS TO STATE GOVERNMENT USERS BY APPROXIMATELY \$1.3M ANNUALLY**. Many VoIP users are incorporating Business Communicator, which provides the ability to chat, place calls, and share medium on an app using their mobile device. Currently ICN has 822 Business Communicator (virtual) users.

VIDEO SERVICES - ICN's video conferencing service is a virtualized service, built on Pexip® Infinity, an award-winning meeting and collaboration platform. This IP video service offers subscribers the ability to interface with one another and with off-network guests across multiple video clients and devices. ICN will officially sunset its MPEG video platform on June 30, 2018.

INCIDENT MANAGEMENT - The goal to **REDUCE GOVERNMENT SPENDING** has been supported by the expansion of the Incident Management ServiceNow system with a catalog ordering function for Human Resources onboarding. The Iowa Department of Transportation was able to **REDUCE THE ONBOARDING TIME FROM 6 HOURS TO LESS THAN 30 MINUTES**. WITH 300 SEASONAL EMPLOYEES THIS REPRESENTS 1,650 STAFF HOURS AND ALMOST A \$30,000 SAVINGS. The Iowa Veterans home improved their onboarding

process from 3-4 days to less than 24 hours. IN FY17 WE HAVE SAVED 3,296 STAFF HOURS AND JUST OVER \$56,000 SAVINGS.

<https://www.integrhythm.com/insights/iowa-transportation-department-servicenow-hr-onboarding-case-study>

Applications

MOBILE APPLICATION FOR TRANSPORTATION Support of the Governor's initiative to TRAIN IOWANS has been accomplished with the implementation of the Iowa CDL Test Prep Application.

- 1.1. This is an important initiative because there is a national shortage of truck drivers. A 2017 American Trucking Associations analysis found the nation's trucking industry was short about 36,500 drivers last year. The deficit is expected to reach about 50,000 by the end of this year and, if the trend holds, the shortage will climb to more than 174,000 by 2026, according to the October study.
- 1.2. Passing the CDL exam is difficult as the failure rate is greater than 50%.
- 1.3. The Iowa CDL Testing App is available on mobile devices through iOS and Android app stores, as well as online.
<https://iowadot.gov/mvd/driverslicense/manuals-and-practice-tests>
The application is an interactive version of the official CDL manual developed by the American Association of Motor Vehicle Administrators and approved by the Federal Motor Carrier Safety Administration, with resource guides and quizzes to help users identify subject areas they may need to study further. The app also provides full-length practice tests. <https://ocio.iowa.gov/mobile-app/official-cdl-test-prep>
- 1.4. Analysis of the January through May period identified a 7% increase in the test success rate by those who used the practice test.
- 1.5. Use of the practice test is increasing for all platforms.

Cybersecurity and Data

Cybersecurity is a top priority for State of Iowa and we continue to focus on protecting the citizens and economy against cyberattacks. Governor Branstad issued Executive Order 87 (EO87); a cybersecurity initiative for the State of Iowa. The Executive Order establishes a multi-agency partnership, the EO87 Leadership Team, with the Office of the Chief Information Officer, Iowa National

Guard, Department of Public Safety, Iowa Communications Network, and the Iowa Homeland Security and Emergency Management Department.

<http://publications.iowa.gov/23032/1/Executive%20Order%20No.%2087.pdf>

The State's first comprehensive Cybersecurity Strategy was released in August of 2016 addressing lifeline critical infrastructure, sectors (Communication, Energy, Transportation, and Water & Wastewater) and state government as it relates to the protection of citizens and digital government services.

https://ocio.iowa.gov/sites/default/files/documents/2016/08/2016_cybersec_document_web_version_2_final_0.pdf

SECURITY EDUCATION:

- 100% of State employees received security awareness training, exceeding the target performance metric of 75%.
- The Iowa Secretary of State created a Cyber Working Group that includes the federal Department of Homeland Security (DHS), the Iowa Homeland Security and Emergency Management (HSEMD), the OCIO, the Iowa National Guard, and county auditors. Two-step authentication for access to Iowa's voter registration database is one new requirement placed on all 99 counties. Cybersecurity workshops with county auditors and their information technology staff were held June 20th and 21st with support from OCIO and the federal Department of Homeland Security (DHS) free resources are available to the counties.

INTRUSION DETECTION:

- The State partners with Iowa counties in developing cybersecurity programs to better prevent, detect, and respond to cybersecurity events. Through Iowa's Homeland Security Grant Program we are able to offer a suite of six cybersecurity services and have participation from over 50 of the 99 counties. COUNTY PARTICIPATION IN AUTO-THREAT DETECTION HAS INCREASED BY 79% IN THE LAST TWO YEARS.
- OCIO has exceeded the performance metric for the average host vulnerability score.

SECURITY OPERATIONS CENTER: Governor Kim Reynolds and Lt. Gov. Adam Gregg officially opened Iowa's Security Operations Center on Oct. 3, 2017. The Security Operations Center provides monitoring of information security systems enabling a near real-time response to information security incidents affecting state and local government. The center combines information from state and federal monitoring systems, cyber intelligence sources and other sources to enable timely decision making. The Iowa Security Operations Center currently has over 125 Agencies, Cities, Counties, and Schools Participating with over 75,000 systems covered by vulnerability management, 250 websites are

protected by web application firewalls, and all state employees are provided Cybersecurity Awareness training. <https://governor.iowa.gov/2017/10/gov-reynolds-lt-gov-gregg-open-iowa%E2%80%99s-security-operations-center>

