

2019-2020
IOT Strategic Direction



PERFORMANCE

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WELCOME

Dewand Neely
Chief Information
Officer



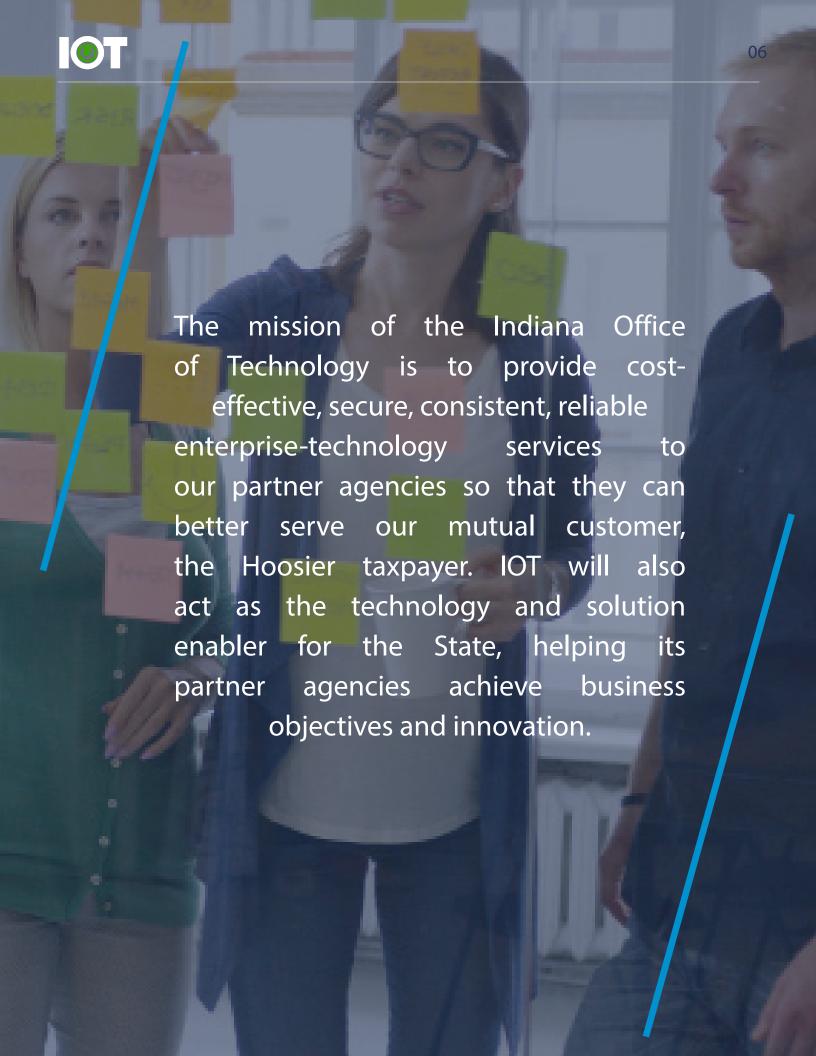
Currently, state agencies are spending more than \$700 million in large information technology projects, which includes major system modernization efforts from the Bureau of Motor Vehicles (BMV), Department of Revenue (DOR) and the Family and Social Services Administration (FSSA). Technology projects and processes like these are vital for the state to provide its services for Hoosiers.

The Indiana Office of Technology (IOT) is legislatively tasked with being the enterprise technology provider for state government. In the past, technology was disparate systems, sometimes maintained by one person operating out of a closet. When technology duties were consolidated in 2005, major efficiencies were realized, saving the state an estimated \$14M annually.

IOT has come a long way in our agency maturity. We now provide 97 products, versus 63 in 2010, and we offer cloud services and have made major cybersecurity investments to keep data safe. Our processes are positively reflected by the Center for Digital Government, which has graded Indiana an 'A-' for its technology usage in each of the last two biennium.

As Indiana continues to deliver next level digital government to Hoosiers, the Office of Technology is not only looking near-term on how to best assist in those efforts but is also forecasting out a few years on the coming technologies. Within this document, we outline our strategy to move IOT forward to utilize the new technologies and the capabilities they will provide to serve our constituents.

Thank you for looking at IOT for your technology needs. I know you have options to use other providers, but we continue each day to try and earn your business.





