FY19
PLAYBOOK
OIT STRATEGIC PLAN

COLORADO

Governor's Office of Information Technology

Serving people serving Colorado

YOUR CALL TO ACTION

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Executive Leadership Team

The Governor's Office of Information Technology (OIT) provides a technical foundation for our customer agencies to deliver a safe, happy, and healthy Colorado. This document provides a snapshot of our key focus areas and our path forward.

Each of us has the opportunity to contribute toward the Wildly Important Goals presented here and can incorporate them into our own path of success in our performance plans. We are all responsible for delivering excellent customer-focused service, enhancing security measures, engaging each other in our work, and strengthening Colorado's technology landscape with our foundational core values of service, integrity, teamwork, respect and courage. Striving to achieve these goals will allow us to deliver on our promise of "serving people serving Colorado."

Please use this Playbook to spark conversations with your colleagues about how you can make a difference for OIT and for Colorado.

Team,

It is with great enthusiasm that I present to you the OIT FY19 Playbook. This 2018-2019 strategic roadmap identifies our key areas of focus in the next fiscal year, and the steps we will take to realize our Wildly Important Goals (WIGs). I ask that you to read through this Playbook to celebrate our past accomplishments and ascertain our direction for IT in the State of Colorado - as defined by many of you!

Over the last four years as Secretary of Technology and Chief Information Officer, it has been truly inspirational to experience OIT's evolution from getting "back to the basics" - a critical necessity for our customers - to also being seen as a valued technology partner and paving the way for IT in the public sector. Let us never lose sight of "keeping the lights on", but I encourage you to continually consider ways in which technology can transform the lives of Coloradans.

These are several examples of how our teams delivered exceptional customer service and impactful IT solutions for agency partners and the residents of Colorado in the last year:

- Delivered the Integrated Parks and Wildlife System (IPAWS), streamlining business functions for customers and allowing citizens to reserve a campsite, buy a fishing license, and apply for a hunting license all in one place.
- Expanded 24x7 Service Desk for agency customers to receive the help they need, when they need it.
- Implemented a Security Analytics and Endpoint Detection and Response toolset across the state to protect against cybersecurity incidents.
- Allocated approximately $115 million with the passing of Senate Bill 18-002 to provide broadband grants for unserved rural areas of the state.

As we embark on the next fiscal year, we will undoubtedly be presented with exciting opportunities and a new set of challenges to tackle. In the face of change, I am confident that we will come together as a team with courage, integrity, and respect serving our customers and always working toward our vision of enriching the citizen experience at every digital touchpoint.

Thank you for proudly serving people serving Colorado each and every day.

Sincerely,

Suma Nallapati

SUMA NALLAPATI
SECRETARY OF TECHNOLOGY & CIO

EXECUTIVE
SUMMARY

OIT's Playbook is our strategic roadmap. It provides our stakeholders (i.e., customers, employees, and partners) with a guide for the future, linking the Governor's vision to our core mission, vision, values, strategies, and goals. Through organizational transparency and straight-forward communications, OIT continues to build a culture of accountability, shared expectations, and trust.

MISSION

To securely enable the effective, efficient and elegant delivery of government services through trusted partnerships and technology.

VISION

*Enriching the citizen experience at every digital touchpoint.*

Every interaction Coloradans have with the state is an opportunity to enrich the citizen experience. Our customers directly serve the public, and OIT is the IT service delivery partner that can elevate their experience. We strive to empower a seamless interaction between the state and the people we serve. Our work includes expanding broadband coverage across the state, leading the way for enterprise solutions that support effective collaboration, streamlining processes for more efficient service, and enhancing security to keep public data and systems safe.

We envision a future where the entire journey of any Coloradan receiving state services is simple and fast no matter how many agencies or applications are involved; customers get the services they need, when they need it, wherever they are.

VALUES

At OIT, we recognize that how we deliver is as important as what we deliver. Our core values define our character, and each employee is expected to embody the values in all the work we do.
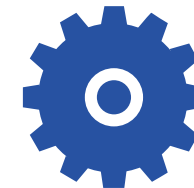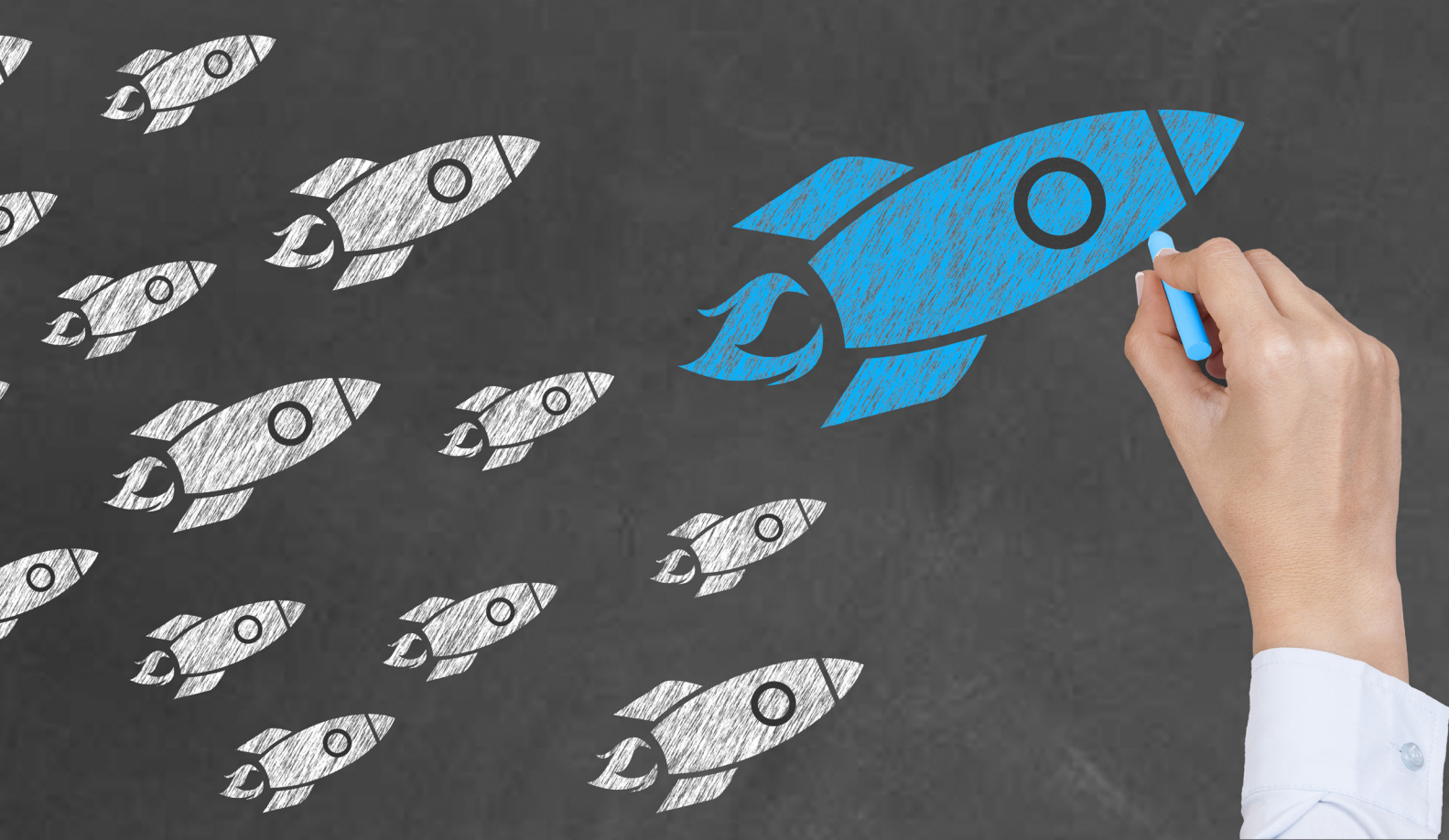
OIT received the 2017 NASCIO State CIO Office Special Recognition Award for our "Strategy of Success: Playbook & 5-Year IT Plans"