Energy - Smart and Sustainable

1. Governor Reynolds administration has been focused on unleashing opportunities for Iowans and this includes an Innovative Energy Policy. IOWANS ENJOY SOME OF THE LOWEST ELECTRICITY RATES IN THE COUNTRY. Economic development relies on affordable and sustainable energy. The state supports the utility industry investment in sustainable energy through tax credits. The utility industry investment also means jobs for Iowans. The Clean Jobs Midwest report recognized Iowa as the regional leader for wind energy jobs. <https://www.cleanjobsmidwest.com/state/iowa>
2. In 2016 Iowa published our energy plan which was supported by then Lt. Governor Reynolds. The plan has promoted investments by utilities and industrial organizations. MidAmerican Energy is delivering on their Wind 11 project which will RESULT IN A TOTAL INVESTMENT OF OVER \$3 BILLION. This build out started in 2017 and will complete in 2019. They have just announced the Wind 12 project <https://www.radioiowa.com/2018/05/30/midamericans-wind-xii-project-moves-utility-to-100-percent-renewable-goal/> which means MIDAMERICAN WILL BE ABLE TO MEET 100% OF CUSTOMERS ENERGY DEMANDS BY RENEWABLE ENERGY. The state's 2017 progress report will shortly be posted to <http://www.iowaenergyplan.org/>.
3. In 2017 Alliant Energy built the State's largest solar garden. The solar garden was the result of collaboration between the Greater Dubuque Development Corporation, the city of Dubuque, the Iowa Department of Natural Resources and the U.S. Environmental Protection Agency as the garden is located on a former industrial site.
4. IT support of the Governor's goal of Innovative Energy Policy is demonstrated by the (Tax) Credit Award, Claim and Transfer Administration System (CACTAS) built by the Office of the Chief Information Officer for the Iowa Department of Revenue. CACTAS allows applicants for the energy tax credit to submit their application online. <https://iub.iowa.gov/renewable-energy-tax-credits>.
5. Investing in renewable energy products has resulted in economic growth with Google, Facebook and Apple all building data centers in Iowa. Google and Facebook have agreements with Iowa that let them run their data centers completely on renewable energy. This kind of activity

demonstrates why Iowa is ranked in the top 10 states for business by CNBC. <https://www.cnbc.com/2017/07/11/americas-top-10-states-for-business-in-2017.html>

6. Internal to State government, the Department of Administrative Services continues to implement sustainable practices and reduced consumption on the capitol complex from FY16 to FY 17 by 1.79%. Efficiencies were gained by maintenance of the central energy plant chillers and continued replacement of 32W T8 lamps with 28W T8 lamps.
<https://www.legis.iowa.gov/docs/publications/DF/865796.pdf>

Governance

Sustained value can be demonstrated by the following OCIO accomplishments in the last two years:

PROJECT MANAGEMENT OFFICE

1. Successfully met the OCIO performance measure of 75% of projects is within 10% of budget estimates. During the last 6 months completed projects have been 98% of their budget.
2. Successfully met the OCIO performance measure of 75% of projects within 10% of schedule estimates. During the last 6 months completed projects have been within 85% of their planned completion date.
3. Established a project governance policy process which includes a requirement for projects to have a designated project manager. Agencies have designated project managers with appropriate experience and training for the size and scope of the project.
[https://ocio.iowa.gov/sites/default/files/standards/2018-06/information technology interim project governance policy - process -standard 6-22-2018.pdf](https://ocio.iowa.gov/sites/default/files/standards/2018-06/information%20technology%20interim%20project%20governance%20policy%20-%20process%20-%20standard%206-22-2018.pdf)
4. Implemented a Google Site and Google forms based status reporting environment to allow for project transparency with state executives, legislators, and the public. Agencies are required to report status monthly if their project is under \$500k and weekly if the project is over \$500k. Transparency on project status accomplishes a long time goal that was supported by feedback from the Digital State Survey in 2014. A

dashboard of project status is available on the State IT Intranet available for all state staff. We are leveraging the Google platform to manage the dashboard and publish it to a Google Site. We have made the status report visible for our survey submission.

<https://docs.google.com/spreadsheets/d/1A-h2sLZpjlr7HGxPgb06kRdoVfwPZgtT-9noGr2MZI/edit?usp=sharing>

5. Funding for digital government initiatives is generated from the sale of driver's license records. Historically these IOWAccess grants were made to agencies with no requirement for repayment. During the last two years we have implemented a payback initiative for agencies to pay back a portion or all of their grant funds after the project has been completed and the agency has achieved operational savings.

Business Continuity and Disaster Recovery

1. Results achieved in Business Continuity and Disaster Recovery include: Successfully met the OCIO performance measurement of 3 disaster recovery tabletop drills performed annually. During the last year 3 drills were performed.
2. Every year, every state agency completes an Annual Affirmation which is an acknowledgement and acceptance of 12 months of plan maintenance and readiness. This full disclosure offers agency directors an opportunity to review their COOP/COG plans (Agency & Essential Function) for improvements.
3. Agency compliance increased by 20% from 2016 to 2017. For the recent compliance period September 30, 2017 we received 80% sign offs from agency directors. Plans reside in a database called OpsPlanner. Agencies have completed their Business Impact Analysis (BIA) surveys to identify their Essential Functions and define the impacts to their agency if they cannot perform their Essential Functions. OpsPlanner offers metrics to enable agencies and technology partners the ability to prioritize their recovery needs.
4. Iowa Department of Homeland and Emergency Management Department (HSEMD) updates a portion of the State Emergency Response Plan annually that addresses the state disaster, emergency, and safety crisis management plan readiness.

5. HSEMD owns and manages an all hazards plan, inclusive of cyber disruptions. Regardless of the type of event, the plan addresses consequences management. Cyber response is also included as part of the overall State of Iowa Cybersecurity Strategy.
6. When we receive the 911 call, the caller will provide us the address of the incident, or we can determine location on MACH so responders can go directly to that location.
7. As of December 31, 2017 112 of 113 Public Safety Answering Points (PSAPs) have upgraded their call-handling equipment to NG911. 102 of the PSAPs are receiving end-to-end IP-enabled wireless calls over the ESInet all the way to their call-taker screens. 98% OF IOWA COUNTIES NOW SUPPORT TEXT-TO-911. REFERENCE: <https://statescoop.com/text-to-911-now-available-across-iowa>
8. 85% of the redundancy setup of a secondary network has been completed with a second ESInet consisting of 13 PSAPs handling calls on behalf of an area experiencing an outage.
9. Alert Iowa, a statewide mass notification and emergency messaging system experienced increased usage by counties and with implementation within state government. Alert Iowa also allows citizens to voluntarily sign up for emergency notifications. The system is used by 91 of 99 counties increasing usage by 5% and now 28 state agencies. The system can be used by state and local authorities to quickly disseminate emergency information to residents in the county. https://www.homelandsecurity.iowa.gov/about_HSEMD/alert_iowa.html
10. During 2016 and 2017 Iowa received three Presidential Disaster Declarations for severe storms, tornadoes and flooding. Federal assistance resulted in the following loss avoidance for the 2016 floods:
 - 10.1. 2,054 houses bought out since 1990; Loss avoided \$68,201,22
 - 10.2. 16 building projects since 1990; Loss avoided \$50,428,250