In the last year, IOT customer satisfaction has grown from 94.13% to 95.66%, and many major accomplishments were completed.

The Office of Technology completed year one of Next Level IOT, focusing on four key performance indicators: Core Service Delivery, Cost Competitiveness, Executive Branch Security Readiness and being a Preferred Workplace. Matt Johnson of Operational Security was awarded as the first Next Level ambassador, voted by his colleagues as the person who best represents each of IOT's core Next Level beliefs.

- Service: I am focused on the needs of internal and external customers and I deliver an experience that exceeds customer expectations.
- Solve It: I am empowered to solve problems. We are free to be proactive. I offer alternative business solutions.
- Change: I make sure that the decisions for changes in practices, procedures, systems, etc. include the participation and communication to all aspects of IOT.
- Contribution: I ensure that my work matters to the success of state government operations. I understand my role and align my daily actions with agency results and work to improve performance every day.
- Business Partner: I take into account the risk and business needs of our agency customers. I work with our customers to resolve procedural differences with mutually satisfactory solutions.
- One IOT: I am committed to achieving agency results as one team, regardless of my work location. I know that if one fails, we all fail.
- Members of the Office 365 team created a 5-part conference to educate our customers and developed the Office 365 champions program that includes 198 champions from 40 agencies.
- The Contact Center Governance Committee created the Contact Center Quarterly Summit last year to meet and discuss upcoming projects and new ideas. More than 20 agencies are participating in the meetings.
- IOT continues to keep security at the forefront, mandating an introductory cyber training ELM module for each new employee, upgrading or decommissioning Windows Server 2003 systems and currently working on the same for Server 2008 and SQL 2008. A team also worked together on "Project Cardinal," advancing working relationships between security and operations to seamlessly protect taxpayer confidential data. Infrastructure was also added to secure Tier 0 accounts, the highest level of administrator accounts.
- IOT also started working with the State Personnel Department to develop additional IT roles that did not exist before, which allow for additional growth and movement within the organization.





Key Performance Indicators

Core Service Delivery

IOT's foundational business is infrastructure services. To be considered delivery flawlessly, consistently infrastructure services of our state. IOT services include: Customer Service, **Application** Development Services, Business Applications, Services. Communications Services, Database Services, Desktop Services, Hosting Services, IN.gov Services, Mainframe Services Services. IOT strives to provide these electricity; flip the switch and you have light.

Each month, IOT posts its metrics to show how we are doing in providing you these services. You can check on us by visiting:

https://on.in.gov/IOTmetrics.



successful, IOT must execute service continually. The agency is driven by many metrics focused on systems availability and customer service for the technical strives to provide the best possible Core Services to their customers. These Collaboration Storage services like a utility company provides

indicators that the agency uses to effectively meet its business objectives. Those are: Core

The Indiana Office of

Technology has developed

four key performance

Service Delivery, Cost Competitiveness, Executive **Branch Security Readiness** and Preferred Workplace. IOT measures its KPIs monthly to evaluate its success at reaching specific goals

Cost Competitiveness

IOT aims to spend your money wisely and is always working to make sure Indiana is getting the best value for the dollars spent. Periodically, IOT engages a third-party to review its rates to ensure they are in-line with industry standards. The December 2016 Gartner Rate Benchmark provided for a thorough comparison of IOT's rate/ cost structure to many peer companies, - private and public companies of similar size and service offerings.

Peers were organized into three sections; Percentile. Average Percentile. and 75% Percentile. IOT determined that the appropriate rate structure for its customers is between the 25th% and the Average % peers. If rates fall below the 25th%, the company could be at risk for staff burnout, staff turnover and decline in service quality. If rates are above the average percent, the product could be at risk for outsourcing.

IOT is engaged to have another biennial update to ensure rates or services remain competitively priced. This study include peer agencies who have varying cloud strategies that will help IOT best offer those services at competitive rates. IOT knows you have choices in who you purchase from and want to make sure that its customer service and rates are top notch.