SERVICE

INTEGRITY

COURAGE

TEAMWORK

RESPECT

STRATEGY

METHODOLOGY

In May 2014, the Governor's Office selected a new strategic planning methodology. The 4 Disciplines of Execution (4DX) has been instrumental in providing the executive branch with a common language and consistent method for developing and measuring strategy execution. OIT quickly adopted this methodology and has been pleased with the process and results. This methodology employs four concepts to align and progress an organization toward common goals. These four disciplines, which specifically target the routine and behavioral change necessary to drive organizational improvement, are: (1) Focus on the Wildly Important; (2) Act on the Lead Measures; (3) Keep a Compelling Scoreboard; and (4) Create a Cadence of Accountability.
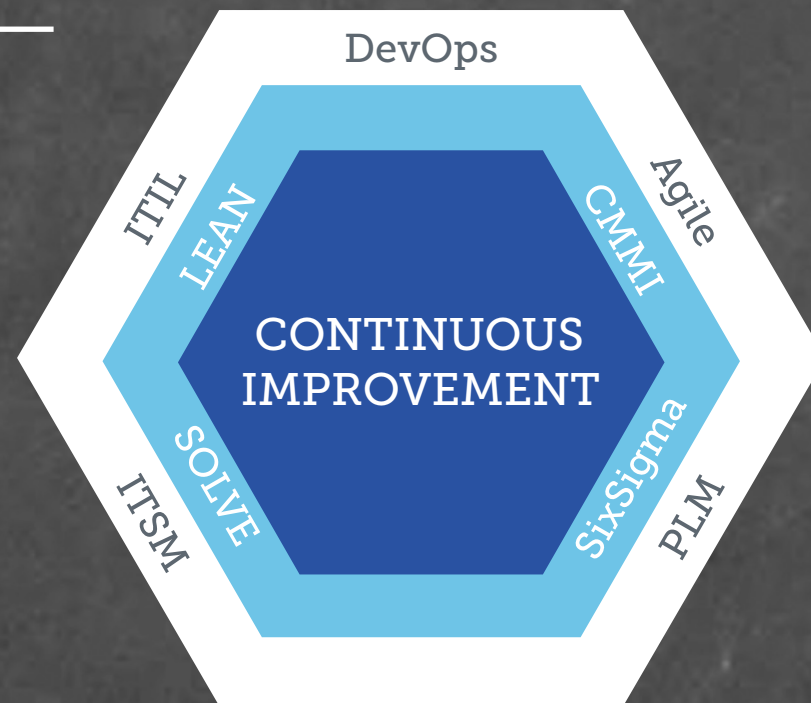
TRACKING OUR PROGRESS

The OIT Scoreboard provides an executive summary of OIT's strategic and operational progress. It includes robust metrics on financial performance, customer service delivery, personnel, information security, and IT economic development. OIT employees can access the Scoreboard data on our intranet, OIT Plaza. In addition to the enterprise OIT Scoreboard, functional teams also track a number of metrics related to their team operations. In all, more than 100 performance measures are being managed and maintained, providing a foundation for data-driven decision-making and creating transparency in our efforts across the organization.

DevOps · Agile · CMMI · SixSigma · PLM · ITSM · SOLVE · LEAN · ITIL

CONTINUOUS IMPROVEMENT

OIT's FY19 WILDLY IMPORTANT GOALS (WIGs)

Since FY15, OIT has kept a steady focus on four major areas: Service Excellence, Information Security, Employee Engagement, and Strengthening Colorado technology landscape. In FY18, we had an additional goal around strengthening Colorado's Technology landscape to show the state's commitment towards ensuring all Coloradans have access to reliable, cost-effective broadband. We're striving to continue on the momentum from FY18 and be consistent with our WIGs for FY19 by keeping the same WIGS and improving on our target goals to drive positive behavioral changes throughout the organization.

Delivering Effective Solutions and Reliable Customer Service

77% Customer Satisfaction through June 30, 2019

Securing Colorado Through Innovation

Increase the State of Colorado's external security rating by 50 points for an increase from 530 to 580 by June 30, 2019

Ensure All Coloradans Have Access to Reliable, Cost-Effective Broadband Internet

92% of rural households have access to broadband by December 31, 2019

Strengthening Colorado's Technology Landscape

95% of critical projects submitted through OIT are reviewed as a potential use case for emerging technology to enhance the citizen digital experience

Advancing Employee Support and Collaboration to Drive Customer Service Improvement to Deliver Superior Performance

25% increase in employee participation in the OIT+ digital community by June 30, 2019

WIG 1

Delivering Effective Solutions and Reliable Customer Service

Achieve and sustain 77% customer satisfaction, as measured by Customer Service Index Rating, consistently through June 30, 2019.

Delivering consistent, high quality services to our agency customers is our priority. As we improve our service ticket handoffs, clarify expectations and processes, and equip our technology professionals with the tools they need to best serve the customer, we are creating a more positive end-to-end customer experience across all channels.

OIT assesses service excellence using a widely adopted best practice measurement—Customer Service Index. It looks at multiple measurements covering satisfaction, delivery, and performance. We measure it monthly, which enables us to view our performance on a detailed level, including how we perform for each of our agency customers.

Strategies & Success Metrics

Value Proposition
Through innovative processes and a high level of commitment for service delivery, we provide the technology solutions that meet our customers needs.

OIT VALUE
SERVICE

Serving the people of Colorado. Intentionally and generously serving others for a better Colorado.

Vendor Issue Resolution Management
The Vendor Issue Resolution Management process will provide customers with a single point of contact for assistance with the resolution of OIT-managed vendor related issues. Additionally, the Vendor Relationship Manager will:

1. Manage issues from initial identification through to successful remediation.
2. Provide ongoing resolution progress and feedback.
3. Identify opportunities for process improvement of recurring vendor related issues.

Cost Benefit Analysis
Cost benefit analysis is a systematic approach to estimating the strengths and weaknesses of projects and initiatives. It is used to determine options that provide the best approach to achieve benefits while preserving savings. To achieve this we will:

1. Incorporate cost benefit analysis as an integral part of the business case for new projects. Including it into the project gating process will ensure that decision makers will have improved knowledge in order to make optimal decisions.
2. Utilize our research center subscription to gather information and ensure the most current data and best practices are used in this process.

Billing Transparency and Accuracy
Billing transparency provides customers with an understanding of what they are being billed for and also allows them to see and understand the levels of service that drives their billing higher or lower. This provides customers with the information they need for more effective decision making and control of the level of service for their needs. We will add even more transparency into our processes by:

1. Utilizing our ITFM (Information Technology Financial Management) application to provide customers with high level and drilled down information to view and research their common policy billing. This application will also allow us to show customers real time common policy billing so they can plan for true up in advance, or use the information to scale back or add to their utilization as needed.
2. Deploying a rate calculator and new Inter-Agency process so customers can see consistent rates applied to IAs and understand what is included.
3. Continuing to train customers on our new telecom rate methodology and how to research their voice and data services bills so they can make decisions regarding line cancellation or expansion of services requested.