REFERENCE: <https://www.legis.iowa.gov/docs/publications/DF/917404.pdf>

Data-driven Government

1. The Department of Transportation (DOT) has adjusted their snow plow replacement cycle to save over two million dollars a year. The recommendation to adjust the replacement strategy came as a result of

analysis by researchers at Iowa State University. The researchers combed through 10 years of maintenance records to reach this conclusion. The DOT operates a fleet of 900 single and tandem axle snowplows. Traditionally, DOT replaced each truck after a 15-year life span. Analysts in the College of Business say these results in extra maintenance costs. DOT is phasing in a 12 year replacement program based on the university researchers' analysis. <https://www.government-fleet.com/137453/iowa-dot-changes-replacement-schedule-for-snow-plows>

2. The citizens of Iowa are safer and the State is saving on snow plow crash related costs due to the analytics from a blue light pilot in 2015 and 2016. A pilot was conducted in a 12 county area where a \$500 blue light was installed on the back of snow plows. Analysis indicated plows experienced a crash every 2,801 hours of operation on average. After installation of the blue light accidents decreased to one only every 8,321 hours of winter operation. In the 2016-17 winter season, the agency recorded one collision every 8,813 hours of operation. The average cost of a crash in motorist and state property damage is \$7,725. The DOT received legislative approval to implement these lights on the remainder of the plow fleet.
<http://www.thegazette.com/subject/news/government/fewer-motorists-crashing-into-iowa-dot-snowplows-20180123>
3. Refer to section on Public Safety...Corrections for data driven process improvements implemented to reduce recidivism in the Department of Corrections.
4. Iowa Workforce Development's Labor Market Division has been honored by the Council for Community and Economic Research (C2ER) with an Applied Research Award for the analytics and report on college student retention. The report on [Retaining Iowa's Talent: Post-Graduation Location & Employment Plans](#) supports the Governor's effort to TRAIN IOWANS and have a COMPETITIVE BUSINESS ENVIRONMENT. This report supports efforts by Iowa Economic Development Authority, Department of Education and Future Ready Iowa to train and retain a talented workforce in Iowa.

The State Performance Measures are reported at <http://www.resultsiowa.org/>
This site is in the process of being replaced.

Policies and Best Practices

Enterprise standards are available on the OCIO website:

<https://ocio.iowa.gov/standards>

Two new standards were implemented in the last two years:

Project Management https://ocio.iowa.gov/sites/default/files/standards/2018-06/information_technology_interim_project_governance_policy_-_process_-_standard_6-22-2018.pdf

Data Information Sharing <https://ocio.iowa.gov/iowa-interim-data-information-sharing-policy>

The PROJECT GOVERNANCE POLICY PROCESS formalizes the governance process which has been in place since 2012 and expands the governance process to require agencies to designate a project manager for all projects and to submit status reports to the OCIO. The enterprise project status report is available to all employees through the state intranet and allows the Governor's Office and Legislature greater visibility to project status.

The DATA INFORMATION SHARING policy addresses the obligation of each state employee to determine that data being shared through a productivity tool is consistent with applicable standards, policies, laws, rules and regulations.

Finance, Administration, Procurement and Human Resources Management

The Governor's goal to REDUCE GOVERNMENT SPENDING has been supported by:

1. The Department of Administrative Services (DAS) implemented a fleet management system from Agile Fleet Management. This cloud hosted system is available to all state employees for making motor pool vehicle reservations and the reservation date, time and vehicle type are auto-confirmed at the time of request. The system also includes GPS features for employee safety and asset security. The system resulted in an estimated SAVINGS OF \$200,000 in the last two fiscal years for maintenance and future replacement costs as the system allowed the department to review vehicle type and use. This analysis resulted in a reduction of motor vehicle rental classes offered from seven to four and the elimination of fourteen vehicles from the motor pool. The system also improves time efficiency and confirmation of motor pool reservations for state employees.

2. DAS implemented an Electronic Document Management System from OpenText allowing the state to reduce paper storage costs and more efficiently respond to record requests.

The Governor's goal to build a COMPETITIVE BUSINESS ENVIRONMENT was supported by:

3. The Iowa Department of Economic Development's implemented a new Targeted Small Business on-line application consolidating and replacing three separate systems that managed different parts of the qualification and business opportunity posting process. Functionality was developed to attach documents to the solicitation postings in TSB increasing the information available to TSB vendors as they decide whether to respond to the solicitation. PROCUREMENT STAFF HAVE REALIZED A SAVINGS OF 130 STAFF HOURS (\$6,500) DUE TO THE ELIMINATION OF DUPLICATE DATA ENTRY. The new system also automates the posting process and ensures the early TSB notice before the solicitation is available to the broader marketplace.
4. The Office of the Chief Information Officer has started down the path of strategic sourcing with:
The enterprise contract for staff augmentation with Computer Aid. Since 2012 this contract is estimated to have saved the State approximately \$1,000,000 per year with a defined rate card. The contract is now being expanded to include project based work through a Statement of Work.
 - OCIO released an RFP for Endpoint Device Management (Desktop Support) on January 31, 2018. The scope of the RFP was for desktop, laptop, and printer required support for approximately 3,700 users, and optional support for another 15,000 users.
 - The contractor's annual per user rate is 20% less than the current break even rates.
 - The contractor's annual costs to the State are 15% less than OCIO's FY18 costs.
 - Eliminates high turnover rates, and eliminates high administrative overhead in recruiting, onboarding, training, and off-boarding workers.
 - COST AVOIDANCE AND SAVINGS: \$469,000 ANNUALLY.

Plans for the Future – Administrative Systems

- Refresh the warrant (check writing system).
- The Public Employment Retirement System (IPERS) will be enhanced to include document management and collection of divorce decrees to allow for adjustments

- Upgrade of ERP system for financial and budget components

Public Safety, Emergency Management, Criminal Justice, and Corrections

The goal to REDUCE GOVERNMENT SPENDING has been supported by:

- 1) The Department of Corrections (DOC) supported the goal to EDUCATE and TRAIN Iowans with implementation of the "IOWA tool" a fidelity monitoring tool improving the evaluation of inmate educational programming to reduce recidivism. <https://ocio.iowa.gov/success-story/corrections-improves-programming-reduce-recidivism> The DOC did not know if the programming provided to inmates was effective in reducing recidivism and helping improve successful re-entry into the community. As a result of the evaluation all programming was categorized and 42 PROGRAMS WERE IDENTIFIED TO BE DISCONTINUED AS THEY DID NOT AID IN RE-ENTRY OR HELP REDUCE RECIDIVISM. THIS EFFORT WAS ABLE TO CALCULATE THE RETURN ON INVESTMENT FOR 20 OF THE PROGRAMS IDENTIFYING BENEFITS RANGING FROM \$2.91 FOR CORRECTIONAL EDUCATION TO \$37.70 FOR PRISON-BASED COGNITIVE THERAPY FOR EVERY DOLLAR INVESTED. The wait list for training was eliminated and a consistent program review and approval process was implemented. This effort has been supported and highlighted by the PEW Trust. <http://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2018/01/iowas-department-of-corrections-takes-an-innovative-evidence-based-approach#1-identify-which-programs-contri>
- 2) The Statewide Interoperable Communications System was upgraded to provide statewide access for all government organizations with a new radio system. The statewide contract reduces the cost for a radio by nearly 50% from \$8,000 to \$4,300. 90 communications sites have been built to improve radio coverage. WITH AN ANTICIPATED 25,000 RADIO USERS THE SAVINGS IS ESTIMATED AT \$92M.
- 3) The Department of Public Safety launched a consolidated weapons permit program in November of 2017. 275,000 citizens have a weapons permit generated by a county Sheriff. 65 of 99 counties had a locally generated permit card which made it difficult for law enforcement and gun sellers to know for certain the permit was valid when some permits were paper only and they were all in a different format. THE CENTRALIZED SYSTEM PROVIDED A SOLUTION TO 34 COUNTIES PREVIOUSLY WITHOUT A SYSTEM AND ALLOWS SOME SHERIFF OFFICES TO DISCONTINUE USE OF OLD SYSTEMS. _Central permit issuance also improved fund

accounting and record quality resulting in better audit and internal controls.

Other accomplishments:

- 4) Pilot (WISE) access for law enforcement with dedicated wireless access at local schools through the statewide network with ICN. Law enforcement is able to drive into school parking lots to access the dedicated network and upload files saving time as well as increasing a police presence at schools. In a school emergency, such as an active shooter, law enforcement would be guaranteed network access and be able to hear what is happening in the school.
https://isicsb.iowa.gov/sites/default/files/documents/2016/12/isicsb_wise-pilot-final_0.pdf <https://icn.iowa.gov/about-icn/news-and-media/media-activity/police-getting-secure-wi-fi-access-3-iowa-schools>
- 5) Iowa became one of 6 states to move to a cloud based AFIS system.
- 6) Predictive analytics allowed for identification of programming for youth offenders which was increasing the recidivism rate. THE MODEL WAS ABLE TO CORRECTLY PREDICT RECIDIVISM IN 67.1% OF OBSERVATIONS. Findings included: court involved community-based services caused the highest increase to the risk of recidivism and the use of residential placements and secure placements decreased risk for moderate and high risk youth. This information has been used to create a Decision Matrix Model to reduce recidivism.

Plans for the Future – Public Safety, Emergency Management, Criminal Justice and Corrections

- Uniform Crime Reporting System Replacement System
- Electrical Licensing migration to Salesforce/Basic Gov
- Pilot 2 finger identification on a mobile device with Idemia
- Hunting/Fishing/Snowmobile License Integration with the DPS system.
- Expansion of the Department of Corrections Digital Signature Initiative

Health, Social and Human Services

In alignment with the Governor's goal for EDUCATING OUR CHILDREN DHS focused on improving the health and welfare of families. Student learning achievements are improved when issues of food insecurity and family stress are reduced. Several administrative systems were enhanced to provide better information to case workers.

COMPREHENSIVE CHILD WELFARE SYSTEM - Implemented a data exchange with the Juvenile Court System (JCS) to JARVIS to receive case note data for child visits for foster care cases that JCS provides case management for. This

replaced a manual process where the juvenile court officer would enter case notes in JCS and fill out a paper report for DHS staff to enter into JARVIS. The automatic transfer of JCS case notes led to an increase in performance measures (20 additional measures) for child visits and eliminated reduced time needed for JCS and DHS staff to get this information into DHS systems.

BENEFITS ELIGIBILITY SYSTEM - An upgrade was made to the Joining Applications and Reports from Various Information Systems (JARVIS) system to automate system checks from additional systems for child protective intakes. The system checks pull information from other DHS systems to provide child protective staff additional information on families being assessed. Automating these checks has replaced the need for staff to manually check these systems for information, decreasing staff time to do these checks and providing more information. DHS had approximately 56,000 intakes (accepted and rejected) in 2017. Automating these functions saves staff 5 minutes per intake.

BENEFITS ELIGIBILITY SYSTEM - The Worker Information System Exchange (WISE) System used to support eligibility systems has consolidated multiple other supporting systems into the WISE system providing workers with access to more data in one place, eliminating the need to log into as many separate systems, creating efficiencies in case work. The eForms implementation with WISE has added more pre-populated forms, creating efficiencies for staff, added additional alerts and improved workflow.

MEDICAID MANAGEMENT - DHS and the Managed Care Organizations (MCO) process paper forms for Targeted Medical Care and Daily Service Record. Effective July 1, 2018, providers must access and submit these forms online. This change in process cuts printing costs and works toward the goal of a completely electronic MCO claim.

MEDICAID MANAGEMENT - In April 2018, DHS switched its Home And Community Based Services (HCBS) Quality Assurance Oversight Review process from paper to electronic format. Previously, DHS sent all correspondence regarding a HCBS agency's review, subsequent reports, corrective action, and compliance letters by mail. Now, information is shared electronically via an encrypted email.

OTHER - MATERNAL HEALTH SYSTEM INTEGRATION - The Department of Public Health implemented a new consolidated Maternal Health System which combined four systems into a single Cloud hosted system which resulted in reduced maintenance and support by the Department. **RESULTS INCLUDE REAL TIME INFORMATION NOW AVAILABLE TO THE 82 CONTRACTING AGENCIES; IMPROVED QUALITY ASSURANCE REVIEWS. REDUCED HELP DESK SUPPORT BY 33% WITH THE ELIMINATION OF 2,000 HOURS SUPPORT ANNUALLY.** <https://ocio.iowa.gov/success-story/maternal-health>

Plans for the Future Health, Social and Human Services

- Child Welfare Case Management Replacement
- Taxonomy for MMIS
- BI data analytics for MMIS
- Consolidating eligibility programs into one portal
- Provide custom search for information letters

Transportation and Motor Vehicles

Please refer to activities outlined in other sections of this response highlighting successes for the Iowa Department of Transportation including:

DATA-DRIVEN GOVERNMENT description of the snow plow lights and plows replacement schedule analysis helping to achieve the Governor's goal to REDUCE THE COST OF GOVERNMENT.