Executive Branch Security Readiness

As Indiana faces an increase in cyber threats, IOT strives to protect the critical systems of all State agencies against attack. In 2018, IOT established a plan to evaluate agencies' risk posture in order to understand and enhance their cybersecurity needs. Under this plan, IOT determined that the fifty-two state agencies that handle Personally Identifiable Information (PII) create the most risk for the State of Indiana. In order to mitigate this risk, IOT collaborated with the agencies on self-assessments, worked with them on plans to hone in on their greatest areas of need and developed metrics to track progress on steps taken to strengthen cybersecurity. In 2019 and beyond, IOT continues to build on this plan to develop a more robust understanding of the State's overall executive branch security readiness.

Maturity Profile Assesment

Following the different functions, categories, and sub-categories of the National Institute of Standards and Technology Cybersecurity Framework, agencies collaborate with IOT to self-assess their cybersecurity maturity levels and to establish appropriate target maturity levels.

Agency Security Plan

Using the results of the Maturity Profile Assessment, agencies develop target areas for improvement and identify their information security resources.

Agency Risk Assessment

IOT provides a third-party vendor to conduct penetration testing in order to generate an unbiased opinion about agencies' risks. This assessment helps to prioritize areas that are more technical in nature and those not necessarily discovered during the Maturity Profile Assessment.

Agency Security Training/Phishing

Recurring training and awareness are important for the maintenance of a strong culture of cybersecurity. Agencies are evaluated on the overall training completion percentage among staff employees, as well as their susceptibility to simulated phishing attacks.

Agency Vulnerability Score

New in 2019, IOT measures and provides feedback on all critical, exploitable vulnerabilities that have been present for more than ninety days, with the expectation that these vulnerabilities will receive foremost attention for agency mitigation actions.

Throughout the year, agencies will receive updates about the specific deadlines associated with scoring opportunities, as well as the status of their individual consolidated scores. At the end of the year, the scores of the fifty-two PII agencies will be aggregated into an overall State score.

Preferred Workplace

Current employees and potential candidates have a lot of choices on where they can take their talents. IOT wants to be known as a great place to work and is making changes so it is recognized as a leading 21st century employer.

Not wanting to make any presumptions, IOT surveyed its employees to learn which factors they felt encompass a great workplace. Factors included supervisor appreciation, colleague relationship, job security, interesting job content and a good work/life balance.

Initial measurement from employees of whether IOT as an organization was meeting those chosen factors came back low, averaging 48.5%.

In response, IOT management identified 45 activities that can improve the workplace and is actively implementing them. Through the first year of Next Level IOT, more than 30 of those activities were completed.

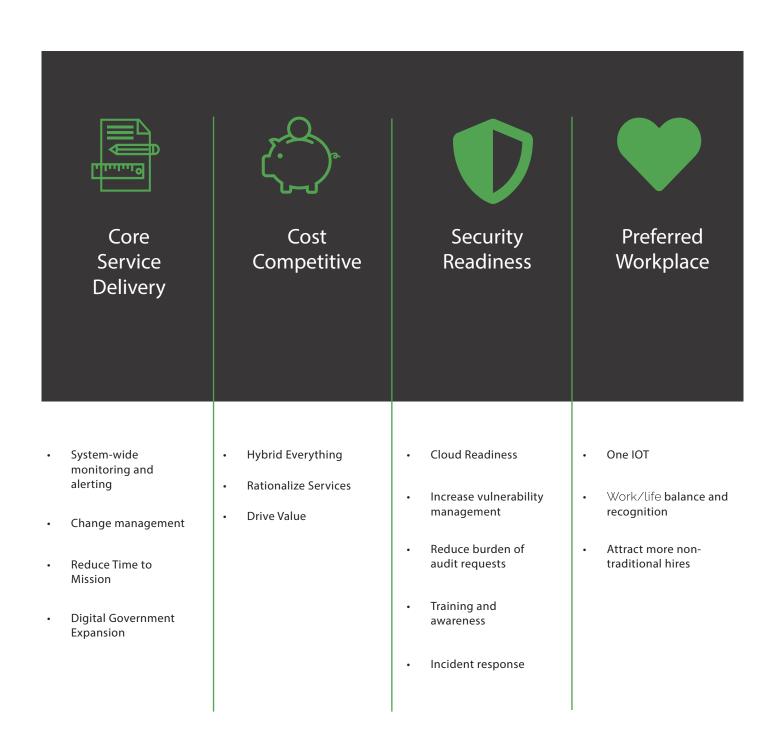
Earlier this year, after implementing many workplace improvement plans, IOT employees and full time contractors rated the workplaces across the same 10 factors again. This time the results came back much more encouraging, averaging 84% across all the factors. Though there is still room for improvement, initial efforts are pointing in a positive direction.