Customer Satisfaction & Delivery
Through defined service level commitments, self-help tools, and technology, we strive to improve customer service and provide cutting edge support to our customers.

Service Level Commitments
Every three years, with an option to make annual amendments, OIT collaborates with our agency customers to determine the level of service they can expect to receive. The resulting agency-specific Service Level Commitments (SLC) define the quality and availability of our services and the responsibilities of both parties. For example, each customer can expect OIT to:

1. Maintain a Service Desk Customer Satisfaction level of 95% or greater.
2. Maintain major incident/incident level response for services agreed upon in the SLC.

Improved Resolution Channels for Customers
Helping the customer answer their questions and resolve problems quickly is OIT's goal. At its core, this means using workflow management systems to seamlessly handle incidents, service requests, problems, and changes. It allows for proactive functionality to continuously improve service delivery and includes customer-accessible functions such as:

1. Dynamic access to self-help information, *intelligent* virtual assistants that guide customers to answers and resolutions, and self-diagnostics tools that can identify a customer's need for assistance sometimes before they realize the need themselves.
2. Central repository for all service, system, and support knowledge.
3. Develop project performance criteria to rate how well OIT delivers project services.
4. Maintain a project health index level of 90% or greater.

WIG 2

Securing Colorado Through Innovation

Increase the State of Colorado's external security rating by 50 points for an increase from 530 to 580 by June 30, 2019.

OIT is responsible for the state's information security governance, architecture, risk, and compliance, as well as provisioning user accounts and overseeing day-to-day security operations. We strive to preserve the confidentiality, integrity, and availability of state and citizen data.

In FY19, we will continue our journey of increased cybersecurity focus on system hardening for preventing attacks. We have also set the aggressive goal of increasing the State of Colorado's external security rating by 50 points; this is generated from an objective external analysis of Colorado's risk posture and is derived from multiple data points. This rating is similar to how an individual credit score indicates credit risk.

Strategies & Success Metrics

Create a Culture of Information Security

Information security is a shared responsibility—it belongs not only to security professionals, but to all those working within an organization, large or small. We have designed an educational security awareness program that gives state employees information they need to avoid potential security threats.

Effective and Efficient Security and Practices

Effective security risk management processes ensure that all security risks are tracked so they can be considered together to assess overall risk. Efficient incident response requires a well orchestrated plan and a well practiced team. To do this, we will:

1. Conduct security assessments for critical and essential applications we manage on behalf of our agency customers. In FY19, we will conduct ten security assessments.
2. Conduct two formal collaborative cybersecurity tabletop response exercises and one technical response exercise annually.

Educational Campaigns

Equipping employees with usable information security knowledge is often a challenging task. However, providing our personnel with the information they need is an important component in ensuring the protection of state assets. In FY19, we will seek opportunities to provide state employees with tools they can use in their daily jobs to promote security best practices. To do this we will:

1. Implement the Security Awards Program within the Office of Information Security to recognize employees demonstrating good security practices with small tokens of recognition. A minimum of 30 employees will be recognized in FY19.
2. Expand "Security Weekly", a weekly dial-in discussion to address broad security questions and topics submitted online. The questions will be solicited through an online forum and answered each month.
3. Implement an outreach program using various communication media (e.g., written, video, etc.). During the course of FY19, we will create and publish a minimum of four communications, blog posts, and/or videos.
4. Conduct classroom-based technical security training aimed at equipping technical resources with security knowledge to help them perform their roles more securely. Four of these training sessions will be provided in FY19.

Pre-Hardening of Systems and Role-Based Access

Before introducing new hardware (e.g., workstations, servers, etc.) into the environment, OIT pre-hardens the operating system to remove certain pre-installed tools and utilities that could potentially provide a means of unauthorized access to our systems. Applying Role-Based Access across our environment will reduce privileges to no more than is necessary to perform the exact function of the job. Eliminating unnecessary privileged access reduces the risk of improper access to data and systems.

Pre-hardened Systems and Agency-Level Containers

A collection of security settings will be predefined for each agency to ensure that any new systems will be deployed with all of those settings in place. OIT will:

1. Define a framework for pre-hardening desktop equipment and all virtual servers for each agency.
2. Monitor and assess compliance with our configuration hardening standards. Teams will work to improve compliance by 10 percent during FY19 to ensure agency-level hardening.

Role-Based Access

OIT's internal and statewide Access Control policies require that access to the state's information systems be restricted to just those who need access to perform their jobs using the principle of least privilege. This means we will:

1. Increase efforts around Two-Factor Privileged Authentication. All privileged access will utilize Two-Factor Authentication (2FA) by the end of FY19.
2. Implement a strategy for Privileged Access Management in FY19.
3. Strengthen the strategy around review of elevated permissions for core applications.

BE ON THE LOOKOUT!

COLORADO OFFICE OF INFORMATION SECURITY

The *"Be On The Lookout"* rewards program recognize sthose who demonstrate good security practices. Award recipients will receive this pin.

OIT VALUE INTEGRITY

Demonstrating credibility and sincerity in our work. Inspiring confidence and trust in the Governor's Office of Information Technology through our personal conduct.

92% of rural households have access to broadband by December 31, 2019.

The Broadband Office was created to lead a statewide effort to expand broadband coverage and capacity in Colorado. By December 31, 2020, the objective is to achieve 100% rural access to broadband. Access to affordable and reliable broadband service is critical to advancing Colorado's economic growth and competitiveness. High-speed broadband service helps create new jobs and attract new industries, expands markets for new and existing businesses, enables Coloradans to better access educational opportunities and resources, facilitates delivery of health care services, and helps protect the public's safety. Greater deployment of broadband services will improve long-term quality of life for many Coloradans.

Strategies & Success Metrics

Broadband Availability

With the passage of SB18-002 providing funding to the Broadband Board and associated Fund for five years, the Broadband Office will prioritize working with the Board to ensure grants for last mile projects are targeting areas with the greatest need. We will continue to collaborate to increase broadband availability by working with broadband providers, community members, and other key stakeholders to assess needs/requirements, capabilities, map coverage, drive grant opportunities, and support county and regional representatives in developing and implementing active broadband plans. Bolstering broadband coverage across Colorado will provide our state's rural areas with improved opportunities across multiple areas, including economic development, education, health care, transportation, and public safety.

Critical Communications Program

The Broadband Office, in conjunction with multiple state agencies, local organizations and other critical communications stakeholders, is developing a strategic plan to address the state's long-term communications infrastructure needs. This is an ongoing effort that will help identify the specific communications needs, both wired and wireless, and support public and private stakeholders in identifying ways to incentivize investment throughout the state that will capitalize on economies-of-scale through collaborative infrastructure. The strategic plan will be reviewed with the Governor's Office in September 2018.

Increase Connectivity and Affordability of K-12 Broadband Services through E-rate

Building upon the state's partnership efforts with the EducationSuperHighway (ESH), OIT will continue to maximize the impact of the federal E-rate program to ensure every school in Colorado meets national connectivity and affordability standards. In 2018, the federal government is expected to revise the standard for school connectivity to 1Mb per student. We will continue to focus on working with local school districts to identify key issues, develop solutions, and support them in the application process. We will:

- Work with EducationSuperHighway and local school districts to increase the number of applications for infrastructure or aggregated services under the new E-rate program.
- Work towards the goal of every school meeting national standards for capacity and affordability.

