



CENTRAL & SOUTHERN OHIO *Chapter*

TOPIC

Nextgen Patient Engagement using
Mobility, Cloud & Big Data

DATE

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INTRODUCTIONS



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Agenda

- Digital Healthcare Trends

- Use Case: Next Gen Engagement Platform
 - Customer Experience
 - Data-Driven
 - Omni-Channel
 - Technology Enablers: Cloud, Mobility & Big Data

Digital Healthcare Trends

Succeeding in the Digital World

Personalized Care

“The patient can see you now”

Reimagined Workflows

Collaboration at the intersection of humans and machines

Platform Revolution

Connecting an ecosystem and industry

Intelligent Organization

Big data, smarter decisions

Outcome-Based Care

Focus on outcomes, not service

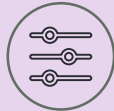


Biggest Challenges Facing Healthcare Industry

What are some of the biggest challenges facing the healthcare industry in 2017?



Healthcare Providers



Managing costs



Improving clinical efficiency and effectiveness



Increasing value, quality, and cost transparency to consumers and health plans



Life Sciences



Increased competition from the generics



Developing comparative effectiveness strategies



Shifting from volume to value



Payers



Changing business models and operating strategies

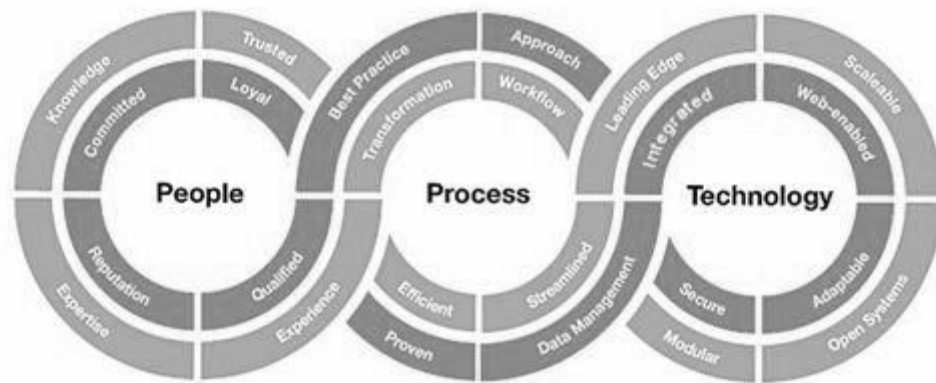


Managing employer and consumer expectations



Adapting to changes from health insurance exchanges

Healthcare: Digital Transformation Enabled by Technology



Value Based
Care



Enriched
Patient
Experience



Personalized
Treatment



Anytime
Anywhere



Efficient
Clinical Trials

ENDLESS OPPORTUNITIES TO: REDUCE COST, IMPROVE QUALITY OF CARE, & IMPROVE PATIENT OUTCOMES



**UNIFYING SCATTERED
PATIENT DATA**



PATIENT 360



**IDENTITY
RESOLUTION**



**INTEGRATED
HEALTHCARE PLATFORM**



**CONTINUOUS PATIENT
ENGAGEMENT**



CONNECTED DEVICES



**CASE & CLAIMS
MANAGEMENT**



**ADVANCED PRESCRIPTIVE
DATA ANALYTICS**

Key Healthcare Providers Trends

Managing Data



Privacy and Security Concerns



Government Mandates



Retraining Staff



Improving the Patient Experience



Reducing Costs



Mobility and BYOD

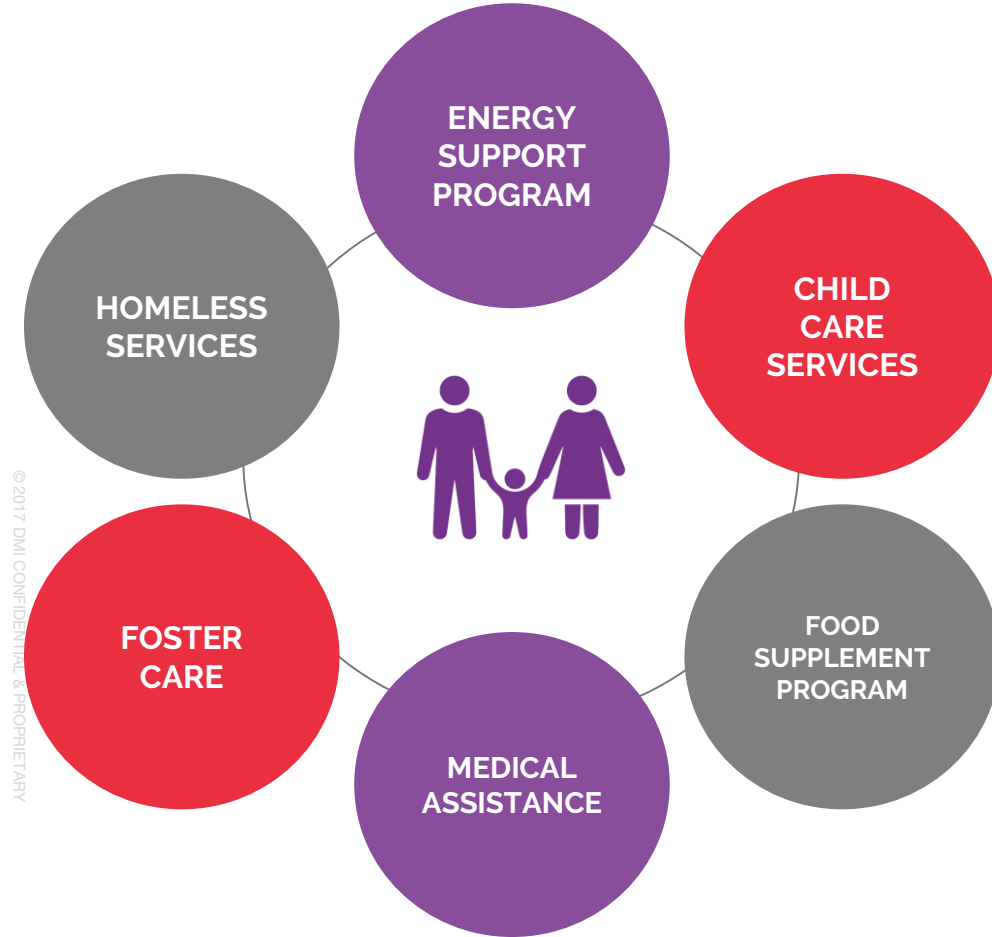


Alternative Care Models



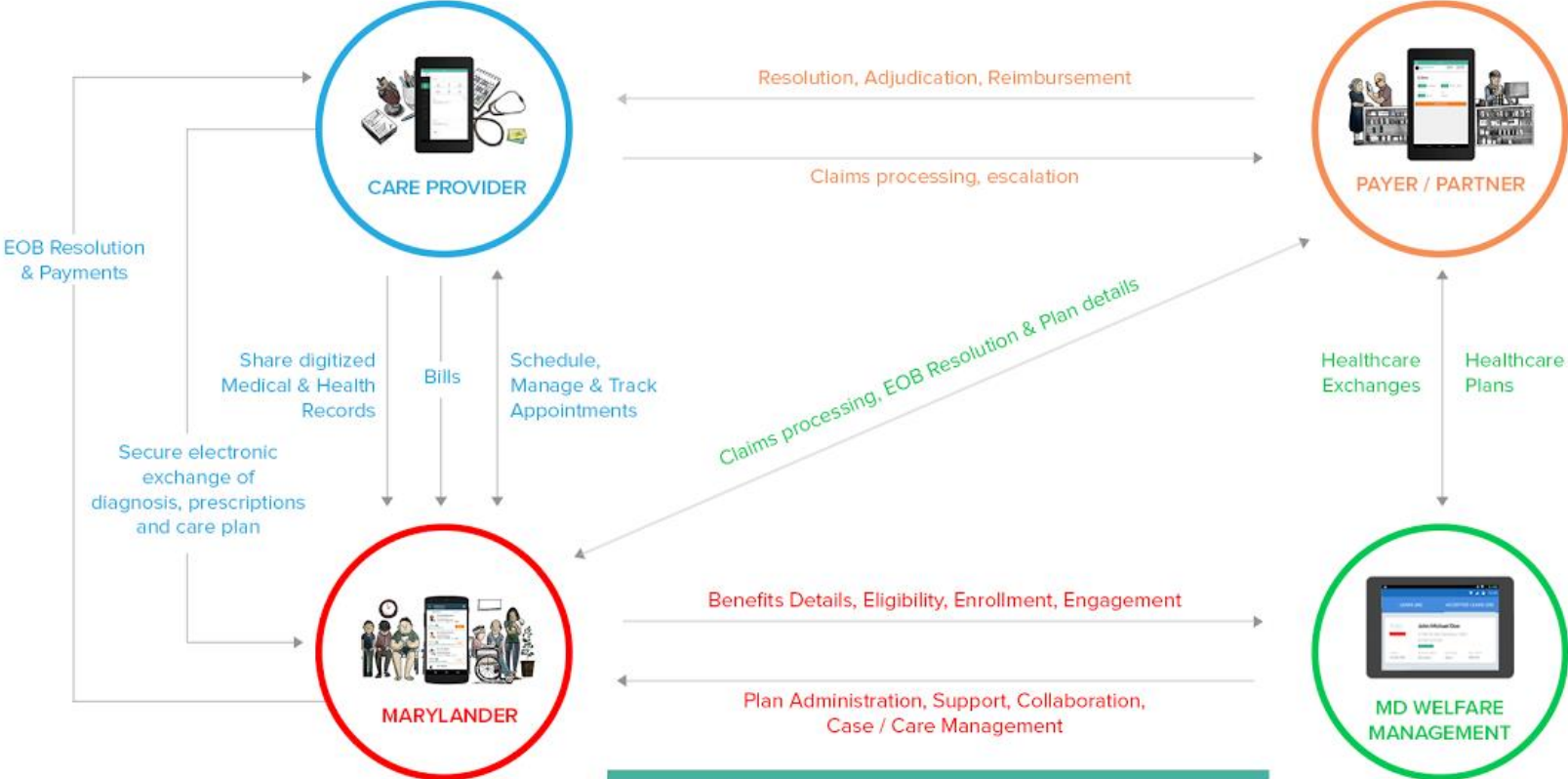
Use Case: Next Gen Engagement Platform

A fully integrated welfare management platform will empower constituents and drive greater value



