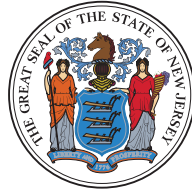


NJ Office of Information Technology

Business & Technology Strategic Plan

2020  2022



Message from Christopher Rein, Chief Technology Officer

It is my pleasure to share with you the NJ Office of Information Technology Business and Technology Strategic Plan for 2020-2022. This replaces and supersedes the prior New Jersey OIT Strategic Plan 2014-2016.

At the time of issuing this document, our State (indeed, our world) finds itself in the middle of a pandemic that has changed, disrupted, and even ended, many of our lives. We mourn the loss of our fellow citizens that this tragic global coronavirus has taken. The pandemic has also radically changed how 'work' gets done. Physical locations, State office buildings, and meeting-room collaborations almost overnight became replaced by words like virtual, remote, and distributed.

Although information technology was already gravitating towards distributed remote staff, cloud and virtualized computing, the shift necessitated by our Agencies - and more importantly by our citizens - is accelerated at a pace almost impossible to imagine.

The fundamentals of this plan, which support the above new paradigms, now need to be enacted at a more rapid pace to serve our citizens' needs.

Our Business and Technology Plan represents a collaborative effort across a number of Agencies in the Executive Branch to ensure that we maximize the full benefits of Technology to support our Customer Agencies as they deliver services to our citizens. The plan articulates the primary role of investing and managing New Jersey's information technology and recognizes the important coordinating and oversight roles required of the State Chief Technology Officer and our agencies' IT leadership. This plan was developed through collaboration between many State agency CIO's; as a result of that collaboration, the IT Business Plan serves as an enterprise roadmap for the Executive Branch.

Our Executive Branch of government is in place to operate the State; that is, to serve New Jersey's citizens. Each one of the 50+ Agencies, Departments, and Authorities has its mission area, and all are OIT's customers. The Office of Information Technology, and each of us who are part of it, are here solely to serve and support our customers in the achievement of *their* core missions. Lastly, I will add that guiding the development of this strategic plan - from its initial stages to completion - has been most rewarding, challenging, and educational.

A handwritten signature in blue ink, appearing to read "Chris Rein".



The Plan

Governor Phil Murphy's priorities include the strengthening of our infrastructure – and technology is an essential pillar to support building a stronger, more efficient, fairer New Jersey. The need to modernize and upgrade our technology after years of delaying and deferring many of the necessary investments creates both a challenge and an opportunity for those who serve within our State's technology operations.

Among the Governor's priorities are:

1. Upgrading the government's technology infrastructure
2. Improving e-government services for New Jerseyans
3. Strengthening links between our universities and innovative sectors
4. Attracting and retaining high-tech talent and investment in New Jersey

As new technologies continue to emerge at a rapid pace, our opportunities to improve mission-focused activities emerge. In 2020, these new capabilities are broad and diverse; the shape of how we deliver technology services is changing. Our State agency customers have a growing need for easier data exchange, more sophisticated business intelligence, big data, Everything-as-a-Service, artificial intelligence and, of course, easier ways to take advantage of the proliferation of the Internet of Things.

Increasing the ease of our citizen's access to our services while securing their data can only be realized through the implementation of strong security measures and privacy policies and these will remain our priority.

This plan includes a three-year vision for how Information Technology will support New Jersey's government. It identifies strategic goals and related initiatives that will help move the Executive Branch forward in its stewardship of IT:

- Strengthen the State's Cybersecurity posture with a layered-defense approach
- Move from paper to online and electronic data input, tracking, and reporting
- Facilitate intergovernmental and interagency data sharing
- Enhance data transparency and ease of use for the public
- Develop the capability for data analytics to inform policy and regulatory decisions

- **Improve communications within and between agencies and to the public**
- **Enable procurement of modern solutions through procedural and legislative changes**
- **Use of the Public Cloud**
- **Continue to implement privacy policies and procedures that will secure and protect our citizens data**

Information technology is a catalyst for successful delivery of our mission throughout the Executive Branch. With over \$500M in IT spending annually across the State Government agencies, a strategic vision of how we will deliver technology services to enable mission attainment is crucial. This plan serves as a roadmap, outlining several strategies we are taking to improve performance and ensure effective implementation.