OIT VALUE
TEAMWORK

Collaboratively working together at OIT and across the state. Working cooperatively with others and engaging in constructive dialogue to overcome difficult challenges.

Members of the Colorado Broadband Office:
Ed Mills, Kimberleigh Coleman Madsen, Anthony Neal-Graves,
Sarah Smith, Brian Shepherd, Megan Gernert

WIG 3

Ensure all Coloradans have access to reliable, cost-effective Broadband internet

95% of critical projects submitted through OIT are reviewed as a potential use case for emerging technology to enhance the citizen digital experience by June 30, 2019.

In addition to providing support to executive branch agencies, OIT is responsible for promoting a robust IT ecosystem throughout Colorado in collaboration with key stakeholders. This aggressive goal focuses on driving the citizen experience by advancing the state's adoption of emerging technology including Artificial Intelligence, Distributed Ledger Technology, Machine Learning, and Mobile Accessibility. We also contribute to growing IT economic development by partnering with local communities to attract new tech companies to our community, developing young tech talent, and fostering relationships with local technology companies to strengthen their commitment to the state. We look at strengthening technology in the state through an advanced digital transformation program.

WIG 4 Strategies & Success Metrics

Advancing the State Through Emerging Technology

Though the definition of a customer in the public and private sector are different, there is a common expectation - that is a modern and seamless experience in their interactions. The use of emerging technologies in state government is rooted towards improving the citizen or user experience and has two layers of technology implementation. First is improving internal operations through the use of technology. This includes replacing legacy systems with cloud platforms and using machine learning around the wealth of data stored in government systems to improve operations.

The second aspect is using technology to improve the citizen experience. The citizen experience is not just about design, but also understanding "where" users are and how they might gain access to state information—

whether through online portals to renew a driver license, mobile applications to apply for benefits, simple text-based chatbot services to answer routine questions, comprehensive/contextual search, or information surfacing in third party apps due to relationships the state has built with those third parties. It is core to enhancing the relationship, visibility and accessibility of the massive range of state services to those we are charged with serving. The possibilities are exciting! Please see the section 8 for more information about the specific technologies OIT is considering.

A. Agency-Centered Focus

Everyday we are exploring uses of emerging technology to enhance state operations. We will:

- Research uses of distributed ledger technology to safely secure data, prevent fraud, and reduce costs by eliminating redundancies.
- Explore usage of Artificial Intelligence and Machine Learning to improve efficiency of our agency customers by enhancing operations tailored to a specific need.

B. Citizen-Centric Focus

Digital advancement includes looking at existing product and services and, under a user experience lens, transforming them to provide the best possible customer experience and satisfaction. We will:

- Create a myColorado mobile application for a seamless user experience interaction with state agencies.
- Ensure all applications are developed with mobile accessibility as a requirement.
- Place a focus on improving technology accessibility for the blind and visually impaired (BVI) community.
- Explore Artificial Intelligence and Machine Learning to respond to inquiries via chatbot technology.

- Provide a Smart Directory with enhanced search results and customized experience by standardizing and indexing the state's online footprint and then using that structured media to provide contextual search returns in a mobile-friendly pathway.
- Communicate User Experience standards and practices for sites/apps by standardizing language and familiarity (e.g., training and resources) with user experience design principles.

C. IT Economic Development

One of the overarching goals of OIT is to support IT economic development for the state. This entails promoting Colorado as an ideal headquarters location for technology companies, attracting technology companies to relocate and/or expand here, and fostering relationships with technology companies already in Colorado to support their growth as well as strengthen their commitment to our state. In these efforts, OIT collaborates and works closely with the Colorado Office of Economic Development and International Trade (OEDIT) on its execution of the state's strategic economic development plan.

Business Retention and Expansion

OIT focuses on the growth and retention of the state's IT industry through multiple activities designed to raise the profile of Colorado as a highly desirable place for tech companies to grow. We provide information and resources highlighting the benefits that make Colorado a great place for IT companies to do business. These activities will be supported by:

- Supporting and/or participating in at least one FY19 economic development trip.
- Promoting Colorado as a business-friendly environment for the tech industry by active board participation and/or representation on technology associations and IT-focused networking organizations.
- Creating a program that utilizes OIT's greatest asset - its people - to "Talk About Tech" and promote the state of Colorado as tech talent mecca and a leader in IT.

Tech Talent

As job opportunities in the IT sector grow within Colorado, OIT recognizes the need to cultivate the skills and talent to meet this demand within our communities. OIT is championing efforts to further the development of technology skills for Coloradans by participating in STEM (Science, Technology, Engineering and Math) activities initiated by school programs, such as CareerWise, TalentFOUND, and CareersConnect with Denver Public Schools.

OIT VALUE
RESPECT

Appreciating and acknowledging the role, diversity, and contribution of those with whom we work. Consistently conducting ourselves in a way that shows regard and thoughtfulness to others.

WIG 4
Strengthening Colorado's Technology Landscape

WIG 5

Advancing Employee Support and Collaboration to Drive Customer Service Improvement to Deliver Superior Performance

To foster a loyal, collaborative and customer-centric culture, increase employee participation in the OIT+ digital community by 25% (from 253 to 316) by June 30, 2019. Engagement communities drive employee retention, involvement and knowledge-sharing across OIT resulting in better customer satisfaction.

At OIT, we foster an environment where employees take pride in delivering critical services that impact our entire state. We believe that together we can create an engaged, empowered, and energized culture where all employees feel connected to each other and to our work, leading to better outcomes for our customers.

WIG 5 Strategies & Success Metrics

A. Internal Customer Service
"There's a remarkably close and consistent link between how internal customers are treated and how external customers perceive the quality of your organization's services. A commitment to serve internal customers invariably shows itself to external customers. It's almost impossible to provide good external service if your organization is not providing good internal service."
                                            -Benjamin Schneider, University of Maryland

At OIT, we believe that a significant factor in our ability to deliver outstanding external customer service is, without question, great internal customer service. It is with this in mind that in FY19 and beyond, we will strive to continually improve our internal customer service and thus, continually improve our external customer service. As OIT employees, we will:

- Set clear expectations about what internal customers can reasonably expect.
- Always keep our internal customers informed on project progress.
- Get to know our teammates including those that work remotely.
- Understand the "big picture" of how the whole organization works and how we can contribute to each other for our combined success.
- Keep our calendars updated so others can easily schedule time with us as needed.
- Always close the loop, ensuring our customer knows we have received a request and it will be worked on.
- Make our co-workers feel valued through our Rewards & Recognition Program as well as through our normal day-to-day interactions.
- Develop a positive attitude doing whatever it takes to get the job done - and done right.
- Solve problems. We won't procrastinate but will develop a plan of attack and handle the situation as quickly and efficiently as possible.
- We will identify and anticipate the needs of both our internal and external customers by communicating regularly.

OIT VALUE
COURAGE

Pushing boundaries to foster positive change. Proactively and positively pursuing the transformations necessary to address tough issues and drive innovation.