- > Connected World of constituents, agencies, insurance providers and partners
- > Integrated data and constituent profile
- > Single platform delivering continuous collaboration, engagement and care
- > Best practice protocols and processes
- > Informative document and resource library for members
- > Proactive “at risk” assessment and monitoring
- > Scalability, robustness, integrity, security and privacy

KEY STAKEHOLDER INTERACTIONS



▶ ONE **TRUE** INTEGRATED WELFARE MANAGEMENT PLATFORM
 ▶ COMPLETELY INTER-OPERABLE

MARYLAND'S OPTIMIZED

CUSTOMER EXPERIENCE

FROM

We share a complex network of websites, physical offices and support centers

I am reliant on others to help me navigate available programs and benefits

My access to services is limited by varying business hours and locations

Case managers use multiple workflows

I feel frustrated & overwhelmed

TO

We share a **common tool** for both end-users and employees

I have **self-service** options to understand and better manage my programs and benefits

I have **24/7 access** to services & support

Case managers use analytics to make smarter workflow decisions

I feel **confident & empowered**

Marylander 360° State Welfare, Simplified

A secure and seamless state welfare management platform. Marylander 360 will empower all the key stakeholders of the ecosystem to actively collaborate on a unified engagement platform providing greater user experience, empowering Constituents to navigate through options in a guided manner while easing decision making for agency case and care staff through the use of analytics.



DEMO

Marylander 360°

URL:

<https://vimeo.com/211424308>

PASSWORD:

Marylandsv04



4 Main Driving Factors

1

Customer
Experience

2

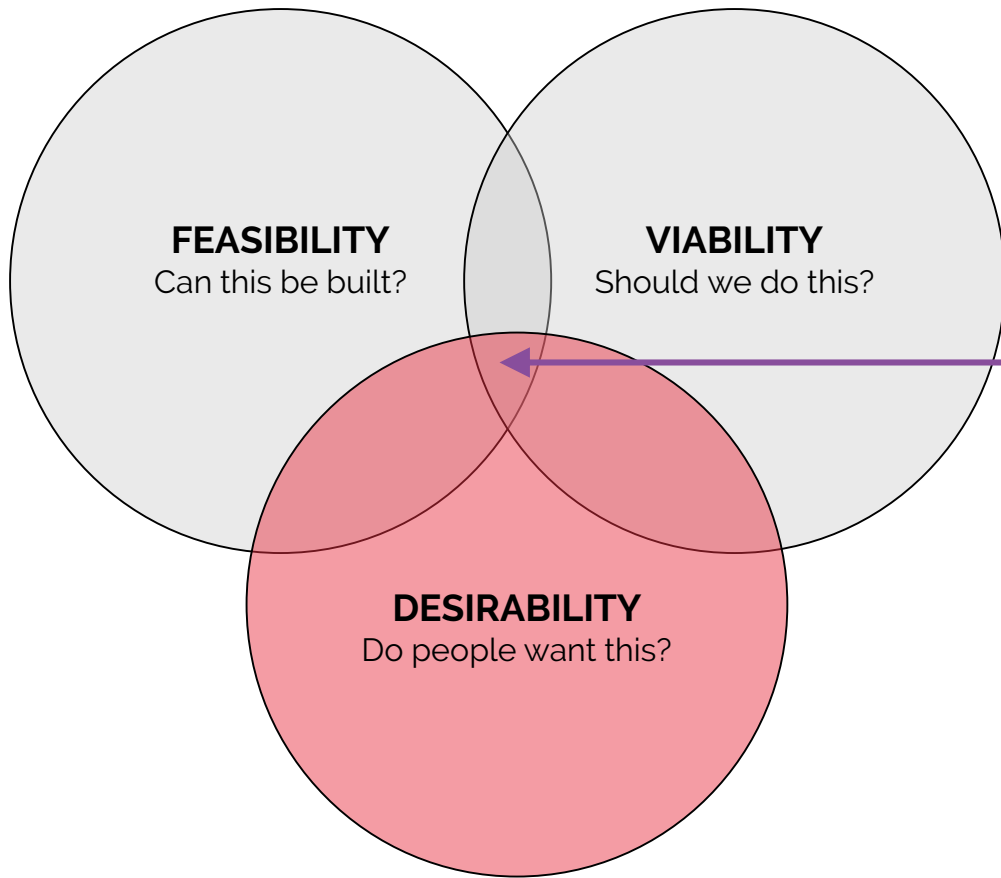
Data-Driven

3

Omni-Channel

4

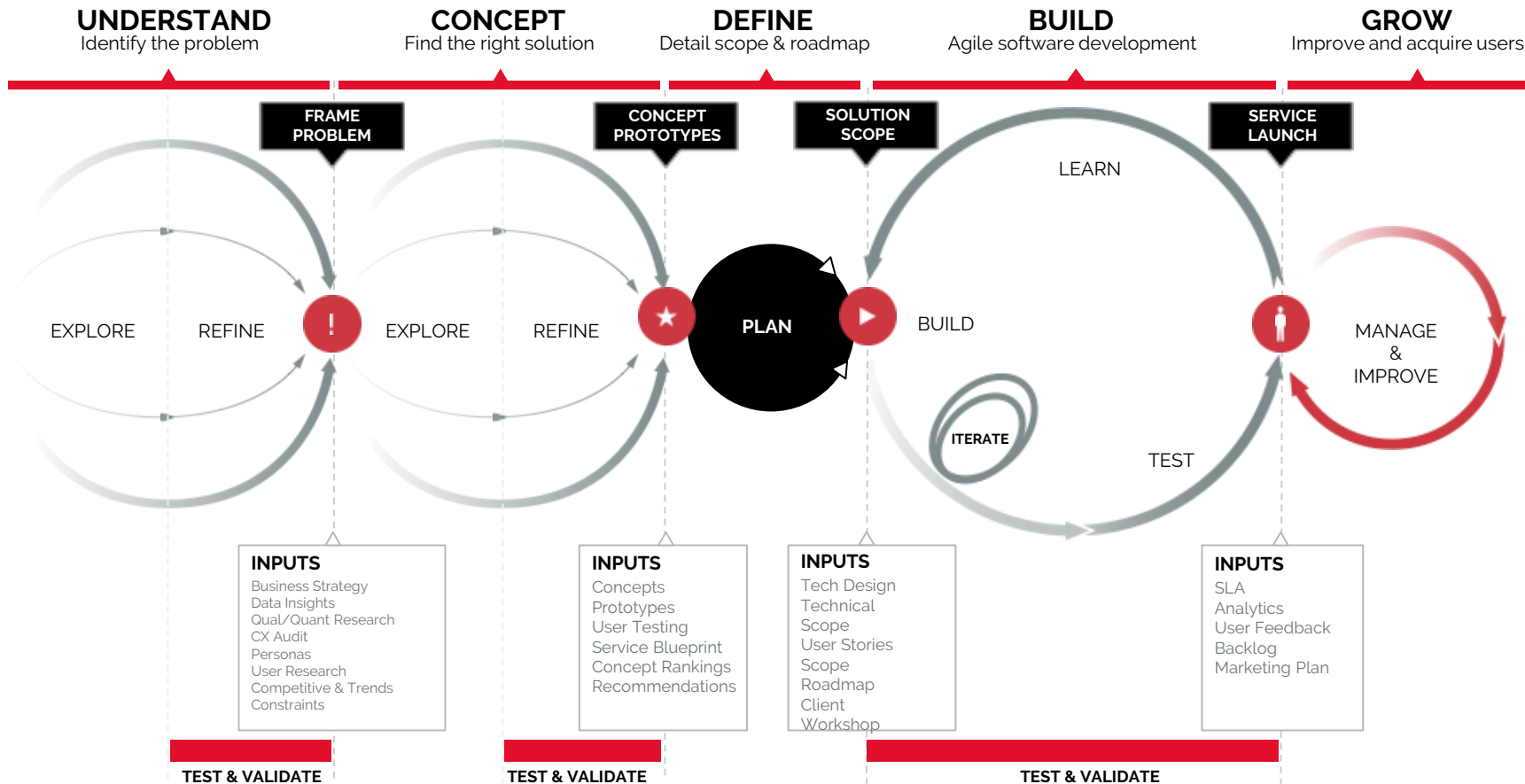
Technology
Enablers



INNOVATION

THIS ALONE IS NOT DIFFERENT.
OUR APPROACH IS.

We've designed our process to focus on speed and end user validation. We have a bias for making things quickly in order to learn from them and move to the next best learning opportunity.

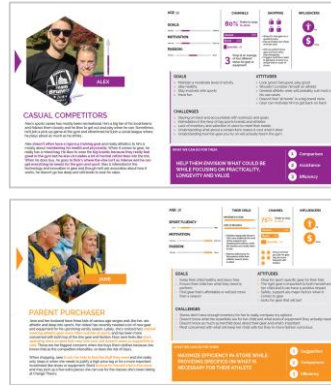


CXI APPROACH | UNDERSTAND

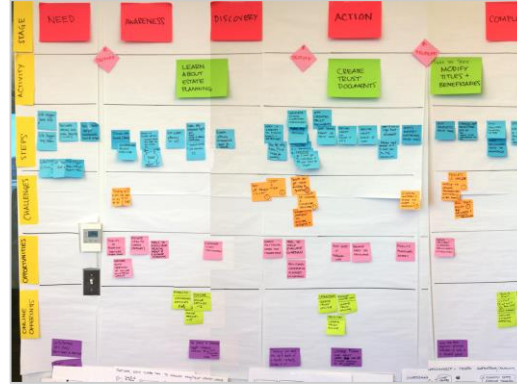
User research



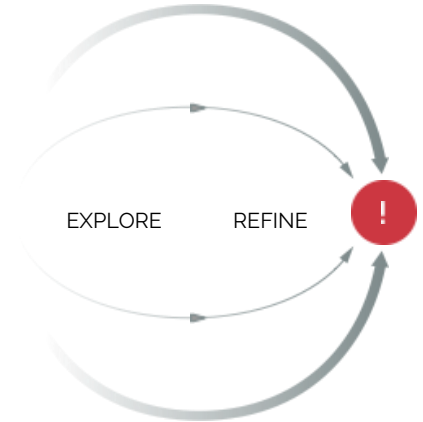
Persona definition



Map the customer journey



Understand



Service Design & UX

Stakeholder interviews + Contextual inquiry | Testing assumptions | Synthesis | Problem framing

Governance

Daily Sync | Weekly Status Report (PDF)

Milestones



Kickoff &
Contextual Inquiry



Customer Journey &
Persona development



Key Findings
Problem framing



Client presentation

WHAT'S DIFFERENT?