OTHER: DRIVER LICENSE RECORD LOOKUP SYSTEM: In November of 2016 the State implemented a new Driver License Record Lookup System which supported the goal to REDUCE THE COST OF GOVERNMENT. The new system transitioned from an escrow based payment process to online payment. The new system also supports the electronic processing of the federally required information for the Driver's Privacy Protection Act (DPPA). THE NEW SYSTEM HAS REDUCED THE NUMBER OF SUPPORT CALLS AND EMAILS BY 90%. The per month average number of emails for the old system were 93 compared to the new system average of 17. Phone support requests dropped from 90 to 3. WE CALCULATE THE STAFF SAVINGS FOR SUPPORT IS \$1,000 PER MONTH.

Plans for the Future – Transportation

- Implementation of new ERP system with Workday.
- Digital Driver Licenses.
- Project and Portfolio Management System.
- American Association of State Highway and Transportation Officials AASHTOWare Construction and Materials implementation.
- Assetworks software implementation to manage assets.

Licensing Systems

The Governor's goal to create a COMPETITIVE BUSINESS ENVIRONMENT has been supported by efforts to automate and improve licensing primarily through the use of two platforms: CSDC with Amanda and BasicGov with Salesforce.

1. 23 professional licenses were implemented through the CSDC Amanda licensing platform and three additional agencies implemented Basic Gov/Salesforce for licensing.
2. BasicGov has been implemented for professional license types (Accountancy, Architects, Engineers & Land Surveyors, Interior Decorators, Landscape Architects, Real Estate Appraisers, Real Estate Agents and Brokers, and regulated industries of the Insurance Division including pre-need funeral sales licenses. The application and renewal process requires a login. All citizens benefit from this investment as they can search to confirm an active license is in place.
<https://iowapl.force.com/LicenseSearchPage>
3. Iowa offers agencies a choice in licensing platforms to encourage automation and process improvement without forcing adoption.
4. Citizens can search online to check the status of 49 different professional licenses. <https://www.iowa.gov/license-permit-and-registration-information>
5. Individuals and businesses can find information online about required licenses for a profession or business.
6. Salesforce has also been used to REDUCE THE COST OF GOVERNMENT in the Department of Cultural Affairs with the use of Salesforce for processing Iowa Arts Council grants, in reporting grants to federal organizations, and in reporting attendance at outreach events. This system supports the backend grant administration process. THE NEW SYSTEM REDUCED GRANT PROCESSING TIME BY 80 HOURS SAVING THE PROGRAM OVER \$2,500.
7. The Secretary of State (SOS) implemented online payments for the biennial corporation report in 2016 saving over 1,100 hours in the first year. Results of this change were dramatic: Nearly 15,000 check payments were made online, eliminating the need to handle physical mail and endorse checks. THIS IMPROVEMENT RESULTED IN A HUMAN EFFORT SAVINGS OF OVER 1,100 PERSON HOURS.
<https://www.legis.iowa.gov/docs/publications/DF/851134.pdf>

The Secretary of State (SOS) made improvements in their business filing system to provide for faster business filing processing. In 2016 the SOS processed more than 20,000 new business filings and the turnaround time for new business filings was reduced from 20 days to 1 day. In June of 2018 the business filing system was enhanced again to allow the SOS to PROCESS DOCUMENTS IN LESS THAN AN HOUR IN MOST CASES. This new Fast Track Filing System <https://filings.sos.iowa.gov/Account/Login> includes field validation to help filers

submit the correct information.

<http://www.thegazette.com/subject/news/business/iowa-fast-track-filing-new-business-paperwork-online-secretary-of-state-20180619>

Plans for the Future – Licensing

- Implement basic forms and payment for small volume licenses – pilot with SeamlessGov
- Expand the use BasicGov/Salesforce and Amanda licensing where appropriate.
- Implementing BasicGov for Liquor licenses.
- Implementing BasicGov for Electrical Licenses

Commerce, Labor and Taxation

1. The Governor’s goal for a COMPETITIVE BUSINESS ENVIRONMENT has been supported by initiatives with the Iowa Department of Revenue (IDR). IDR receives all IT support through the OCIO.
2. A new program was implemented to improve internal efficiencies for the audit of the Business Property Tax Credit (BPTC) program under Iowa Code Chapter 426C. A critical component of this audit is contiguous parcel definition which determines eligible property units. The BPTC Geographic Information System (GIS) project allows IDR to publish parcel data with geographic context. This allows IDR to communicate audit results in an automated way to local governments and manage corrections through a self-service portal. The system is used by IDR staff and Iowa’s local government representatives. There are approximately 250 registered users.
 - 2.1. The BPTC GIS project has eliminated the need for inefficient manual audit review processes. The back and forth letters and phone calls and staff contacts have been replaced by the self-service portal which is used to publish audit results and manage corrections.
 - 2.2. Every year, parcel audits are conducted on all 99 Iowa counties comprising roughly 2.7 million records. THE BPTC SYSTEM HAS REDUCED THE NUMBER OF IDR STAFF HOURS REQUIRED TO CONDUCT THESE AUDITS BY OVER 70 PERCENT. IT HAS ALSO REDUCED THE NUMBER OF HOURS NEEDED FOR COUNTIES TO RESOLVE AUDIT FINDINGS.
 - 2.3. It is the goal of the Iowa Department of Revenue to provide accurate, clear, and concise information to taxpayers while also

providing efficient tax administration. The BPTC GIS project serves both of these goals by providing audit information to local governments in the most accurate and concise manner possible while also avoiding inefficient manual audit processes.

3. IDR implemented a new Sales Tax Lookup system which provided retail sellers with the obligation to collect sales and use tax and local option sales tax to have the ability to look up an address and see the correct sales tax rate for that address. <https://lge.iowa.gov/SalesTaxRate.html> This is valuable to businesses that ship goods or deliver services to locations other than their store front. Buyers are also able to look up their own address to see if a seller is charging them the correct sales tax rate. This has improved transparency in how sales tax rates are applied and made it easier for businesses to know what rate to collect. The site utilizes adaptive rendering to allow users to use the site seamlessly from their mobile devices.
 - 3.1. The web application is available to the public including the 160,000 sellers that have sales tax permits with IDR.
 - 3.2. The direct cost savings comes from the reduction of refund requests as a result of buyers being charged too much sales tax. The indirect return on investment comes from increased voluntary compliance through self-service and the modernization of sales and use tax rate administration.
 - 3.3. It is the mission of the Iowa Department of Revenue to collect all taxes required by law, but no more. It is also a goal of the Iowa Department of Revenue to modernize tax administration. The Sales Tax Lookup project serves both of these ends by helping businesses charge the correct sales tax rate today while also positioning the department for the expanding future of remote sales. Given that the foundation of tax administration is cooperation and voluntary compliance, Sales Tax Lookup serves a critical role in delivering tax services in a way that taxpayers and business sellers expect.