B. Growth and Development
We desire to nurture a learning culture by providing challenging assignments that make a positive impact on our customers, provide a sense of mission and purpose, and provide for opportunities to collaborate with stimulating colleagues. We believe that successful people see learning as a continual journey, not something they reach. With this in mind, we will undertake the following efforts to continue to grow and develop with a mindset of achieving our fullest potential:

- Develop new skills and abilities through internal training offerings and Sandwich and Substance sessions.
- Develop and strengthen leadership skills through internal and external training and use of the Franklin Covey Trainer courses.
- Continue to utilize the Emotional Intelligence Assessment and Training for our leadership team; we believe by taking a close look at our individual style and how others view it, we can better understand what areas need to be developed.
- Provide Generational Awareness Training; you have to know who you are attempting to lead to better understand their needs, wants, and capabilities.
- Help team members visualize what other opportunities are available to them and what it takes to get there through clear Succession Planning and Mentorship opportunities that meet the business needs.
- Help team members develop in their careers by better understanding and identifying their career goals through Individual Development Plans (IDPs).
- Provide opportunities to share talent across teams through cross-functional assignments or collaboration opportunities to build OIT's depth and strength.
- Create a culture where the team embraces the value of personal improvement.

Value Employees Through Rewards and Recognition

OIT's robust Rewards & Recognition Program is designed to encourage and reward behaviors that reflect OIT's values, mission, and vision. The Program is also designed to help employees feel a sense of personal accomplishment at work and a sense that what they do each and every day and how they accomplish it is important to the vision and mission of OIT. These efforts include:

- Public recognition of employees in town halls and open mic sessions.
- ELT Spot Recognition/Skip Level Recognition.
- Empowering and encouraging employees to recognize one another's achievements.
- Recognizing leadership attributes with the Pay-It-Forward Leadership Coin program.
- Focusing on the three-legged stool of Recognition: Informal (peer-to-peer), Formal (significant awards for significant achievements), and Day-to-Day (supervisor driven).

INITIATIVES

In addition to our Wildly Important Goal activities, we are also leading a number of enterprise projects that will maximize state resources and provide agencies with tools to enhance end-user support to Coloradans. From stabilization of mission-critical infrastructure consistently across the state to pushing ahead to next generation solutions, we aim to leave a legacy of lasting, well-constructed foundations for decades to come. Though there are hundreds of projects OIT is managing at any one time, the OIT-led enterprise initiatives listed here are key to our overall strategic direction.

Next Generation Colorado

Next Generation Colorado is an initiative to develop the automation and operations to support quick service delivery, transparent cost modeling, scalability on-demand, high availability, and agility of workloads across the enterprise. This effort will also include data center modernization, operational management, and hybrid cloud solutioning to span private and public IaaS models. This is a capital funded initiative from an FY18 decision item (DI). Half of the funding was approved for use in FY19, and will support cloud readiness and sustainability, security improvements, and data center repairs. The second half of the funding is expected to be approved for use starting in FY20, and will be used to continue our FY19 work as well as automation and service efficiencies.

HRWorks (Human Resource Information System)

The Department of Personnel & Administration (DPA) and OIT continue their work to develop an enterprise Human Resource Information System (HRIS). The HRWorks project is a collaborative effort to consolidate approximately 80 disparate, outdated, and redundant systems into a modern, seamless solution that will eventually integrate with CORE, the state's financial system of record. Modules in the new HRIS, which is expected to go live in FY19, will include central employee demographics repository, employee performance management, onboarding, payroll, and timekeeping.

Two-factor Authentication

OIT will enable two-factor authentication (2FA) to add an extra layer of security to the verification process and thus reduce risk of data breaches and meet data privacy requirements. OIT's internal and statewide Access Control policies require that access to the state's information systems be restricted to just those who need access to perform their jobs, using the principle of least privilege. Eighty percent of all privileged access will utilize two-factor authentication by the end of FY18, and with new funding from Secure Colorado beginning FY19, we will continue deployment.

"The Google Team continues to push towards using new and emerging products and services to help promote an environment of innovation. The tools we provide users within the executive branch continue to increase overall security and productivity."

- Lilo Santos, Service Delivery Supervisor

MISSION-CRITICAL FOUNDATION

These initiatives are vital to the functioning of normal government services. Delay in pursuing the initiatives will create a need for future effort and resources that surpass those needed if the initiatives are carried out proactively.

Mainframe Decommission

As agencies move to more cloud based solutions OIT is working to retire the mainframe; applications, integration and data sets must be identified and planned for migration or retirement, including determining agency costs. Agencies that will be impacted are the Departments of Agriculture, Corrections, Health Care Policy & Financing, Human Services, Labor & Employment, Natural Resources, Public Health & Environment, Personnel & Administration, Public Safety, Regulatory Agencies, Revenue, and Transportation. The target date for retirement is December 2019.

Agency Security Assessment

The Security Team will conduct agency-specific assessments to determine what risks and threats our customers may be facing and ensure that the security program is aligned and designed to mitigate security risk to the business objectives. The effort includes understanding the agencies' specific nuances and business objectives, ensuring that critical and essential systems match OIT's inventory, and that agency risks are understood. The assessment will highlight specific areas of risk-reduction for each agency, and we will create roadmaps for reducing those risks.

Telecom Enhancements

To keep our phone technology current and consistent, OIT's Telecommunications Team will continue to migrate agencies from their stand alone Cisco VoIP systems to the enterprise Managed IP Communications (MIPC) voice solution. The multi-year initiative is nearing completion, the last four implementations will occur as the current stand-alone Cisco VoIP system approaches end of life in each of the agencies.

Identity Management

OIT is establishing One Identity, a centralized system for secure access, authentication, authorization, and user account administration for all systems managed or supported by OIT. In addition to significantly speeding up the delivery of access control and on-boarding requests, we expect a reduction in the risks and costs associated with duplicative accounts. This multi-year effort is expected to be complete by February 2019.

Firewall Upgrades

OIT will continue upgrading the disparate agency-specific firewalls to the statewide standard Next Generation Firewall. These firewall upgrades will increase security through web filtering, application inspection, and intrusion protection systems, and we expect to see significant cost savings from an enterprise licensing agreement.

ADVANCING TECHNOLOGY

These initiatives provide new yet fundamental service to agencies. Heightened end-user technical expectations are driving service providers to strengthen system functionality. Delay in implementing these new services in the coming years would exacerbate major inefficiencies and significantly impair the state from meeting citizen expectations.

INITIATIVES

myColorado

OIT is leading the effort to create a mobile application that will deliver current and future agency services on a modern and mobile platform. The myColorado app will give residents, visitors, and businesses easy access to services, information, resources and support provided by multiple state agencies in a single interface accessible anytime, anywhere. The solution will provide easy integration for agencies wanting to add a service to the app. It will provide users a protected entry point into state services and once they establish a profile, it will reduce the need to re-enter that data. Phase 1 will be the launch of the app with the initial services of driver license and vehicle registration renewal, and the ability to store a digital copy of a vehicle insurance card. It will also include the ability for the Governor's Office to provide direct communication to app users. Future phases will include the integration of services provided by multiple state agencies.

Technology Accessibility Assessment, Testing, and Remediation

OIT has a statutory obligation to work with executive branch agencies to improve technology access to users with disabilities, including those who are blind and/or visually impaired (see C.R.S. 24-85-101 et seq). To fulfill our duty to improve these services, OIT must provide tools, methods, and resources to adequately assess, remediate, and maintain the systems for their ability to provide proper accessibility (in conformance to industry standards). This initiative will establish project governance, application testing requirements, standards, and training to achieve the goals and mandates of this statute. The initiative is schedule for implementation beginning FY19 and will be ongoing thereafter.