- > **Prototype** (instead of documentation)
- > Discover & Concept sprints are largely **non-technical**
- > Focus is on **outcomes** instead of traditional “deliverables”
- > Empirical and **data-driven** (to the extent possible)

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Key Business Questions that needs to be addressed through Analytics

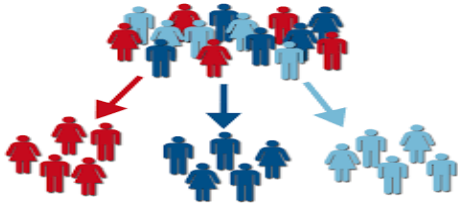
1. Who are we? (What is the demographic and profile of our constituent population?)
2. How much are we spending by each profile segment? – looking at claims and administrative costs and comparing it with the benchmarks/goals?
3. Where are we spending? – focusing on the utilization of services (including where the services are provided)
4. What can we change? – focusing on targeted actions that drives the most impact: training, placement and other programs to enable independence from support

A DATA-DRIVEN APPROACH

To Analyze Existing Constituent Profiles & Proactively Accelerate "Independence from Support"

1

Constituent Segmentation



Create constituent segments based on service (adoption, child support, etc.) and financial assistance type (emergency, medical assistance, etc):

- New Constituents, Temporary Assistance
- Economically Disadvantaged
- Repeat Constituents
- Permanent Beneficiaries
- Fraud & Program Abuse

2

Profiling & Analysis



- Profile segments by demographics (Age, Income, Gender, Occupation, Location, etc.)
- For example, 25% of constituents are located in Howard County that contribute to 40% of \$spend, having a median age of 55
- Identify steps or measures that drive "self-sustenance"

3

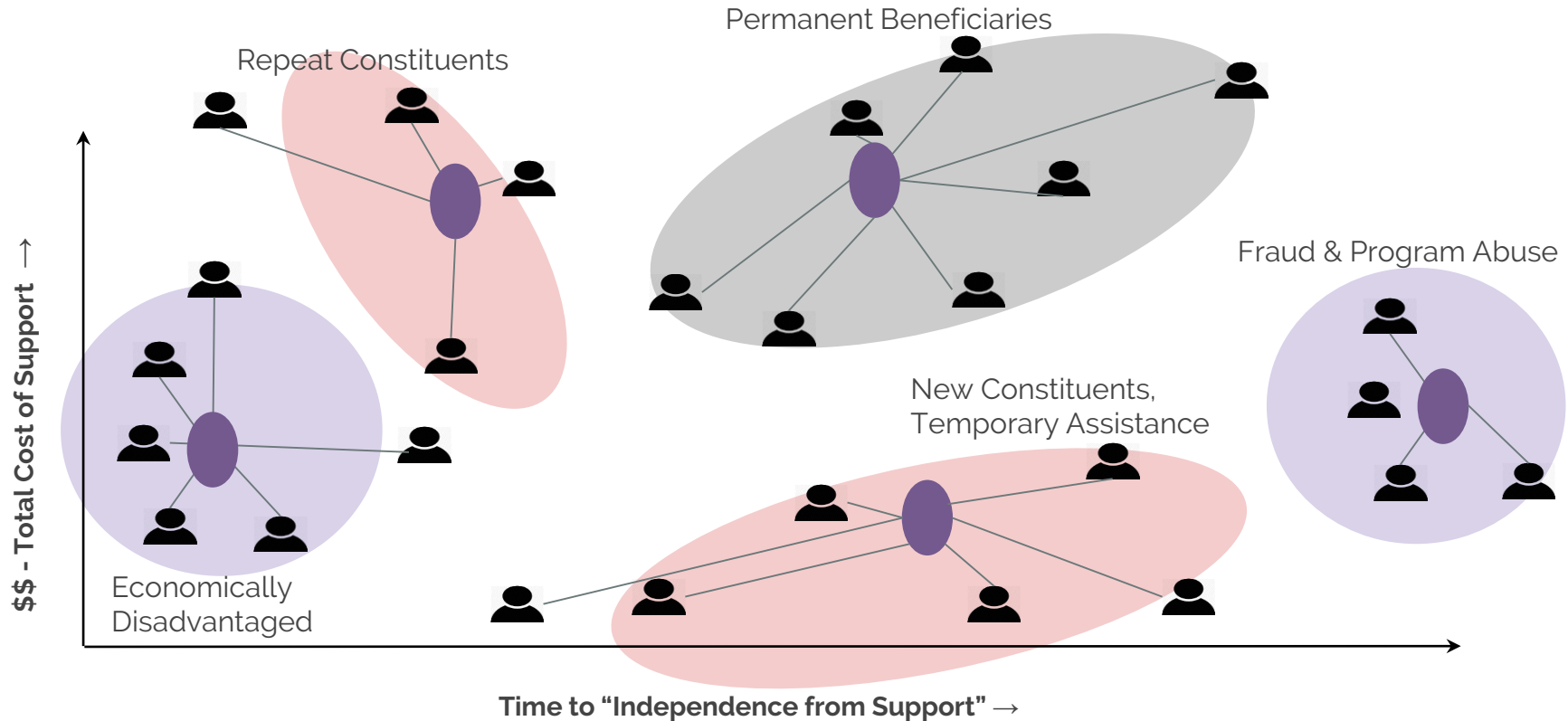
Outcomes & Potential Actions



- Proactively manage and prioritize spend stemming out of segmentation and profiling insights
- Recommend most frequent path to "Independence from support" in each segment
- Tweak enrollment and eligibility rules based on usage insights