Plans for the Future

- Strategic Application Assessment

Natural Resources

The Iowa Department of Natural Resources has supported the Governor's goal to REDUCE THE COST OF GOVERNMENT with the implementation of the

annual online filing system for manure management plans. (MMP) for Animal Feeding Operations (AFO) and Concentrated Animal Feeding Operations (CAFO). <https://ocio.iowa.gov/success-story/emanure-management-plans>

1. Annually, 7,000 MMPs were submitted on paper, delivered to each county where manure was applied, then submitted to the Department of Natural Resources (DNR) for review and approval.
 - 1.1. In March of 2018, DNR rolled out electronic Manure Management Plan (eMMP) the online submittal option. Farmers and consultants have reduced the time it takes to submit a plan from approximately 60 minutes per plan to less than 10. Using the Bureau of Labor Statistics income information from 2011 for farmers this represents a SAVINGS OF \$27.00/FILING OR \$189,000/YEAR. The eMMP submission process also dramatically REDUCES MILES DRIVEN TO COUNTY OFFICES BY AT LEAST 175,000 WHICH REPRESENTS A \$95,000 SAVINGS TO THE FARMING COMMUNITY IN IOWA.
 - 1.2. The eMMP application ensures quality data, eliminates duplicative data entry for subsequent plans, reminds farmers of due dates and notifies counties after plans are successfully submitted. Accessible from home, office or smartphone, users submitted 94 plans, in the first two weeks. <https://programs.iowadnr.gov/afoemmp/>
2. The Iowa Flood Center based at the University of Iowa has implemented 250 sensors to offer real time flood forecasts to AI chatbots with the NEXT GENERATION IOWA FLOOD INFORMATION SYSTEM.
<http://ifis.iowafloodcenter.org/ifis/en/>
 - 2.1. The Flood Center combines sensor information from the US Geological Survey, and the U.S. Department of Agriculture to track water level data. Currently citizens can sign up for text notifications relating to flooding, explore watershed information, view flood inundation maps, and explore the flight simulator. The data, which can forecast floods, is also shared with the National Weather Service, the U.S. Geological Survey, county emergency managers, Iowa Homeland Security, U.S. Army Corps of Engineers and other partners.
 - 2.2. Every 15 minutes [sensors] are sending observation, rainfall, and forecast data back to the server that runs through the University super-computer.
 - 2.3. That information helps communities and community managers make informed decisions about how to respond and plan for floods.

<http://www.govtech.com/fs/automation/iowa-Flood-Sensors-Wade-into-Artificial-Intelligence.html>

Plans for the Future – Natural Resources

- Refresh of the Hunting and Fishing License system with Brandt Info Services
- Air Quality eApp for construction permitting
- FloodPlain and Sovereign Lands application integration
- Mobile GIS application for Chronic Wasting Disease Reporting
- Lab Certification application refresh

Open and Transparent Government

1. Iowa implemented <https://iowaopenrecords.nextrequest.com/> in early 2018 to support increased transparency for public record requests and citizen requests for information. Four agencies are currently using the system to manage their record requests with the enterprise rollout to other agencies anticipated to occur over the next 12 months. Through early June we had processed 500 requests.
 - 1.1. This site offers citizens access to read and download previous request responses and to submit a request for public information and disclosures.
 - 1.2. The administrative system allows the state to track the time and cost associated with filling the requests and identify the timeliness of agency replies. THE COST TO FILL THESE REQUESTS WAS \$7,336 IN STAFF TIME AND THE AVERAGE TIME TO CLOSE WAS 3.2 DAYS.
 - 1.3. The site supports the goal to REDUCE THE COST OF GOVERNMENT by saving money through the elimination of duplicate requests - citizens can search the system to find previously answered requests. When a visitor begins entering a request description that has been identified as a common request an alert displays indicating where the information can be found. The system reports 62 instances where the Alert appeared which represents nearly a \$1,000 savings.
2. IOWA IS ONE OF 8 STATES RECOGNIZED AS A LEADING STATE FOR ONLINE SPENDING TRANSPARENCY. <https://uspirg.org/news/usf/following-money-2018> Earlier this year the U.S. Public Interest Research Group (PIRG) Education Fund report FOLLOWING THE MONEY 2018 recognized Iowa as being among eight leading states. Iowa was recognized for having created a user-friendly website providing citizens with accessible and comprehensive information on state spending. Information can be accessed on specific expenditures through easy-to-use features, including a multi-tiered search function that allows users to search for two or more criteria at once. <http://checkbook.iowa.gov/>

3. Iowa's data portal (<https://data.iowa.gov>) provides the public access to over 1,300 state data assets published by 47 state agencies. The data transparency portal also includes local government and school district financial data. The data portal currently has over 155 million rows of data published, and facilitates thousands of downloads per month and even more API calls.
 - 3.1. We have seen a 3.4% increase in data assets since July 1, 2017.
 - 3.2. The portal averages 6,400 unique visitors per month.
 - 3.3. The data volume in data.iowa.gov has increased 62% from 96M to 155M rows of data during this fiscal year.
 - 3.4. State employee salary data offers increased transparency <https://data.iowa.gov/Government/State-of-Iowa-Salary-Book/swbj-fwy8>

Iowa invites public participation in policy-making with <https://rules.iowa.gov> allowing the public to provide comments to proposed administrative rules and <https://comment.iowa.gov> providing the public the ability to provide comment on any agency (or local government) proposed plan. The Rules website receives an average of 1,025 visits per month.

Digital Government Services

Over the last two years a major effort was made to improve content and make information more searchable.