Salesforce Strategic Initiatives

Salesforce is an enterprise cloud platform that provides multi-tenant services including platform as a service and software as a service. The platform is a collection of application development, deployment and hosting services which allows customers the ability to purchase, use and customize Salesforce deployed applications or use platform capabilities to develop their own applications. It includes the Salesforce Platform, a multi-tenant platform that allows each organization to use a set of shared resources. Organizations share a common codebase and their applications can be customized for their specific needs.

As an OIT provided service, there are several Salesforce Strategic initiatives planned for FY19 to better serve the needs of the state which include: the continued migration of existing agency applications to the new Salesforce UI; implementation of Salesforce DX which allows for continuous delivery and quality controlled releases for Salesforce applications; an enterprise-wide Salesforce Release and Environment procedure to better manage multi tenant environments; a Salesforce Platform System Security Plan and security standards to ensure Salesforce applications meet regulatory and compliance statutes; and a new Salesforce private appexchange to share components and applications across the enterprise to reduce implementation costs associated with Salesforce.

> *"Collaboration is key to success in delivering service and solutions for our customers. At OIT, we have seen time and time again, that partnering across functional areas, leveraging each other's strengths and focusing on common outcomes spurs innovation and yields meaningful results. Our team supporting DOC exemplifies collaboration!"*
>
> *- Dannette Matthis, Deputy Chief Customer Officer*

Privileged Access Management (PAM)

This is an effort to implement a least privilege management solution to oversee enterprise password management over privileged credentials, application password management, session logging, as well as server privilege management to ensure administrator and root security and compliance. The benefits are many and include: a dashboard for operations, management and audit reports; an open standards tool that integrates with ITSM, IDM, Active Directory, etc.; automatic discovery of systems with privileged access; automating the creation of role-based access; assisting in role definition/creation; and secure employee exit deprovisioning which currently relies on manual processes creating security risks and the loss of assets. This effort is scheduled for completion in FY19.

Secure Office Print Ecosystem (SOPE)

OIT is working with the Department of Personnel & Administration (DPA) on the Secure Office Print Ecosystem (SOPE) project to secure the state's multifunction printers against hackers. This project involves the approximately 656 devices managed by DPA's Multifunction Printer Program, which are distributed in sixteen executive branch agencies. As members of the SOPE project, OIT's security and deskside teams are helping to upgrade firmware and secure the printer platform and its entry points into the state network. OIT is also providing project management services. DPA is incurring all costs associated with this managed print service solution. Implementation for all agencies is expected to be complete by March 31, 2019.

NEXT GENERATION SOLUTIONS

OIT will propose next generation solutions that allow OIT to discover new and innovative services for state agencies, increase state employee efficiency, and improve service to Colorado residents and state visitors.

Identity Analytics

Incorporate identity analytics into our security and big data strategy using machine learning and advanced behavioral analytics that consumes and analyzes data and our capabilities to detect and respond to risk timely, help with digital change, increase agility, and enable higher levels of automation. This is a multi-year initiative with implementation being planned for FY20-22.

OIT AGENCY ROADMAPS

Beginning in April 2015, OIT collaborated with our agency customers to develop 5-Year IT Plans to define their technology needs and priorities, provide insight into IT funding needs and gaps, and allow business goals and initiatives to drive technology solutions. Although customer-specific, the Plans also allow OIT to manage IT from the entire state enterprise. For example, the Plans define technology targets for equipment acquisition and refresh which are aligned with OIT standards and funding, identify technology needs across agencies which are then managed as one purchase to leverage larger buying power, and identify system replacements for which IT resources (staff and funding) are better managed.

The following is a sampling of the initiatives defined in the 5-Year IT Plans.

INITIATIVES

Offices of the Governor (GOV)
includes the Governor's Office, Colorado Energy Office, the Office of State Planning & Budgeting, the Office of Economic Development & International Trade, and the Office of Information Technology

- Governor's Office - Modernization of Salesforce application suite
- Results First Database
- Colorado Energy Office Weatherization Assistance Program Application Modernization - Salesforce
- Colorado Energy Office Portfolio Management- Salesforce
- Wireless Service Buildout for the Capitol and Executive Residence

Colorado Department of Transportation (CDOT)
- Highway Safety Program
- I-70 Viaduct Project
- Program/Cash Management
- Evolution of Cloud Services and CDOT Technologies

Colorado Department of Public Health & Environment (CDPHE)
- Colorado Environmental Online System (CEOS)
- Electronic Birth Systems Rewrite
- Health Facilities System Rewrite
- Water Quality Control Division - Application Modernization
- Emergency Management & Trauma Services

Colorado Department of Public Safety (CDPS)
- CAD Reprocurement
- Colorado Crime Information Center (CCIC) Reprocurement
- Integration with the District Attorney's e-Discovery System
- Community Corrections Information and Billing (CCIB) System Replacement
- Division of Homeland Security and Emergency Management (DHSEM) Mitigation and Recovery Section (MARS)

Colorado Department of Agriculture (CDA)
- AgLicense
- Fruit and Vegetable Electronic Certificates
- Colorado MarketMaker
- Produce Safety Rule Farm Inventory Database
- Brand Horse Permanent Travel Card

Colorado Department of Human Services (CDHS)
- CHATS Modernization Project
- Joint-Agency Interoperability Project
- Trails Modernization Project
- Data Integration Initiative
- Division of Youth Services (DYS) Desktop Education Initiative

Colorado Department of Labor & Employment (CDLE)
- Connecting Colorado Modernization
- Oil and Public Safety Application Modernization
- Migration to Enterprise Hosting Environment
- Unemployment Insurance Application Modernization

Department of Local Affairs (DOLA)
- Compliance Documents for Oracle Community Development Block Grant (CDBG) Database
- Document Retention System
- Division of Local Government

Department of Corrections (DOC)
- DeCORuM Phases II, III, and IV
- Department of Education Chromebook Deployment
- ITX Facility Photo Imaging Software Upgrade
- Business Applications Refactoring
- Business Applications Modernization

Department of Personnel & Administration (DPA)
- HRWorks
- CORE Upgrade (CORE Phase II)
- Consolidation of IT Systems and Architecture
- Enterprise Case Management - State Personnel Board
- South Campus Infrastructure Refresh

AGENCY INITIATIVES

Department of Military & Veterans Affairs (DMVA)
- HRWorks efficiencies and integrations
- Infrastructure Refresh

Department of Natural Resources (DNR)
- Arkansas River Decision Support System (ArkDSS) Admin and Accounting Tools
- CORIS - NxGen Development
- Integrated Parks and Wildlife System (iPAWS) - Phase II
- MyDWR Well Permitting Forms/ECommerce
- Consolidate Aquatic Animal Health (AAHL2), Aquatic Data Management System (ADAMAS), CREEL, and TRANS 6 Applications

Department of Revenue (DOR)
- Decommission CSTARS and Driver License System
- DRIVES Phase 2 (Titles & Registration)
- Tumbleweed Replacement
- Workstation Refreshes
- Enterprise Legislative Management System (ELMS)

Department of Regulatory Agencies (DORA)
- Banking Information Database Modernization
- eLicensing Solutions across multiple divisions
- Insurance Paperless Initiative
- Intranet Modernization
- Public Utilities Commission Portal Replacement