Employees are the backbone of the service IOT provides to agencies and making this a great place to work ultimately leads to a higher quality product for customers.



2019-2020

Strategic Direction







IOT's foundational business is infrastructure services.

Core Service Delivery



System-wide monitoring and alerting

While operating a modern and significant IT system, IOT manages nearly 10,000 servers and databases that support more than 1,000 systems. When there are problems with one of those systems or a server, sometimes it is the customer that informs IOT about the outage or issue. This is not acceptable and IOT is acutely working to rationalize its processes in monitoring and alerting to target that we know before the customer if there is a problem.

To achieve system-wide monitoring, IOT will utilize the 24x7 operations center and build dashboards to indicate if there is an issue. A key area to focus on is being able to determine quickly if the outage is a blip - with just a short disruption - or an actual outage. This type of proactive monitoring will assist with better customer service and quicker issue resolution. Additionally, Artificial Intelligence is being evaluated as a solution that is able to predict issues before they arise.

Change Management



Technology is never stagnant, it is constantly changing as improvements are developed or patches need installing. With more than 1,000 systems under State control, keeping everything running without one change impacting a completely different system is a challenge. To make this a better, more refined process, IOT is instituting some additional controls for change management. The agency is working to track metrics for change velocity and looking for process improvement to speed up that velocity without impacting change success.

The normal Request for Change (RFC) forms and processes will move into Alemba vFire, which is IOT's Information Technology System Management platform. Combined with improvements in IOT's Configuration Management Database (CMDB), this will help better communicate changes so everyone is more fully aware of any potential impact.

Sometimes, despite extensive testing, unforeseen problems arise from a change. IOT is going to document and communicate those problems in a Root Cause Analysis (RCA) document for all outages. The process for completing those will be refined and ultimately should help mitigate future issues.

The ultimate goal of the change management process is to move toward daily changes and make the State a more dynamic organization.



Core Service Delivery Continued...

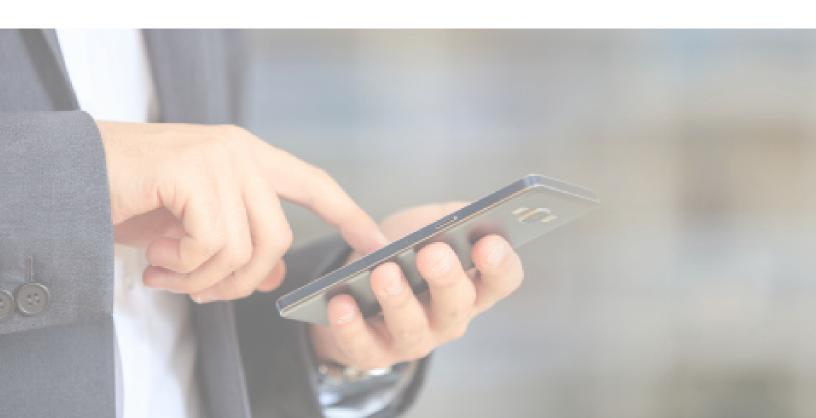


Reduce Time to Mission

The Office of Technology aims to 'Reduce Time to Mission' to enable agencies to deliver to their constituents faster and more effectively. The agency is working on major fronts: hybrid everything - right resource, right place, right time (see page 14), integrating cloud services into our standard offerings and increasing development velocity, which is reducing the time it takes to launch a product.

Automation is a key part of IOT's plans to reduce time to mission and will be evaluated and implemented where it makes sense. Development velocity is being supported in a number of ways including one method that recently reduced the time it took to develop a server in the Protected Zone from weeks to hours. In addition, IOT is constantly evaluating processes to identify bottlenecks, redundancies and other impediments to operational efficiency.