Segmentation with Disjoint Clustering – Example (using K-Means) Algorithm

Analyze
Historical Data



Systematic Analytical Process

Turning Data Into Action

Analyze
Historical Data

Assess Current
Constituents

Conduct
Profiling
(Demographics &
Digital Behavior)

Identify
Measures
(Self-Sustenance)

Recommend
"Path to
Independence
From Support"

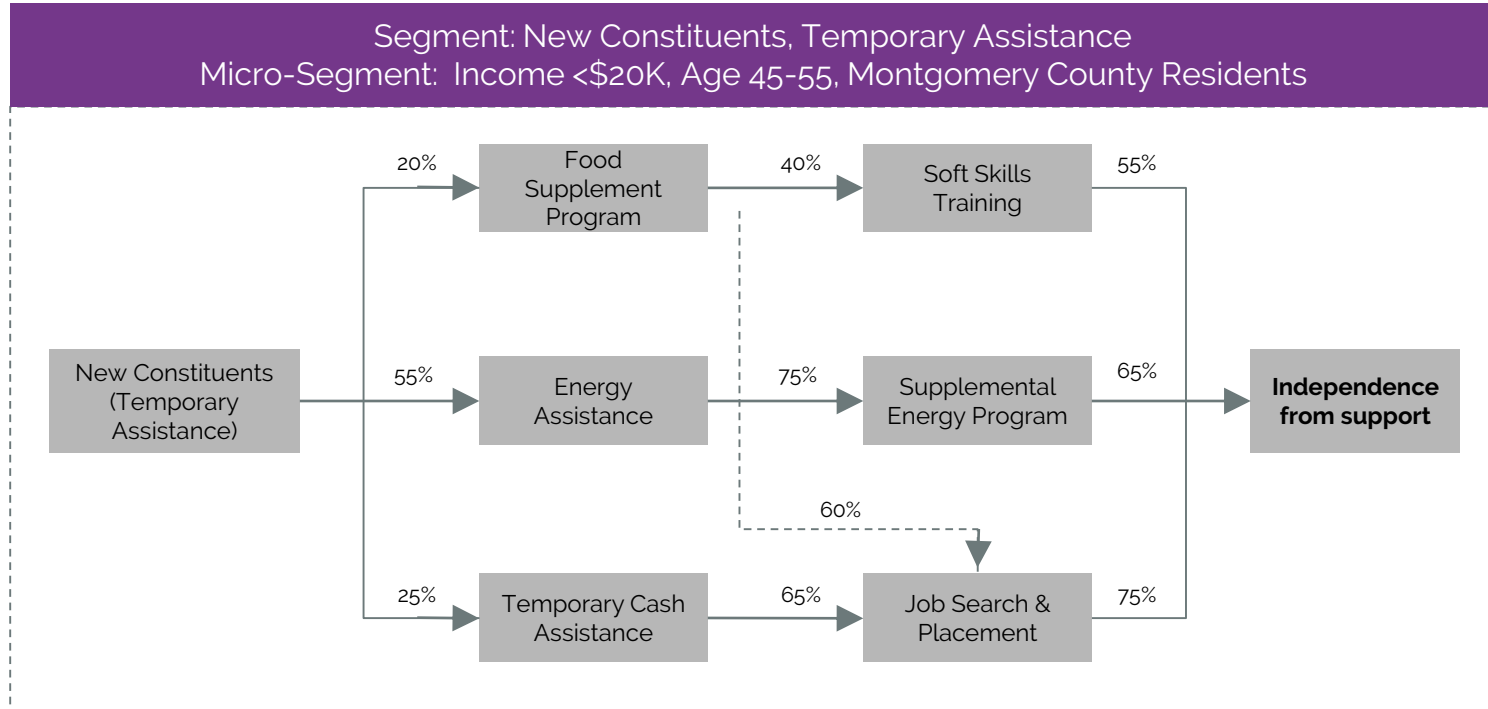
**What
happened?**

**Who are my constituents?
(Identify Segments)**

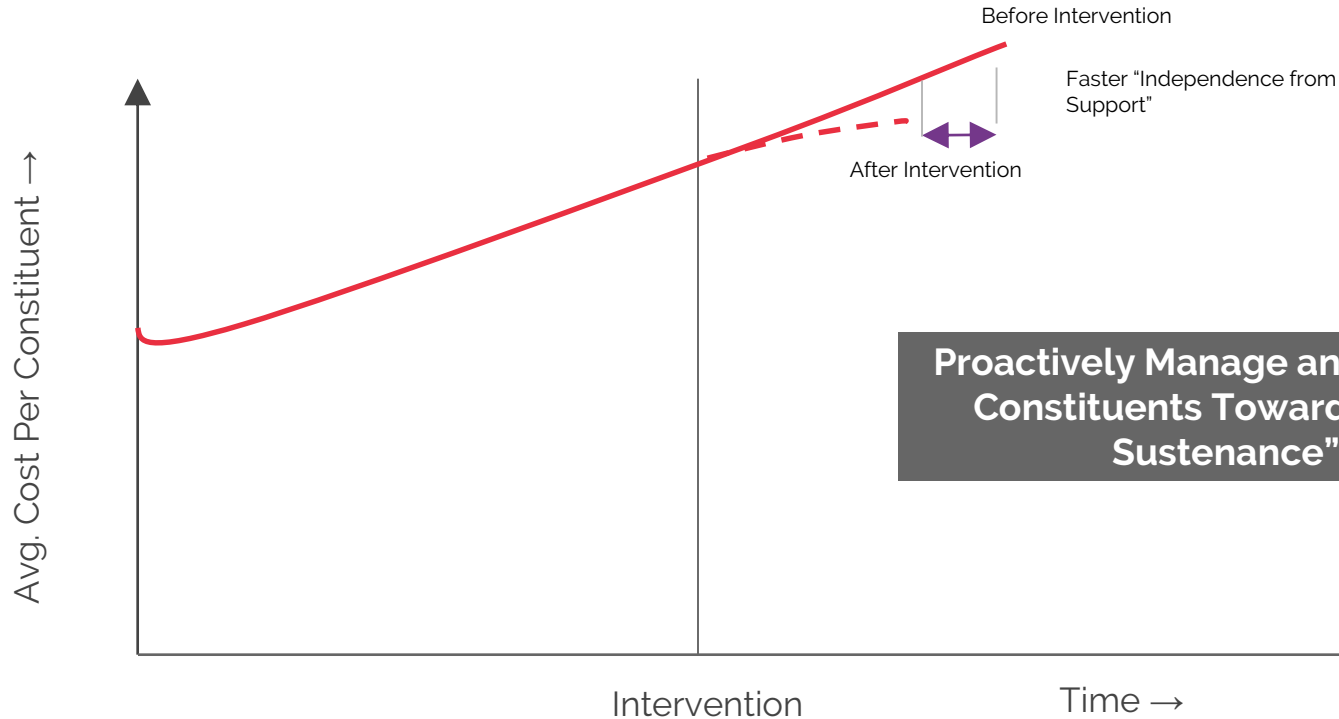
**How do I proactively drive self-
sustenance?
(Analyze & Recommend)**

DATA-DRIVEN OUTCOMES

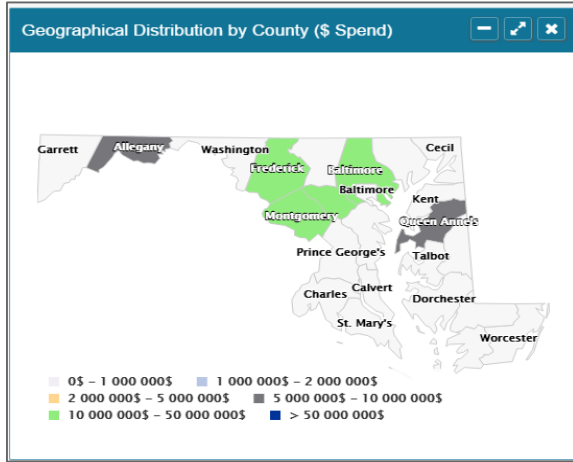