Health Care Policy and Financing (HCPF)
- Google / Microsoft O365 Roadmap Development
- Member Contact Center (MCC) Workforce Management (new solution)
- Two-factor Authentication
- Single Sign-On and Salesforce Integrations HCPF Orgs
- Master Patient Index

History Colorado (HC)
- Business Process and Point of Sales Solutions
- Campus IT Infrastructure Upgrade/Life Safety Upgrade
- Update from Windows Server 2003 to Windows Server 2008

Artificial Intelligence (AI) and Machine Learning (ML)

Artificial Intelligence is the theory and development of computer systems able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages. The State of Colorado will see innovations using Artificial Intelligence in our law enforcement agencies to help solve crimes, recover stolen vehicles, and provide a more active role in protecting the citizen. The Chatbot is another great AI innovation that would allow agencies to provide a fully scalable customer service and engage with more Coloradans without allocating additional personnel.
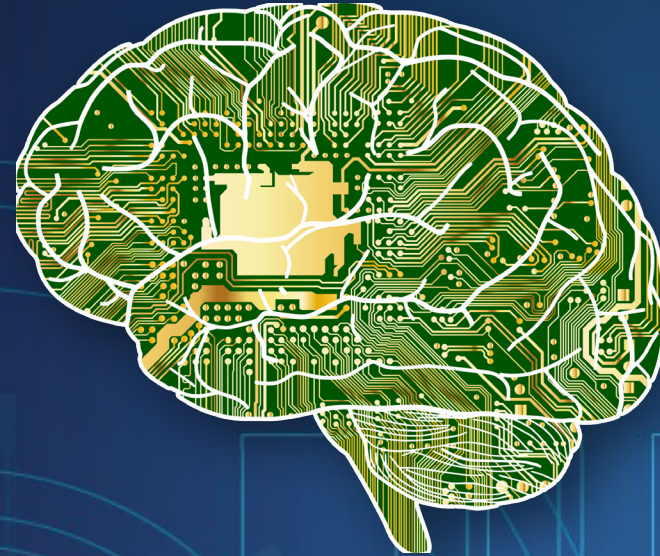
Mobile Accessibility

Mobile Accessibility refers to making applications and websites easily accessible to people with disabilities when they are using mobile phones and other devices including iPads, smartwatches and more. As we design technical solutions for our customers or ourself, we will strive to include mobile accessibility so that those with a disability can have an experience equivalent to that of a person without a disability. Mobile accessibility is critical to reaching all audiences and an excellent way to improve overall user experience.

EMERGING TECHNOLOGIES
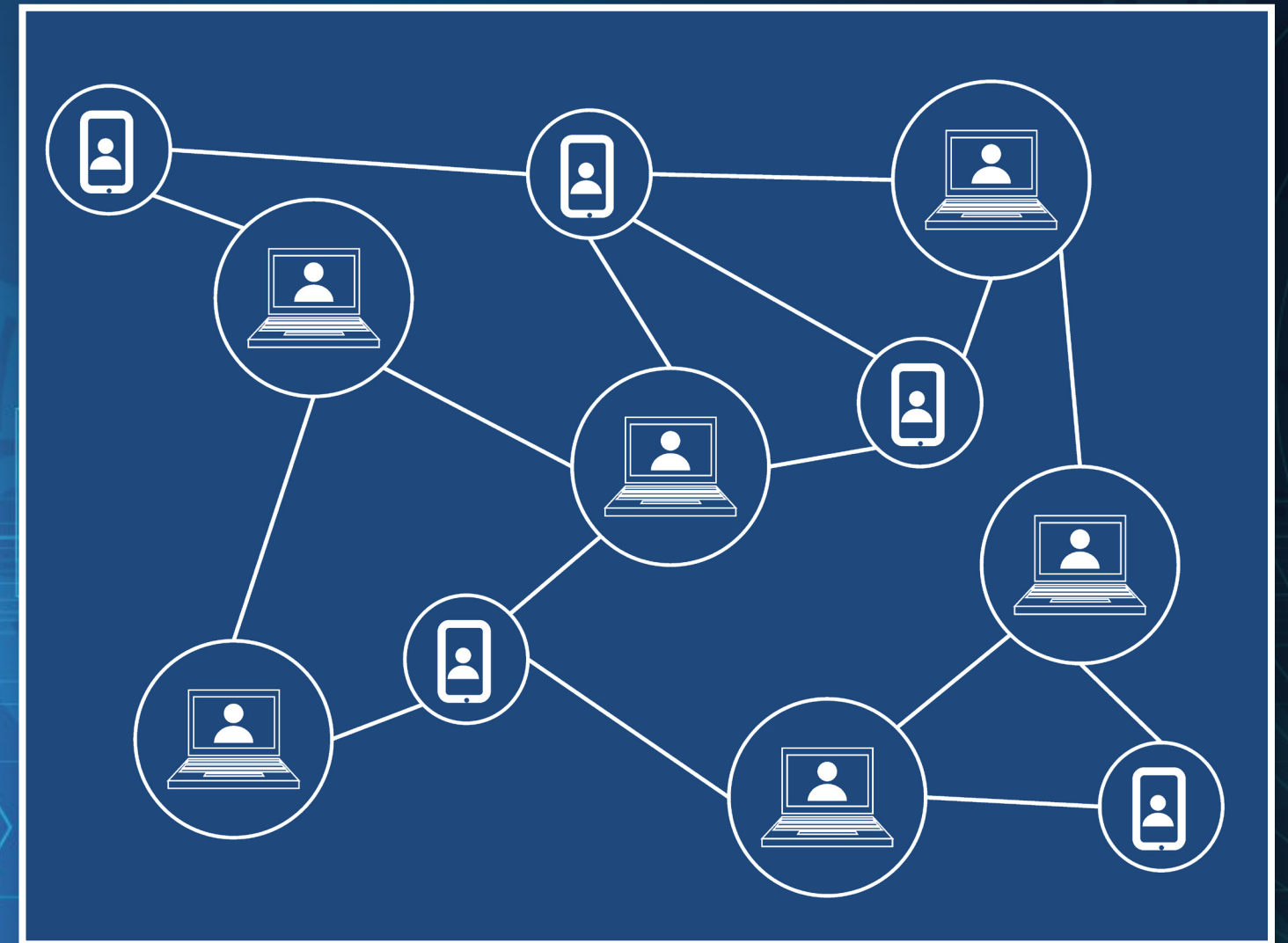
Blockchain

Blockchain entered the scene in 2007 as the digital currency known as bitcoin and was used to facilitate payments. Blockchain technology stores data in a chain of computers (decentralized ledger), with each chain holding different pieces and which must approve a transaction before it can be verified and recorded. With this type of dependency, the ledgers are virtually unalterable and easy to track. Until recently, blockchain has not been used outside of the financial world. However, states—including Colorado—are now seeing good use cases for blockchain and related technologies to help manage data security, among other things. The Colorado General Assembly passed legislation (SB18-086) to allow OIT to explore the costs of blockchain technology and how it might be used to help protect the vast amount of data entrusted to us, solve digital identity-related problems, and to ensure the integrity of distributed security workloads. This bill also directs the Colorado Department of State to consider using blockchain for business licensing records. The usage is so compelling that on May 2, 2018, Governor Hickenlooper issued Executive Order B 2018 002 to create the Council for the Advancement of Blockchain Technology Use, which is housed in the Office of Economic Development & Trade and administered in partnership with OIT. The Council has been charged with recommending a comprehensive legal framework to support blockchain technology and the potential applications for its use.