Another way IOT will reduce time to mission is by working to modernize the State's enterprise resource tools focusing on the payroll system and upgrading to PeopleSoft Financials 9.2. The PeopleSoft Enterprise Steering Committee is helping gather requirements for these projects so that a solution will benefit all state agencies and reduce friction in working with both systems. The payroll system, in place since 1992, is not receiving more feature enhancements from the vendor. The Financials upgrade moves Indiana to the latest version of the platform and creates more internal efficiencies in business delivery. Each project upgrade has a modern user interface, which delivers a better user experience. These updates will enable an easier and more uniform flow of information from one agency to another.







Digital Government Expansion



Digital government service is the forefront of customer experience with the State of Indiana. Users are not only expecting services to be available online, but they are wanting it to be accompanied by a good user experience. IOT, through the IN.gov Program, has helped launch many new online services over the past few years at little or no cost to agencies, including the ability to text the state (866-463-5292) to ask questions and developing The Assistant, which works on Amazon Alexa and Google Home. Some of these services are being fully or partially funded through enhanced access to data, convenience fees and payment processing revenue.

During the next few years, IOT will work on Access Indiana (www.IN.gov/access), which is the single sign-on (SSO) application that provides sign-in to agency apps. Once logged into Access Indiana, there is a dashboard that provides users with quick access to each of the integrated agency applications and has the ability to see selected application information and notifications.

IOT is also procuring a new enterprise content management system to replace the RedDot solution. The content management system controls more than 200 websites and more than 65,000 web pages. The state website is the most visible aspect of Indiana government and will be a priority project.

OMB has directed IOT to develop a digital government investment program to assist agencies in getting important projects moving forward. IOT will work on developing the fund, including a governance model that determines how projects are selected. The goal is to develop more digital government products that improve internal efficiency or provide value and self-service options for Hoosiers.



Driving Competitive Pricing for our Customers

Cost Competitiveness



Given the desire to take advantage of emerging capabilities to deliver to customers, IOT is modernizing how it deploys products. That means, using the right resource in the right place, at the right time. The goal is to provide a consistent, well-governed environment combining the capabilities of its on-premise services, as well as those of cloud providers such as Microsoft Azure, Amazon Web Services and Google.

IOT is focused on delivering a roadmap of available capabilities so that agencies can feel confident that:

- 1. constituent data is appropriately protected,
- 2. costs are clearly understood, and
- 3. agility is available for development, and stability is ensured for years of operation.

Rationalize Services



In addition to maintaining the infrastructure for agency IT operations, the Office of Technology provides support for more than 100 products and 250 applications directly or through IN.gov. Just because of the broad nature of the portfolio, there will always be overlap between some of the offered products. IOT carefully examines its product portfolio on an ongoing basis, where possible, the agency will develop plans for rationalization and remove duplicative services. IOT will ensure that agencies have the lead time to migrate successfully away from redundant or unsupported systems.

One example of product rationalization that IOT is examining is in the area of data exchange. IOT supports multiple products that can transfer information, each with its own strengths. These will be evaluated to determine the best solution that most meets the needs of the State. Similarly, there is an opportunity for application rationalization, specifically around case management. Agencies need solutions to manage constituent services, yet there are many different systems in place across the breadth of government. There is an opportunity to realize savings and efficiencies by moving to fewer platforms. This would benefit agencies and allow for better information sharing.



Cost Competitiveness Continued...



Drive Value

IOT has been widely recognized for its efforts in saving money for the state by driving down costs through enterprise software agreements for products like Geographic Information System tools, Mainframe software, Project Online and the Adobe and Microsoft suites. With evermore capabilities available, IOT will make thoughtful "Build vs. Buy" decisions with regard to Artificial Intelligence, Data Analysis, Development Pipelines and others. The service cost must be competitive with the value delivered by competitors. The agency is looking on an ongoing basis for alternative and innovative approaches for the use of physical hardware and application code.

To drive additional value from existing purchases, IOT will build out the Adoption Center that will enable customers to adopt the services for which IOT already pays. The agency will also be more proactive in letting customers know what services are available to reduce the acquisition of duplicate systems. The adoption center will be staffed with the apprentices. (see page 19).

The State has nearly 36,000 machines to support the work done on behalf of Hoosiers, each of which gets refreshed every four years through the SEAT services. Some of these machines, such as some from the Department of Corrections, get used less than others, which provides an opportunity to deploy them elsewhere. These computers can be used to develop a laptop loaner pool for interns at no cost to agencies. Repurposing equipment for agencies that do not require heavy-duty PCs is a way to lower cost.

