



THINKing Outside the Box – Building a Statewide Cloud Platform for Health and Human Services

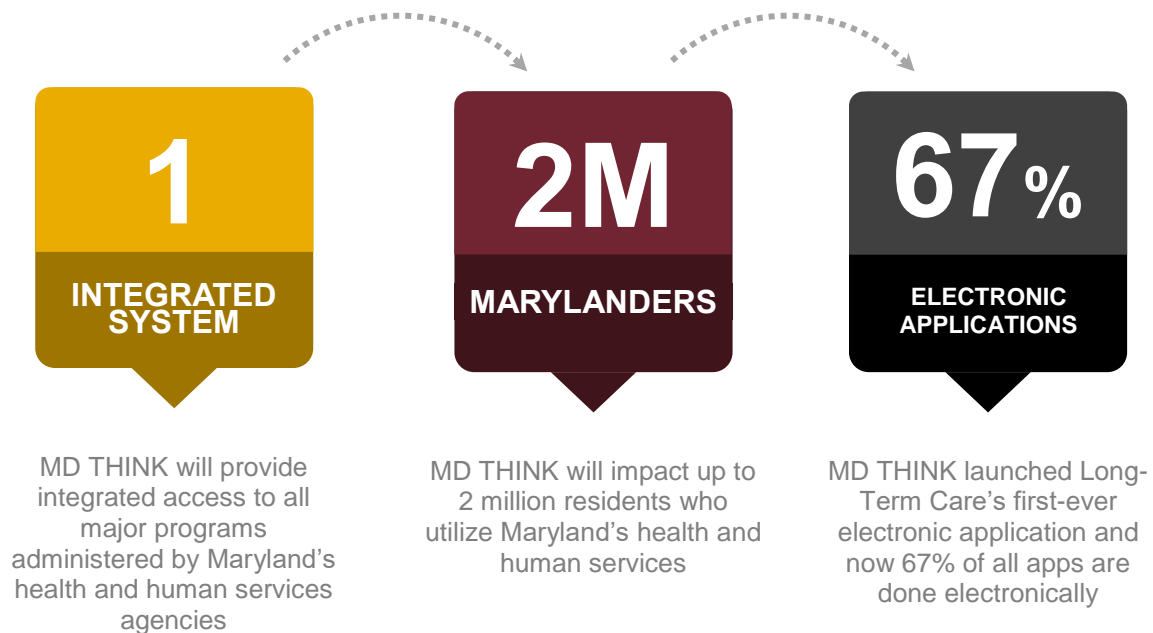
Enterprise IT Management Initiatives, Maryland
Initial Phase: December 2016-December 2018

Executive Summary

MD THINK is a transformative and ambitious cloud-based platform that is revolutionizing health and human services delivery for the citizens of Maryland. The first program of its kind in the nation, MD THINK (Maryland Total Human Services Integrated Network) is making state government more efficient and effective by consolidating and unifying state agency information and service delivery.

The modernized shared services platform allows customers to access all health and human services options through a common portal where they can easily upload supporting documents and enroll in benefits. Customers also enjoy shorter turnaround times for eligibility determination and enrollment, as well as more efficient document handling and reporting. Additionally, MD THINK enables improved system performance and higher data fidelity that substantially reduces fraud, waste, and abuse.

By transforming the way Maryland delivers health and human services, MD THINK is improving the lives of approximately two million Marylanders and Long-Term Care program's electronic application has already spiked to 67 percent – reducing manual processing and increasing efficiency for faster eligibility determination.



Project Narrative: Concept, Significance and Impact

Nearly four years ago, violent riots rocked the city of Baltimore after a 25-year-old African American man died from injuries sustained while in police custody. His death spurred peaceful protests, but those protests soon turned to unrest, and unrest turned to violence. Thousands of police and Maryland National Guard troops were deployed, but in the end, more than 20 police officers were injured, nearly 250 arrests were made, and hundreds of businesses and buildings were damaged, looted, or burned.