Priority Shifts

The events of 2020 triggered by societal, financial, and pandemic-related changes are dramatic. An entire new set of ways to deliver government services must be imagined, and then enacted. Little doubt exists that the underpinnings of this massive shift has to be technology. Of course, new and improved business processes must be created, but they will undoubtedly be powered by information technology.

As an example of just one of these sudden shifts is the immediate impact of a WiFi-as-a-Service project that was undertaken in 2019. OIT and our Agency customers were setting up both secure WiFi and guest WiFi around the various Agency office buildings. Now, at a time where we are planning, re-thinking when and how State employees come to an office, (...or need to?) it is clear that here is a project that needs to at the very least be paused, re-prioritized, or even tactically modified.

On the other end of the strategic-change spectrum, Secure remote access, at scale, jumps to the front of most priority lists.

Agency Priorities

As a service organization, the Office of Information Technology must begin with understanding our customers' needs. Following are some of the priorities the State Departments and Agencies have shared with OIT for the next several years.



The Department of Human Services (DHS) will look to improve the economic and social well-being of New Jersey's residents by promoting coordination and collaboration among social service providers and streamlining communication between federal, state, and community partners. DHS is the largest state agency with a combined state and federal budget of more than \$18 billion annually. These resources must be managed effectively; modern, agile IT systems for program management, accounting, and oversight will be put in place. The Department will ensure the health and safety of individuals receiving its support by improving the technological tools used to monitor health and safety compliance reporting, as well as effective and robust oversight and auditing.



The Department of Labor and Workforce Development (NJDOLE) will continue to provide superior service to internal and external customers in the area of information technology by supporting the development of a technologically knowledgeable internal business workforce and continuing the development of IT expertise necessary to provide the best possible solutions, products, and services. NJDOLE will use IT solutions to increase and improve both the public's and NJDOLE's access to information and services, and they will take appropriate advantage of information technologies when making improvements to business processes. They will prioritize application modernization, adoption of enterprise solutions, succession planning and resource management, and information security program development. They will ensure that the infrastructure that supports IT service delivery is both secure and reliable with the throughput to meet the demand of customers and the public. NJDOLE will also ensure that data and information are protected from fraud, theft, unauthorized manipulation, or accidental loss, and will be accessed, exchanged, and maintained in a safe and secure environment. IT service delivery infrastructure, facilities, and hardware will always be in alignment with state objectives and guidelines and will be maintained at a high level to meet all business needs. NJDOLE will transform the Temporary Disability and Family Leave Insurance (TDI/FLI) system to revolutionize the business and technical systems that are currently utilized to deliver benefits and services. It will streamline the way they operate, enabling reduced costs, and make it easier to provide more efficient services to citizens.



The New Jersey State Police (NJSP) is constantly planning and implementing technologies that can improve its digital services. Leveraging technology will allow the NJSP to increase its ability to serve the public effectively while reducing manual, time-consuming processes. The NJSP has worked closely with the Department of Law and Public Safety and its vendors to create a number of enhancements to its services provided to the public. They collect and maintain personally

identifiable information and criminal justice information that needs to be safeguarded in both digital and physical forms. They plan to evaluate and upgrade methods of securing information, including the implementation of a privacy framework to better identify, assess, manage, and communicate about privacy risks to enhance trust. Physical and digital security will be enhanced. Digital asset tracking will be improved, and the establishment of a digital classification process will reduce risk by purging data no longer needed and reducing storage costs. NJSP also plans to improve its communications by upgrading its existing radio system to a modern, more reliable radio network, enhancing mobile communications to maximize the ability to communicate with employees, and enhancing collaboration platforms to provide tools to employees to more effectively work with others. NJSP will integrate 9-1-1 call systems with dispatch software and online geospatial plotting components.