IOT is also working to standardize some code procedures. Through IN.gov, a standard application header is already available. This serves multiple purposes, creating a standard look and feel, so customers know they are on an official State of Indiana application, but also reducing the time and money associated with coding a custom header for each app. Similarly, with the development of Access Indiana, all logins will be standardized to this framework. The code that is already developed can be reused, meaning developers will not have to write custom credentials and users will not need to create and remember a new password.





Executive Branch Security Readiness



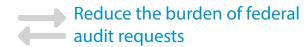
Cloud Readiness

Services such as hosting, servers and storage are no longer necessarily tied to on-premise solutions. Increasingly, cloud options are desirable alternatives to the historic-owned data center solutions because of the ability to quickly scale up or down based upon business needs. Security and data protection is still a major part of any cloud solution. In tandem with IOT's Hybrid Everything approach, security is developing controls around Platform as a Service (PaaS) so agencies are able to more readily leverage technologies such as Azure and Amazon Web Services. As security controls are preemptively developed and in place, agencies will be able to choose what is best for their products and place them in a certified-ready cloud solution or continue to host applications on premise in a physical or virtual environment. IOT will offer solution options to meet agency needs, but those must be secure and have proper governance controls.



Incident Response Adoption

Though IOT's security training does a good job of preparing employees for the landscape of online threats, the state's network is attacked thousands upon thousands of times each day. Sometimes mitigation efforts are required and urgent action needs to be taken. IOT security is working on incident response plans and processes to clearly delineate to agencies where responsibilities fall between agencies and IOT. This will result in new processes being deployed and managed through the risk management system, Archer. When an incident does occur, it is important that, through training, all parties are prepared to appropriately and actively respond to quickly mitigate harm.



The United States Government Accountability Office (GAO) recently asked states about their level of effort spent in responding to Federal audits associated with the handling of sensitive information. While a precise number of hours is difficult to capture, IOT - for Indiana estimated that the state's response to the 2018 Internal Revenue Service audit alone easily exceeded the GAO's high-level threshold of over five-hundred work hours. Unfortunately, while federal audits fundamentally deal with similar areas of security controls and compliance, there is no centralized federal coordination among audits or auditing agencies, leading to duplication of effort across multiple Indiana agencies. Since IOT the state's centralized information technology infrastructure resource, IOT faces a tremendous burden in balancing time-consuming audit support for each agency that is tasked with a response all while managing the proliferation of operational needs across its customer base.

IOT has taken strategic and tactical steps to help alleviate the difficulty of federal auditing requirements. First, the state's chief information officer is working actively with the National Association of State Chief Information Officers (NASCIO) to coordinate with the federal government on streamlining auditing requests, which would reduce state overhead spent on responses. Second, IOT has expanded its Security/Risk & Compliance business area to include a Compliance Manager who will lead a new Center of Excellence in Compliance - an innovative effort that will make Indiana a national leader in addressing federal audits. The Center will facilitate responses between IOT's technical subject matter experts, audited customers and their executive stakeholders. The standardization of data knowledge management and response collection, development will generate tremendous value and efficiency among impacted Indiana agencies.

Multi-factor Authentication coming for PeopleSoft



As IOT continues to modernize enterprise tools and offer more employee self-service, security is always a priority.

IOT, in consultation with the PeopleSoft Enterprise Steering Committee (PESC), will begin documenting the requirements of enabling multi-factor authentication (MFA) to use some PeopleSoft services. The full extent of the MFA installation is still being determined by the PESC, but they will work to find the proper balance between security and ease of use.

One possible example where MFA could be used is during open enrollment. Currently, the employee and all dependent's Social Security numbers are fully displayed in the system. With this change, those numbers could be masked and in order to see them, the employee would need to utilize MFA. Adding MFA to PeopleSoft will provide a needed extra layer of security for employees and state resources.



Training and Awareness Effectiveness



Increase vulnerability management



ahead of attacks. Currently, IOT conducts network-based scans on a monthly basis and reports this information individually to each agency. This often causes stale information to be acted upon, and can provide a false sense of security and/or exposure -depending on the timing.