WIG #1
Delivering Effective Solutions and Reliable Customer Service

IPAWS, AgLicense, UIM, Trails, LIMS, agency infrastructure refreshes; stabilized others such as DeCORuM and various EHR initiatives.

Streamlined and modified the project lifecycle

Maintained meaningful customer relationships in the midst of continual change and transformation, and high customer satisfaction scores while improving first call resolution and mean time to resolve.

Expanded 24x7 major incident service to all Agencies.

Delivered Year in Review for each agency using a standard format including SLC compliance metrics.

Incorporate Agile, change management and support model principles.

WIG #2
Securing Colorado Through Innovation

A Governance, Risk, and Compliance (GRC) tool was implemented to aid in fulfilling audit requests, tracking security assessments and remediation efforts, and to ensure important compliance data is maintained in a single location and available when needed.

The Risk and Compliance team worked with agencies to complete the Corrective Action Plans and the System Security Report for the IRS systems and prepared for the IRS onsite audit that occurred April 2018.

A Security Analytics and Endpoint Detection and Response toolset was fully implemented across the state. This purchase was enabled through a FY17 Decision Item, and will increase visibility and protection against cybersecurity incidents.

Two-factor authentication was enabled for remote access.

Multiple simulated security incidents were practiced through tabletop exercises, involving partners such as the Colorado National Guard, Regis University, and other state and local responders.

WIG #3
Ensure All Coloradans Have Access to Reliable, Cost-Effective Broadband Internet

Senate Bill 18-002 passed which allocates approximately $115 million through 2023 to the Broadband Fund for grants for unserved areas of the state.

Completed the evaluation process regarding the FirstNet proposed plan and provided the Governor with a recommendation as to whether to opt-in or out of the plan.

One of six states in the initial implementation of the national verifier program for the Lifeline program. This is the first step towards implementing new program rules that permit low-income individuals to qualify for a $10/month subsidy towards their broadband bill.

94% of Colorado school districts have access to internet capacity that meet national standards.

Received approval to move forward on state tower project as part of overall telecommunications infrastructure plan in partnership with CDOT.

OIT embarked for the first time into Public Cloud based Infrastructure as a Service working with both AWS and Google.

Completed the Education Chromebook Project for the Department of Corrections.

WIG #4
Strengthening Colorado's Technology Landscape

OIT selected a partner to facilitate digital signature across the state. This key technology will offer a more digital experience for Colorado residents.

The Digital Trunked Radio System Team built and replaced three emergency communication towers.

The State of Colorado and Theresa Montano, OIT's Technology Accessibility Coordinator and Solution Architect, were honored at Blind Institute of Technology's annual Gala for her work to improve technology accessibility for the blind and visually impaired (BVI) community.

Completed processing statewide enterprise GIS data sets for land ownership and address points.

The Learning & Development program was improved with more offerings and a focus on achieving strategic results tied directly to job requirements.

OIT achieved a 72% overall employee engagement score and had 77% participation in the 2017 Statewide Employee Engagement Survey.

WIG #5
Advancing a Culture of Employee Support and Collaboration

Talent Acquisition processes were improved by 20%, decreasing time to fill to meet our critical business needs.

Heard directly from employees through strategy sessions and focus groups, with the mindset of developing initiatives that provide employees the support they need to be successful.

28% of OIT employees joined OIT+ Community within the first three months from launch, and participation is steadily increasing (34% as of May 22, 2018).

ACCOMPLISHMENTS FROM FY18

Many of OIT's projects and initiatives span several years and build upon past achievements. Thus, even as we look forward to the next fiscal year, it's important to look back at some of the many accomplishments attained by OIT in FY18!

OUR CUSTOMERS

Our Agency Customers

OIT is the enterprise provider of information technology and communications services for the following executive branch agencies.

COLORADO Department of Agriculture

COLORADO Department of Human Services

COLORADO Department of Natural Resources

COLORADO Department of Local Affairs

COLORADO Department of Labor and Employment

COLORADO Department of Corrections

COLORADO Department of Revenue

COLORADO Department of Regulatory Agencies

COLORADO Department of Transportation

COLORADO Department of Public Health & Environment

COLORADO Department of Personnel & Administration

COLORADO Department of Health Care Policy & Financing

COLORADO Department of Public Safety

COLORADO Department of Military and Veterans Affairs

HISTORY Colorado

COLORADO Gov. John Hickenlooper

Our Statewide Security Customers

Through our Office of Information Security and the Chief Information Security Officer, our customers are all state agencies in the executive and judicial branches. Institutions of Higher Education and the Colorado General Assembly are excluded by statute.

Our Public Safety Communications Network Customers

OIT maintains the Public Safety Communications Network, which includes the Digital Trunked Radio System (DTRS). The more than 1,000 state, local, county, federal, and tribal agencies using the network are also our customers.

Our IT Economic Development & Broadband Customers

OIT helps local communities to identify their broadband resources, needs, and gaps, and works with them to find solutions. Additionally, we support the Colorado technology industry by linking companies to supportive networks and providing them with information about state incentives.

Our County Customers

OIT provides varied services to 30,000 county employees in all 64 of Colorado's counties, including security risk and compliance; technical support for CBMS, PEAK, CHATS and Trails; and assistance with computer refreshes.

OUR LEADERSHIP

Brenda Berlin
Chief Financial Officer & Deputy CIO

William Schoeppner
Deputy Chief Strategy Officer

Laura Calder
Deputy Chief Financial Officer

- Budget
- Contracts Finance
- Payroll
- Procurement
- Vendor Services
- Legislative Affairs
- Business Operations
- Strategy
- Performance Management
- Process Transformation
- Process Improvement
- Asset Management
- Vendor Support Resolution

Anthony Neal-Graves
Executive Director
Colorado Broadband Office

Brian Shepherd
Chief Operating Officer
Colorado Broadband Office

- Broadband Strategy
- E-rate

Suma Nallapati
Secretary of Technology &
Chief Information Officer

William Chumley
Chief Customer Officer

Dannette Matthis
Deputy Chief Customer Officer

Ramona Gomoll
Chief People Officer

- Agency IT Directors
- Business Relationships
- Human Resources
- IT EcoSystem & Customer Service Portal
- Major Incident/Change Management
- Project Management & Business Portfolio
- Service Desk

Deborah Blyth
Chief Information Security Officer

- Office of Information Security
- Risk & Compliance
- Security Governance
- Security Architecture Planning & Review

David McCurdy
Chief Technology Officer

Dan Santangelo
Chief Operating Officer & Deputy CTO

Jonathan Gottsegen
Chief Data Officer

- Agency (Business) Applications & Service/Development & Support
- CBMS
- Chief Data Office
- Data Centers
- Database Services
- Deskside Support & Services
- Digital Transformation
- Enterprise Applications & Services
- GIS
- Google Apps for Government
- Mainframe, System & Server Administration
- Network and Voice Services
- Public Safety Communications Network (DTRS)
- Security Operations & Access Control

Brandi Simmons
Chief Communications Officer & PIO

- Agency Communications
- Health IT Communications
- Internal Communications
- Digital Media
- IT Economic Development
- Marketing & Branding
- Media Relations

OIT PLAYBOOK
FY19

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Colorado Governor's Office of
Information Technology