1. From May 2016 to May 2018 the LISTING OF ONLINE SERVICES AVAILABLE WENT FROM 160 TO 409!
<https://directory.iowa.gov/service/Index> The services listing is the most visited section of the directory with 60% of the visitors to the site using the services listing. The directory has an average of 33,000 visitors per month. Services listed in this directory support the goals of TRAINING, EDUCATING OUR CHILDREN, and COMPETITIVE BUSINESS ENVIRONMENT. Search for training, learning, apprentice, or business and find services that help unleash opportunities for Iowans.
2. The centralization of the subscription service for citizen communications has had strong results with the state now achieving an engagement rate of 60%. See additional information in Section Experience Strategies.
3. Implemented [Geodata.iowa.gov](https://geodata.iowa.gov) in February 2018 where citizens can discover geospatial data for the State of Iowa. The main focus is on data that is specifically designed for use in a geographic information system or location analytics tools often used by researchers, cartographers, web and applications developers, planners, and journalists who need data for a

project, services for an application, or some other resource. There are currently 370 reference datasets from 9 agencies including imagery, elevation models, boundary reference data, and selected agency business data. The site has had over 3,700 users in just 3 months. Data within the system can help achieve the goal of a COMPETITIVE BUSINESS ENVIRONMENT as businesses may review data to help determine facility locations. An example of data helpful to business is LIDAR information. <https://geodata.iowa.gov/dataset/two-foot-contours-iowa-derived-lidar-data>

4. Implemented an embedded Google Calendar for Public Meetings. Information about public meetings now easily entered by 47 agencies, reducing data entry to make the information available. Leveraging the Google Calendar also allows citizens to easily map directions to the meeting or add the meeting their personal calendar. <https://www.iowa.gov/public-meetings> Citizens are able to easily find the calendar regardless of where they start their search. The link is consistently returned from a search on Google, Iowa.gov, or Directory.iowa.gov.

5. Implemented a web service of tax rates for a location. The Iowa Dept. of Revenue, with support from OCIO, created the web service to return a tax rate for a location for both the Local Option Sales Tax (LOST) and lodging tax (hotel/motel). IDR uses this service in a web application to assist business owners in determining a correct tax rate for a location. The web service is also public and could be used by a business to create their own location-based tax application.

Priorities for improving citizen/ businesses experience

- Complete implementation of voice response for Google Home and Amazon Alexa with AskIowa skill.
- Implement Enterprise live chat/AI chatbot and integrate data with AskIowa skill.
- Begin migration to Drupal 8 and agency standardized navigation.

How Citizens Experience State Government Experience

Directory of online services, social media, department and employee phonebook	https://directory.iowa.gov
Subscribe to Over 400 government topics including 31 different agency press releases	https://www.iowa.gov/subscribe
Google My Business	https://google.com Search

	for any State agency name "Iowa Department of Public Health"
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Experience Strategies

1. Technology strategy and investments are governed by the Chief Information Officer (CIO) by code.
<https://www.legis.iowa.gov/docs/code/2018/8B.21.pdf> A Citizen Engagement subcommittee (CES) was added in 2017 for governance over the citizen experience. CES is working on creating content; active in design of a new Iowa.gov portal; content creation for the voice assistance skill "AskIowa"; selection of an AI based chatbot. Release of these citizen experience improvements is planned for the summer of 2018.
 - 1.1. The State has a published content management standard.
<https://ocio.iowa.gov/web-content-management-system-standard>
 Branding is consistent across websites with a Sliver allowing citizens to perform an enterprise search, access the Directory of employees, departments, services, and social media. The Sliver requirement and consistent navigation are part of the Web Design Standard.
<https://ocio.iowa.gov/sites/default/files/standards/2016-01/enterprisewebdesignstandard1015.pdf>
2. Improvements to the citizen experience over the last two years include: Gaining ownership of over 340 Google My Business (GMB) Profiles for State agency locations. Agencies were trained to manage agency profiles, set up notifications, and respond to citizen questions. Establishing the GMB profiles not only benefits citizens searching on their computers, tablets or phones but also returns results for the voice searches with Google Home. We invite you say OK GOOGLE CALL THE IOWA OFFICE OF THE CHIEF INFORMATION OFFICER. Helen at our front desk would be glad to help answer your questions through your Home device or Google Assistant! THE MOST IMPORTANT BENEFIT OF OWNING THE PROFILES IS AGENCIES ARE NOW RESPONDING TO CITIZEN QUESTIONS WHICH HAD REMAINED UNANSWERED OR HAD BEEN ANSWERED, POTENTIALLY INCORRECTLY, BY A GENERIC GOOGLE GUIDE. Iowa is now engaging with citizens where they prefer to interact through Google My Business and Google Maps.
3. The enterprise subscription service (Grancius Communications Cloud) expanded from 13 to 41 agencies and from 50 to over 400 topics. In May

subscriptions totaled 930k (39% increase in 12 months). This centralized subscription service allows citizens to manage access to the fishing report in the same location where they sign up for income tax updates. OUR OVERALL ENGAGEMENT RATE FOR COMMUNICATIONS IS AT 60%! The median engagement rate for the state government is only 49% according to the Grancius Benchmark Report. Citizens and media representatives can subscribe to press releases for 31 departments in a single location!

https://granicus.com/pdfs/guide_2017_benchmark_report.pdf

4. Agency participation in social media increased from 41 to 60 in the last two years. Averages of 30,000 posts per month are sent from more than 200 accounts. Facebook has the largest presence with 53 agencies. ARCHIVE SOCIAL was implemented to ensure a reliable archive is available for public record requests. Archive Social provided the archive of Governor Branstad's social media messages for State Archivist retention. Iowa's followers are growing and represent a higher engagement rate than our benchmarked peers:
 - DOT Twitter increased from 28.8 to 34.8k compared to Indiana 16k.
 - DOT Facebook 35k compared to Indiana 19k; New York DOT 23k.
 - DNR Twitter increased from 15k to 21.6k compared to Utah 3.8k.
 - DNR Facebook increased from 56k to 108k!!!

Citizen Feedback

1. The state conducted citizen feedback through a survey on our Iowa.gov portal for FY17. We found 48% of respondents indicated it was somewhat to very difficult or they could not find the information they were searching for. The Citizen Engagement Subcommittee has worked to improve the search results by identifying the top questions and answers for their agencies and to provide guidance about a new design for <https://www.iowa.gov>.
2. The search function has been improved by including promotions in our Google Custom Search engine to address the top questions and answers. The new website is scheduled launch before Labor Day. The state has acknowledged the feedback we have received through the survey in a letter to citizens posted on the Iowa.gov. We anticipate conducting a new survey to measure improvement with the new design and search optimizations.
3. Agencies are also working to get feedback from citizens about their system design. The Department of Natural Resources initiated the design

effort for their electronic manure management plan with a lean event including over 100 stakeholders with an investment of more than 480 hours. The result of this design effort was quick adoption of the application with more than 94 online submissions in the first two weeks.

The state also acknowledges feedback from citizens through social media direct messages and by responding to questions posted on Google My Business.