Vulnerability management companies are moving toward agent-based models that integrate multitenant platforms to provide better data and ondemand dashboards. This model can provide near real-time information on endpoints within the State's network. IOT has acquired the tooling that combines the agent-based model, while still maintaining capabilities to conduct network scans for those required use cases. This shift will provide agencies with actionable, risk-based information to help prioritize remediation efforts. Patches can be quickly identified to resolve a bulk of the risk presented by specific vulnerabilities, offering cost-effective remediation.

IOT is focusing on reducing risk and improving the safety of state data. Many security breaches begin with a workstation infected with malware. IOT first tested state government's phishing susceptibility five years ago with a pilot that had failure rates ranging from 18 to 28%. Since then, the state has seen improvement that coincides with the implementation of statewide cybersecurity training. In two exercises last year, using phishing templates rated as "easy," the failure rates were reduced to 4% on one test and less than 1% on the next. In the first test of 2019, the complexity level of the templates was ramped up featuring an IT support theme. The statewide failure rate for this exercise was 8%.

Though the improvement is encouraging, more work remains. IOT's awareness effort will continue with a focus on those threats posing the greatest risk to citizen data through an array of training methods. Testing and measuring the absorption of awareness information are keys to success as IOT works with state agencies to help the workforce understand their security responsibilities and the accountability that comes ensuring the safety of state information.



IOT wants to be known as a great place to work and is making changes so it is recognized as a leading 21st century employer.

Preferred Workplace



There are a lot of worthy projects in state government that IOT can help achieve, but to generate maximum effectiveness, it helps to have everyone pulling in the same direction. To that end, IOT is going to ensure that its agency goals throughout the entire organization are aligned with the governor's goals. This is not just tracked at upper levels, but an alignment that runs through the entire agency all the way from the top to the bottom.

Agency goals are going to more closely match those of Gov. Holcomb, so the Next Level Initiatives are supporting each other. To further accomplish this vertical alignment, IOT will have employee goals tied to the department goals and those goals will be linked with the agency's goals. This shift will align annual employee performance reviews all the way up to the governor's priorities. It ensures that all IOT employees and departments are moving in the same overall direction and that each department is supporting one another.

Work/Life Balance



Although some departments provide on-call services, IOT is not a 24/7/365 operation. Employees generally have weekends off, except for the standard change window(s) and major system upgrades. Most departments provide flexible work hours to accommodate special circumstances where possible.

IOT offers Work from Home for eligible employees, and there is even an on-campus child care service.

IOT's work area has been modernized to promote collaboration: providing new common workspaces, a larger break room with more vending machines and adding monitors to help disseminate information. The work flexibility at IOT allows our staff to better serve their customers and Indiana citizens.





Employee Recognition



IOT Management developed and implemented the Employee Engagement Program to help ensure the organization was providing employees the support they needed to professionally succeed. The agency performs annual Manager Behavior Assessments, where all team members provide feedback to help managers identify areas for personal growth.

Managers conduct "Employee Satisfaction" interviews to learn the specific actions they must take to strengthen their employees' engagement and retention within the organization. From these interviews, managers then develop a tailored plan for each employee to help resolve identified issues and concerns.

Managers are encouraged to provide timely recognition and appreciation to employees for a job well-done through the Next Level Recognition program. This program includes various methods to reward outstanding performance, including SPOT bonuses, IOT apparel, or coffee or lunch with senior staff for those employees that go above and beyond their necessary job duties.



Attract Non-Traditional Hires

One of IOT's goals is to expand the profile and skill of its staff to develop a 21st century workforce. Gov. Holcomb has made this a priority for the private sector, but it is something that can be emulated in state government.

Gov. Holcomb created the Next Level Jobs initiative and one of the programs revolves around linking companies in need of skilled workers with Hoosiers looking for jobs. IOT is working with the Office of Work-Based Learning and Apprenticeship, located within the Department of Workforce Development, to become part of its certified apprenticeship program and, once completed, will be able to bring on apprentices. This will help prepare the next generation of tech workers and allow IOT to expand its support for customers. Additionally, IOT is looking to become an Orr Fellowship Program participant.

Each of these programs offer value to the state and assists in stopping the brain drain, allowing government to tap into and mold talent while getting work completed in a less expensive manner.





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