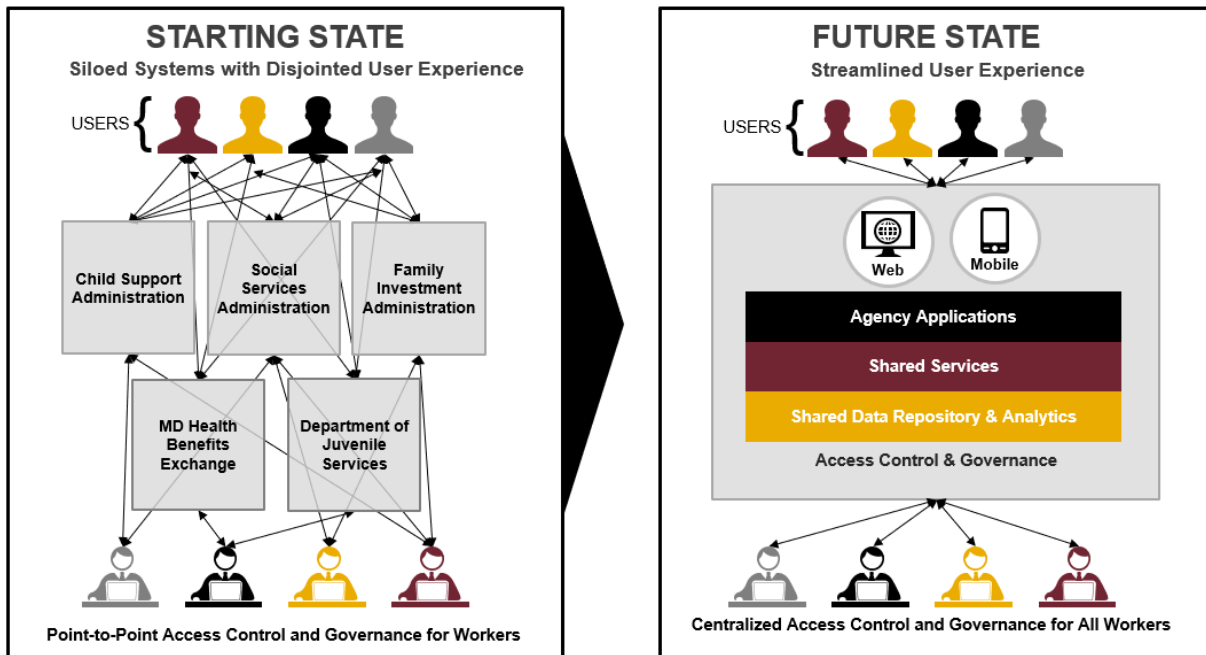
As the State worked to deliver aid following these unprecedented riots, it became clear that Maryland had a lot of citizen data but no effective system to share or coordinate that data across state agencies in order to efficiently direct resources to the people who needed it most. This realization prompted State leaders to advocate for an integrated technology system that could host the State's health and human services applications on a unified platform and utilize common services to better deliver benefits.

From that idea, MD THINK's integrated cloud-based technology platform was born.

MD THINK is making state government more effective by breaking down silos and data barriers to provide better data access and integrated resources. The platform offers a common hosting service where multiple State agencies and their applications come together to leverage shared services, such as enterprise security, business rules, data management, reporting, business analytics, and document storage and retrieval. The MD THINK shared services platform was built on Amazon Web Services cloud and went live in August 2017.

Platform Benefits

The holistic approach of MD THINK is helping achieve both cost and performance efficiencies by consolidating expensive local on-premise hosting, reducing duplicate data entry across multiple siloed systems, providing a high quality of platform and data security to all applications, and allowing them to leverage several other common services in the integrated architecture that would otherwise have to be built separately for each individual application.



Through MD THINK's innovations, customers benefit from:

1. **One master customer portal:** Customers can access all health and human services options through a common portal. They can create an application on a single web or mobile interface, upload supporting documents, have their eligibility determined for various services, and enroll in a service – all in one portal.
2. **Shorter turnaround times for eligibility determination and enrollment:** Customers experience quicker turnaround times because of streamlined eligibility determination rules that no longer require accessing multiple databases to determine eligibility.
3. **More efficient document handling and reporting:** Transmission of enrollment and other related notification documents is quicker and more efficient due to automated scan and upload functions where documents are available to multiple applications.
4. **Improved quality of service:** The modernized platform and use of shared data enables state agencies to deliver the highest level of service to its customers.