The Department of Treasury will create and maintain an IT platform that enables their line divisions to continually meet or exceed their performance standards in the Department's core mission areas. They will provide citizens, businesses, and government with the highest level of service through a coordinated, up-to-date, and cohesive IT infrastructure and strategic investment in business-responsive technology. In concert with NJOIT, Treasury will prioritize public and private cloud adoption, security enhancements, infrastructure modernization, and service enhancements. Treasury will continually integrate mobile technology into the department's IT architecture, as well as make effective and efficient use of collaborative technologies and features such as social media, enhanced web presence, and Web 2.0 for both internal and customer-facing interactions, decision-making, promotional communications, and customer service. The public cloud will support rapid innovation and agility without the need for capacity assessments, hardware procurements, or data center space. The private cloud platform will automate common provisioning tasks and support self-service functionality while reducing resource provisioning time by nearly 90% and supporting transparent multi-site disaster recovery and resilience capabilities for critical applications.



The Department of Environmental Protection (DEP) will provide resiliency, reliability, and stability to protect the health and safety of people, communities, and resources of New Jersey through the acquisition, development, use, and support of technologies and information systems, as well as the identification of emerging technologies and trends to improve cost-effectiveness, productivity, and customer service. The DEP's Division of Information Technology will continue to leverage existing governance structures and procedures to implement the following plan in a diligent and effective manner to accomplish the DEP priorities, focusing on the use of metrics and requiring sound science to be the cornerstone of all environmental decision-making. DEP will enhance and maintain critical mission systems and replace retiring legacy infrastructure with modernized applications. They provide a safe and secure computing environment, while promoting cybersecurity awareness and best data management practices. They will continue to provide world-class Geographic Information Services (GIS) through modernized applications.



The Department of Consumer Affairs (DCA) will move to online and electronic data input, tracking, and reporting. They will facilitate intergovernmental and interagency data sharing, enhance data transparency and ease of use for the public, develop the capability for data analytics to inform policy and regulatory decisions, improve communications within and between agencies and to the public, attract and retain a workforce with the requisite skills for a modern organization, and enable procurement of modern solutions through legislative changes. They will bring all inspection, plan review, and permitting solutions online and off of paper. Tracking of lead remediation and abatement will be done online. DCA will create a one-stop online portal for applicants of any of their housing-related programs, which will allow for controlled communication with constituents and standardized data collection and sharing. They will enhance consumer protections by bringing the New Home Warranty process and homeowner association registration online. They will utilize social media tools to improve public awareness of DCA activities and to improve public relations.



The Board of Public Utilities (BPU) will have three main areas of focus: the Governor's mandate for 100% clean energy by 2050, transparency in government, and digitizing all of its correspondence. The clean energy initiatives require annual stakeholder meetings, application filing, and public comment filing. BPU will implement an easier means of distributing and receiving information to/from its constituents, utilities, and sister agencies in the state. They will also develop for an outward-facing, real-time calendar of events that can send out alerts if needed and also provide assistance with directions, handicap, or hearing-impaired accommodations. BPU will outfit its website with a user-friendly search engine, as well as e-filing and e-payment capabilities.



Guiding Principles: Achieving Goals through Execution

The most important part – the most precious resource – of our IT organization is its people. Our technology workforce is vital to mission accomplishment. Building and maintaining a community of diverse, well-trained IT professionals is essential to the successful execution of both our State’s mandated requirements and our Governor’s priorities.



OIT must effectively:

- Improve and increase the customer and user experience through a digital journey of technology optimization and digital transformation. In some cases, this involves adopting new business processes; sometimes uses new technologies; sometimes both. Improve workforce productivity, increase business capabilities for enterprise.
- Help our Agencies design, procure, and deliver solutions that put the needs of New Jersey’s citizens first - user experience.
- Enhance the quality, availability, and delivery of information through our infrastructure.
- Efficiency—Increase ROI of taxpayers’ resources through consolidation and optimization.
- Plan for, acquire, develop, and sustain a strong and diverse IT workforce with expanded learning and training programs across OIT.
- Further enhance stability in operations through a more rigorous and thorough Change Management process.

Building on Strengths

Throughout 2019, NJOIT has, along with our partners:

- ✔ Physically relocated the State's large mainframe computing platform into the Enterprise Data Center, a massive undertaking which had been repeatedly deferred by prior administrations
- ✔ Consolidated hundreds of servers onto NJOIT's enterprise hosting platforms
- ✔ Modernized the Governor's website, the State's website, and the sites of a number of State agencies and departments
- ✔ Migrated four agency call centers onto NJOIT's enterprise VoIP call center platform
- ✔ Consolidated a large number of databases onto NJOIT's enterprise scale database platform
- ✔ Migrated more than 10,000 traditional Centrex phone lines onto NJOIT's enterprise VoIP platform, saving money over the per-line cost of Centrex telephone service
- ✔ Upgraded the State's enterprise data center's operating infrastructure, including electric, network, and fire suppression advances
- ✔ Implemented robust protective cybersecurity measures to improve resiliency
- ✔ A streamlined systems architecture review process is being implemented so that a better balance can be struck between faster implementation of new systems for our Agencies and containing unchecked technology sprawl, otherwise referenced in the industry as "Shadow-IT".