Accelerate "Independence from Support" - Based on Historical Trends (Illustrative)



Proactively Drive Independence From Support **Using Data Analytics**



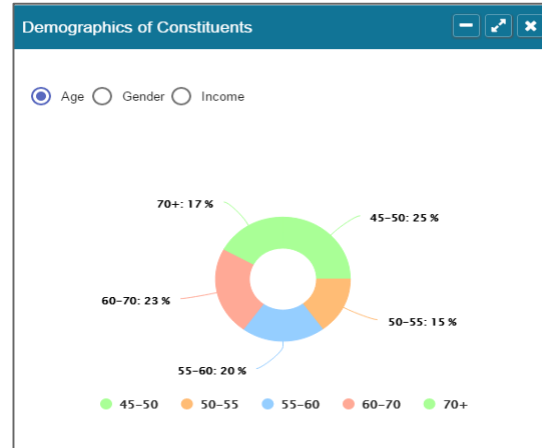
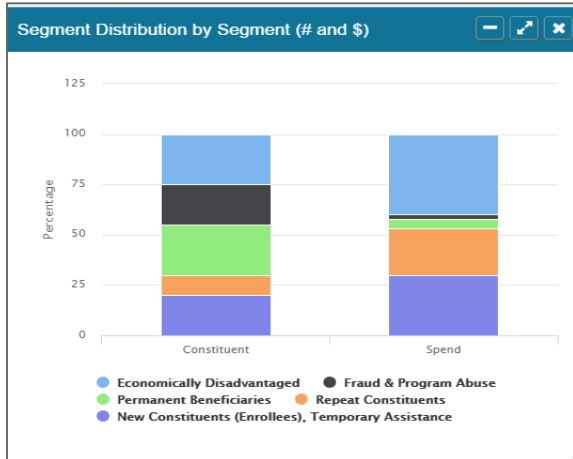
Visualization & Insights



Constituent Segment Insights

Howard County

Constituent Segment	Total	Spend in	%	Average	Spend Per
	Constituents	(\$)	Spend	Age	Constituent (\$)
New Constituents, Temporary Assistance	4,400	\$60,00,000	30%	62	\$1,364
Economically Disadvantaged	2,000	\$80,00,000	40%	53	\$4,000
Repeat Constituents	2,300	\$46,00,000	23%	58	\$2,000
Permanent Beneficiaries	1,000	\$10,00,000	5%	65	\$1,000
Fraud & Program Abuse	300	\$4,00,000	2%	48	\$1,333