How We Align with the Enterprise Goals

The Citizen Engagement Subcommittee has worked to promote alignment with our enterprise goals and to ensure content reflects the most common questions and requests we receive from citizens. Changes have been implemented on <https://www.iowa.gov> to improve the content and to update the Google Custom Search engine so search results return the correct links. In the last two years we implemented TRENDING TOPICS CONTENT on Iowa.gov to include high value information for citizens: jobs, hunting/fishing information, birth certificates, and to highlight content supporting our goals:

- 1) COMPETITIVE BUSINESS ENVIRONMENT - implemented listing of professional licensing links <https://www.iowa.gov/license-permit-and-registration-information>
- 2) TRAINING IOWANS - promoting apprenticeship and online training.
- 3) EDUCATING OUR CHILDREN - promoted Iowa Learning Online (ILO) for high school students and School Report Cards for families. The ILO program from the Iowa Department of Education helps with credit recovery, credit advancement, scheduling conflicts, courses otherwise not available within the district and teacher shortages. Rigorous online courses help students succeed and graduate. ILO serves all Iowa high school students and middle school students taking high school courses for high school credit. Accredited public and non-public students must be enrolled in ILO courses by their local school. Home-school families may enroll their students directly with ILO. The online course listing is available at <http://iowalearningonline.org/courses> ILO course enrollment has increased by 86% in the last 5 years with a current enrollment of 3,500 students.

INNOVATIVE ENERGY POLICY - promoted the State Energy Plan.

Emerging Technologies/Innovation

The greatest technology breakthrough has been the Department of Transportation's (DOT) proof of concept for the Digital Driver License. The pilot provided real user data tested in a wide range of identified use cases. The test group used a downloadable iOS mobile app that required identity verification before the mobile driver's license appeared on the phone.

Iowa began testing the IDEMIA solution in 2018. The application is automatically updated by events such as a license suspension or a 21st birthday, it authenticates the license holder with facial verification, and features privacy versions for proving identity or age without revealing additional personal information. The app communicates with a laptop in the law enforcement officer's car with encrypted Bluetooth signals, providing the identity of the driver before the officer leaves the vehicle.

With the successful completion of the proof of concept DOT will develop an app-based mobile driver's license for statewide deployment in 2018.

REFERENCES: <https://wqad.com/2017/05/22/iowa-smartphone-drivers-licenses-planned-to-launch-in-2018/>
<http://www.govtech.com/transportation/iowa-Five-Other-States-Will-Try-Digital-Drivers-License-Projects-in-2018.html>

Collaboration

Several agencies collaborated to support the goal of a COMPETITIVE BUSINESS ENVIRONMENT by working together to expand the (Tax) Credit Award, Claim, Transfer and Administration System for Credit (CACTAS) System. <https://taxcredit.iowa.gov/>

The Iowa Department of Revenue (IDR) worked with the departments of Economic Development, Iowa Utilities Board, and the Department of Cultural Affairs to make it easy for businesses and individuals to apply for tax credits. This collaborative effort has resulted in an integrated tool accommodating the variation among programs while providing data consistency and validity. Consolidating the tax credit application process across departments reduces duplication and supports tax credit analysis and data stewardship. Having a single system for tax credits makes it easier for businesses to process claims for different credit programs. The system originally supported only 4 tax credit types and has been expanded now to more than 15 applications programs covering

more than 20 types of tax credits from 17 different state agencies!

Data about the number of tax credits issued and the value of the credits is a critical component to revenue estimating. The legislature and Governor rely on accurate estimating to establish the State budget and spending plan. An example of the volume of credits processed through the system and the value of the data for revenue estimating can be seen in the 2017 Solar Tax Credit report outlining 834 credits awarded and nearly evenly split between individuals and businesses for a total of \$5 million. REFERENCE:

<https://www.legis.iowa.gov/docs/publications/DF/916643.pdf>

The CACTAS program was recognized in 2017 by the FEDERATION OF TAX ADMINISTRATORS AS THE WINNER OF THE AWARD FOR OUTSTANDING RESEARCH AND ANALYSIS. REFERENCE:

https://www.taxadmin.org/index.php?option=com_content&view=article&id=594:2017-research-award&catid=41:news-releases&Itemid=279

Where We Collaborate with Local Government

- CyberSecurity
- Google My Business
- Local Government Budget

Our Biggest Accomplishment

During the last two years the State made significant advancements to improve citizen engagement. We have improved our online experience for citizens to support their offline experience. Citizens want to be able to make child support payments online but they also want to know the phone number and address for their local child support office. We recognize citizens want to have a conversation with government about the rules we are proposing, request public records, and talk to our staff to get help.

Having completed the effort to claim ownership for the 340 Google My Business locations of Iowa government offices means we have insight into how often citizens are searching for our offices and taking action. We know that in the month of May there were:

- 233,250 direct searches on Google for our state offices.
- 38,922 phone calls to our agencies from the Google My Business profiles.
- 18,226 citizens requested directions to our offices from the profiles.

- 2,427 phone calls came into the DOT Motor Vehicle Office in Davenport representing the highest call referral from Google My Business for all state offices.
- 1,447 citizens linked to directions for the DOT Motor Vehicle Office in Cedar Rapids.
- 13,573 citizens directly searched for the Iowa Department of Revenue representing the highest direct search request for all state offices.

These insights of how citizens have leveraged Google My Business have helped state agencies push information to Google My Business to help citizens answer questions before they get to an office or the agency website.

Citizens want to get to the right place to talk with someone about their needs and we know this can be confusing with departments supporting different services at different locations. Google doesn't always have the right information - unless you make the effort to ensure the information is updated. Google has helped us improve the search results for citizens with the Google My Business categories function. The Department of Transportation (DOT) has over 100 offices but only 16 locations are driver license renewal locations. By designating a location with the category Driver License Station only the DOT locations that are driver license stations will appear.

Citizens will reach out and seek help in many different ways: searching on iowa.gov, <https://iowaopenrecords.NextRequest.com>; through chat on the portal; through Google My Business; social media posts. The Citizen Engagement Subcommittee (CES) in coordination with the Office of the Chief Information Officer is working to provide citizens with a consistent experience and response when they pose a question on any of these channels. Trending Topics on iowa.gov are also loaded to the public and information request system and agencies are entering these key questions and answers on their Google My Business profiles.

Working across the enterprise of State government and now working with counties to engage with citizens through Google My Business helps Iowa government be responsive to citizens where citizens are looking for answers -- with Google.