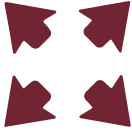





In addition to improving the customer experience, MD THINK significantly impacts the backbone of health and human services: case workers. Caseworkers and the State benefit from:

1. **Reduction in fraud, waste, and abuse:** Consolidated technology applications and a shared data repository greatly reduces fraud, waste, and abuse by introducing accuracy, efficiency, and automated checks and balances within the application processing system.

2. **Higher fidelity of data:** The stringency of data increases because of reduction in redundancies and duplications in the records maintained in the shared data repository.
3. **Remote access:** With cloud-based data, case workers are provided tablet devices that enable them to provide services in the field. This ground-breaking shift means they will no longer need to return to a central location to input data — saving valuable time and resources.
4. **Easier customer service:** The unified application and eligibility determination process, as well as greater data sharing across entities, ensures a better quality of customer service and eases the burden on case workers.
5. **Improved system performance:** An overall improvement in system stability and performance leads to quicker processing times and increases the ease of the application process.

TECHNOLOGY

Led by Chief Technology Officer Subramanian Muniasamy, MD THINK is the most ambitious technology project in Maryland’s history. With the goal of creating a unified and fully integrated network that modernizes the State’s health and human services applications, the MD THINK platform features the following:

 <p>Highly scalable, yet affordable cloud infrastructure with flexible configuration for rapid setup</p>	 <p>User-friendly web and mobile platform</p>	 <p>Shared data repository and analytics that are flexible and searchable</p>
 <p>Uniform security that meet all federal and state requirements</p>	 <p>Secure, role-based access to cross-agency data</p>	 <p>Full-featured application architecture with ready to use, fully-configured application frameworks</p>

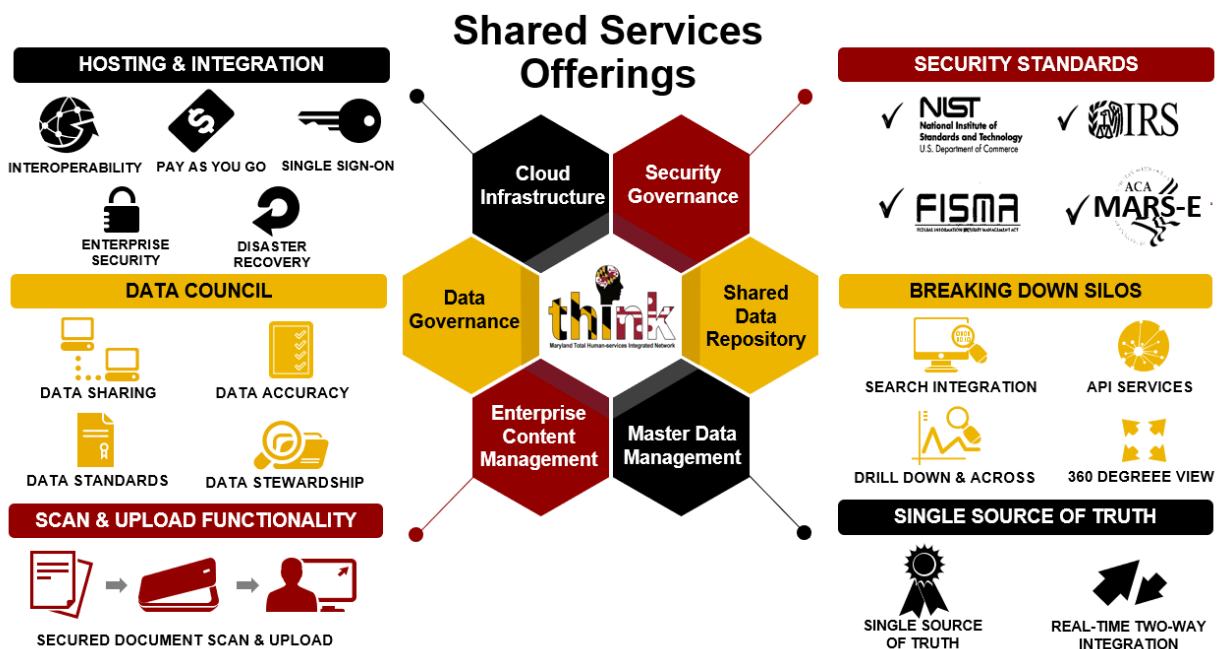
In addition to enhanced functionality, data security remains the highest priority of the initiative. Running on the Amazon Web Services (AWS) cloud, the MD THINK Platform is able to manage security in the cloud with:

- Centralized identity and access management
- Multi-factor authentication
- Infrastructure and perimeter security
- Vulnerability management and endpoint protection
- Web application security
- Encryption at rest and in motion

Additionally, MD THINK’s centralized shared data repository provides a secure one-stop-shop for data through role-based access. Role-based access data security ensures that only select information is shared between agencies, and only authorized individuals are able to view data required for their role.

Consolidated Infrastructure for Cost Savings

Under Muniyasamy’s strategic leadership, this unique model of inter-agency technological collaboration is also generating cost savings for the State by consolidating infrastructure and data services into one shared platform and a common shared data repository. Additionally, it is using a scalable, pay-as-you-go, cloud-based platform that streamlines program operations, increases productivity, and enables state agencies to build new systems at a relatively low cost. With every additional agency application that is added, the platform becomes more cost efficient and the cost of operating the platform will decrease.



Phases/Achievements

In 2017, the MD THINK project was awarded nearly \$195 million in federal funding and several collaborating agencies were identified to migrate their modernized applications to the MD THINK platform: Child Welfare, Child Support, Family Welfare the Department of Health, the Department of Juvenile Services, Maryland Health Benefit Exchange, and the Department of Labor, Licensing, and Regulation.

MD THINK launched the cloud-services platform and the Maryland Office of Refugees and Asylees application that fall, and in December 2017, the base platform went live. In March 2018, the first version of Enterprise Content Management System was deployed, and in August, the first major application on the MD THINK platform was launched statewide supporting Long-Term Care functionality.

With the platform fully implemented, MD THINK is continuing to modernize and deploy additional applications. In May 2019, the modernized application for the Child Welfare pilot will roll out in waves until the entire Child, Juvenile, and Adult Management System deploys statewide by October 2019. In July 2019, the Maryland Health Benefit Exchange’s application will be migrated to MD THINK, and in May 2020, the Eligibility and Enrollment and Child Support applications will go live. By September 2021, all remaining Health and Human Services applications will be deployed.

Through revolutionizing the way Maryland delivers health and human services, MD THINK is improving the lives of approximately two million Marylanders and has already witnessed a sharp increase in electronic applications for their Long-Term Care programs, which has reduced manual processing and increased efficiency for faster eligibility determination.

COMPLETED		FUTURE DEVELOPMENT		
2017	2018	2019	2020	2021
<ul style="list-style-type: none"> ✓ APD Approved, CTO Hired ✓ Software Procurement Completed ✓ Agile Team RFP Released ✓ CJAMS RFP Released ✓ Established Steering Committee ✓ Pilot, base infrastructure and data platform deployed ✓ Maryland Office of Refugees and Asylees application 	<ul style="list-style-type: none"> ✓ E&E Long Term Care application deployed in production ✓ Base Content Management (ECMS) Platform deployed in production ✓ Awarded CJAMS Vendor ✓ Awarded Agile Team Vendors 	<ul style="list-style-type: none"> ☐ CJAMS deployment planned (Child, Juvenile and Adult Management System) ☐ MHBE's application integration planned 	<ul style="list-style-type: none"> ☐ Eligibility and Enrollment (E&E) system deployment (Non-MAGI, SNAP & Cash Assistance Programs) ☐ Onboard other agency application 	<ul style="list-style-type: none"> ☐ Child Support System (CSS) deployment ☐ Obtain Child Support Federal Certification ☐ MD THINK Operational