4 Main Driving Factors

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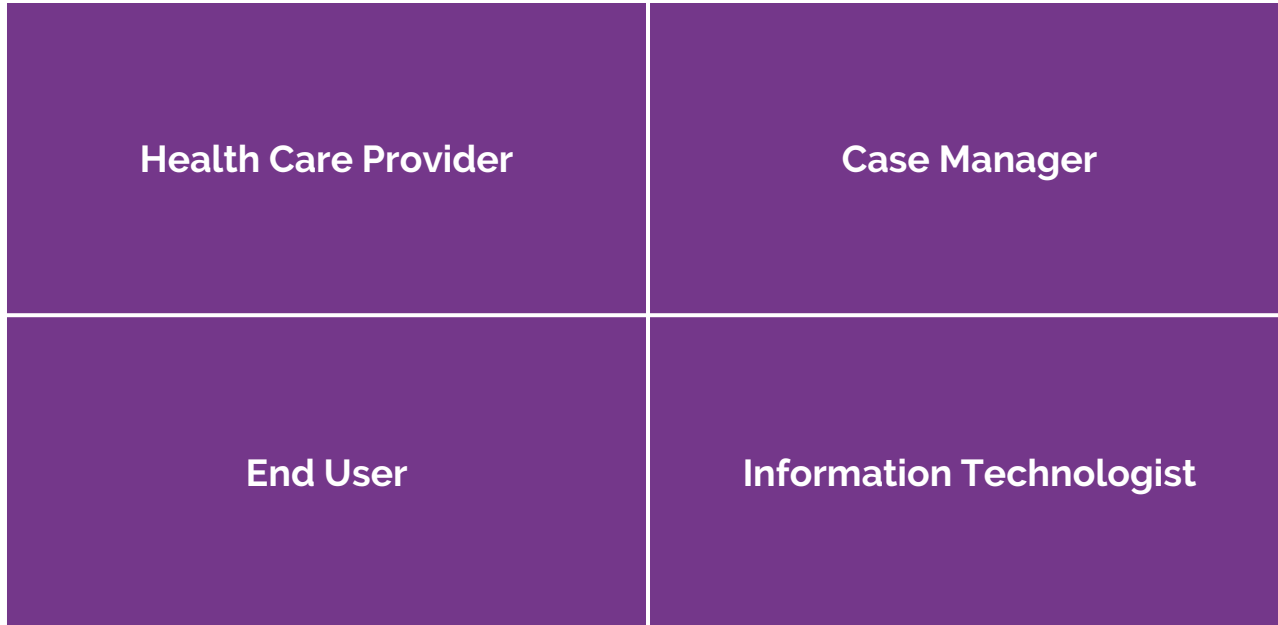
Omni-Channel

4

Technology
Enablers

A UNIFIED AND SECURE WELFARE MANAGEMENT PLATFORM

A comprehensive welfare management platform for all Marylanders with seamless, safe and secure information and data exchange between all key points of care and consumption



Marylander Family



Other Agencies



Web



Mobile



Kiosk



Person

Case Workers

Plan Admin

Other Maryland Assets

Medical Assistance

OMB & SLMB

MMIS\HBX

Eligibility

SNAP, MSAP

Medical

Enrollment

Child Support

Foster Youth

Medicaid

Children

Workforce Development

Home Energy

Adult Services

Food & Cash

PERSISTENCE / STORAGE

OLTP

Archive / Legacy Data

OLTP, OLAP
Postgres



FILE SYSTEM

S3



S3

OLAP

EMRFS



HDFS Data Lake



ACCESS

ORM(Slick)



File System Connectors



Rest Server

Data Exchange



RUNTIME

Message - Driven Runtime



WebApps / Services



Apache Spark



Streaming

Batch

ML

SQL

Graph

ENGAGEMENT LAYER



Web



Apps



Analytics

Predictive



BI/Reporting



Visualization



BPM/DMN



Monitoring



FUNCTIONAL COMPONENTS

CLIENT



HIPAA SECURE CLOUD



ENTERPRISE



EXPERIENCE MANAGEMENT		
Omni-channel		
Web	Mobile	Kiosk
Contact center		
Notifications		
Marketplace		
Search & Discovery		
Digital services		
AI Chatbots		
Partner tools		
IoT Devices	Social	

MICROSERVICES AND MODULES										
Authentication & Identity Access	Content & Knowledge base	Dashboards	Visualization	Sentiment analysis	Predictive analytics	Centralized Policy Enforcement	Machine Learning	Data Tools Data Exchange Data Quality Governance Management	Applications Consumer Service delivery Plan management Point of Sale Tracking, Monitoring Field force/Mobile Administration	Integration Engine
		Integrated, real time decision analytics								
Registration, Eligibility & Enrollment						Automation				
Case & Care Management			Application & workflow configuration engine							
Continuous monitoring										

BACK OFFICE
Other Data Sources
Legacy Systems
Other agencies

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TECHNOLOGY ENABLERS:

Driving Innovation Throughout the Continuum-of-Care



Q&A

- > Please ask any questions you may have to the GoToWebinar Chat Box

Thank You

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