Technology and Business Objectives

OIT will continue to identify and improve the processes, standards, people and technology needed to support our Agency customers across the State. We do this in part through advocating and enabling smart contracting and accelerating the transformation of IT in the Executive Branch from a large, asset-based and 'on-prem' focused organization to that of a service broker, utilizing the Cloud where we can in meeting our customers' business requirements. More on this later.

Although each New Jersey State Department and Agency has its own set of strategic goals and operational objectives, through collaborative efforts across our customers, we look to maximize the full benefits of technology to best serve New Jersey's citizens. A key element here is to look for opportunities where common needs can be met by shared and common building blocks. Greater volume purchasing discounts and focusing the skillsets of our valuable IT resources are just two important by-products of this effort. Clearly a common goal is to increase public access and

engagement opportunities through the evolution of our State's web presence, while securing our citizens' data, providing strong security measures, and implementing privacy policies.

Because we must strengthen the State's infrastructure, including modernizing and upgrading technology, and because we must operate within fiscal constraints, our focus must be sharp. This means we must decide on which initiatives that we will not undertake. Several examples of these initiatives and strategies that OIT will avoid, noting that occasionally an exception may be warranted, include:

- Big contracts with massive, multi-year replacement strategies: With a high failure rate, it has been shown that projects over \$6M - \$10M have a very poor track record, with a low percentage of success - including prior NJ efforts.
- Large investments in Blockchain for 2020 or 2021: A State task force is evaluating the technology for government use and ROI, but at this time research shows that the adoption has dramatically slowed. We do not have experience nor skills to support this platform.
- Large Scale in-house Programming Projects: More and more, governments (especially state and local) are coming to understand that our mission is to provide services and govern efficiently and effectively, and not to amass large programming teams for one-off or custom development, which is expensive and adds risk over time to support these applications.



NJOIT and the Public Cloud

New Jersey's IT community and OIT will prioritize public and private cloud adoption, security enhancements, and access infrastructure so that Agencies can more quickly bring new or enhanced systems into service. New systems and business applications will be evaluated, and procurements will be approved guided by, a "Cloud first where securely feasible" approach. Throughout 2019 and early 2020, we have built two very secure, robust operating environments with the two market-leading cloud providers. The public cloud will support rapid innovation and agility without the need for capacity assessments, hardware procurements, or data center space.

Public cloud services, built into an enterprise cloud platform for our Agencies to leverage, present an unprecedented opportunity to pivot long-term investments in physical assets to a pay-by-the-use consumption model. The private cloud platform will automate common provisioning tasks and support self-service functionality while reducing resource provisioning time by nearly 90% and supporting transparent multi-site disaster recovery and resilience capabilities for critical applications.

In 2020, NJOIT's data backup service is being augmented to add the public cloud as an additional, fully-encrypted offsite and isolated copy of the State's backup and archive data. This service enhancement supports the State's ability to recover from disasters and protects critical backup data from ransomware and cyber-attacks.



Tactics for Goal Achievement

The necessary follow-on for a strategic plan is a tactical plan. An achievable, action-based one.

How are we looking to achieve these goals? What building blocks will we leverage? What process improvements will we make that will help us implement the strategies outlined within our plan? And, how will the new ways our government needs to deliver services shape these plans and tactics?

Fiscal year 2021 for the State of New Jersey will look like nothing that had been imagined just 5 short months ago. The revenue "cliff" which has beset our State, as well as the ensuing Federal and State legislation changes underway, will in part shape what resources can be brought to execute on the key strategies discussed herein.

Therefore, it is expected that our IT Tactical planning process, guided by the fundamental tenets of this Strategic Plan, will begin shortly after the full FY21 budget is announced.



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