

IT Optimization

INCREASE EFFICIENCY. IMPROVE SERVICE.
REDUCE COMPLEXITY. REALIZE SAVINGS.



IT Optimization Summit

Instilling Intellectual Curiosity into Ohio's IT Leadership

February 16, 2018

IT Optimization Summit

Instilling Intellectual Curiosity into Ohio's IT Leadership

LEVERAGING NEW TOOLS AND TECHNOLOGIES

WELCOME

Stu Davis

DATA ANALYTICS

Nate Huskey & Derek Bridges

INTELLIGENT AUTOMATION

Derek Bridges, Deven Mehta & Spencer Wood

CONTINUOUS IMPROVEMENT THROUGH AGILE ADOPTION

Brian Lee & Mark Walker

ADJOURN



Ohio DAS

SERVICE · SUPPORT · SOLUTIONS
DEPARTMENT OF ADMINISTRATIVE SERVICES

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Consolidation of Services and Refocusing the IT Organization

Through our focus on consolidation and the collaboration with State agencies, Ohio has:

- ▶ Saved over \$160M in IT operations in the last three years
- ▶ Consolidated critical infrastructure (data centers, networks, compute, storage/operations).
- ▶ Reduced IT hardware spend by 98% and IT maintenance and repairs by 88%
- ▶ Driven more than 800% efficiency gains through migration from a “physical asset” orientation to a “virtual cloud” model
- ▶ Positioned for an “asset free” future.

The IT Optimization program has :

- ▶ Consolidated five agency mainframes down to one running agency and has expanded to local government workloads
- ▶ Driven a ten-fold increase in consolidated and virtualized servers (6,200+)
- ▶ migrated of more than 22,000 users from Centrex to a hosted VoIP solution that counts more than 44,000 state and local government users as customers, with more to come

Results: In four years' time, the State 'flipped' IT spend from 80% infrastructure focused (2011) to 60% enterprise applications focused (2016) that drive value to Ohio's customers and constituents and make Ohio a better place to live, do business and work.





Driving Enterprise Culture, Collaboration and Cloud Adoption

Driving an enterprise perspective has resulted in:

- ▶ Twenty-six agency CIOs organized to opened up lines of collaboration across the State
- ▶ Fostering the sharing of ideas, opportunities, innovation, shared solutions and services across agency CIOs and the lines of business
- ▶ Inclusion of representatives from each line of business that provide a self-sustaining enterprise IT direction for Ohio that drives meaningful change and repeatable results.

Results: Numerous “firsts” for the state and in the public sector including: consolidation of email, servers and storage, data centers; implementation of numerous enterprise shared services all with a cloud and mobility first perspective. Ohio has migrated 87% of all compute, storage, and applications to Ohio’s private and commercial cloud solutions.

Innovation and Positioning for the Future

Ohio is leading the nation in addressing challenges facing our State:

- ▶ National Leadership in driving data driven decision making using data analytics
- ▶ Harvesting and unifying State data from more than 1,600 applications and 4PB of operational data to solve public problems such as infant mortality, Opioid abuse, criminal justice and transportation optimization.
- ▶ Embracing a digital future that includes intelligent automation, machine learning and robotic process automation, digital citizen engagement and paperless processes.

Enterprise Shared Services are the core of what we do:

- | | | |
|----------------------------------|----------------------------------|---|
| ▶ Enterprise document management | ▶ Project prioritization | ▶ management |
| ▶ Timekeeping | ▶ Identity access and management | ▶ Disaster recovery services |
| ▶ ePayment engine | ▶ Grants management | ▶ Data visualization, and business intelligence |
| ▶ eLicensing | ▶ IT service | |

Results: The State is now reinvesting IT savings sustainably – taking money that used to be spent on infrastructure and reinventing itself through new systems, cloud everything, digital engagement and abandonment of decades old processes, systems and ideas.



Protecting State Assets and Data

Ohio's centralized cybersecurity functions has raised the state's cybersecurity defenses for state assets (systems, applications and data) from cyber threats is a table stakes requirement:

Ohio's 1,600 systems present a prime target for malicious actors and our defenses must outpace their efforts. We are:

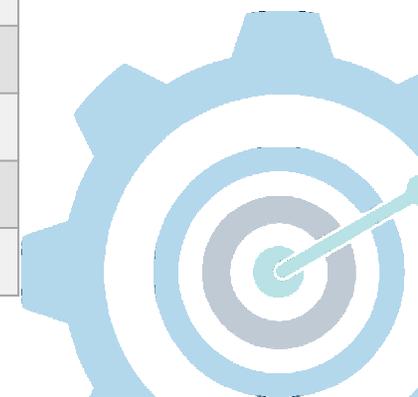
- ▶ Driving a layering of enterprise solutions including vulnerability management, security information and event management (SIEM),
- ▶ Including cloud access security broker (CASB), web filtering, penetration testing, mobile device management, file system and database encryption, and end point protection.
- ▶ Moving to a unified identity, access and fraud framework to both drive digital constituent engagement
- ▶ Adopting the highest standards of credential management in the public sector.

Results: The State now maintains a comprehensive and coordinated defense, reaction and resolution capability that aligns with the threats public sector entities face every day, 24x365.

STATE CIO TOP 10 PRIORITIES for 2018 – NASCIO

Strategies, Management Processes & Solutions

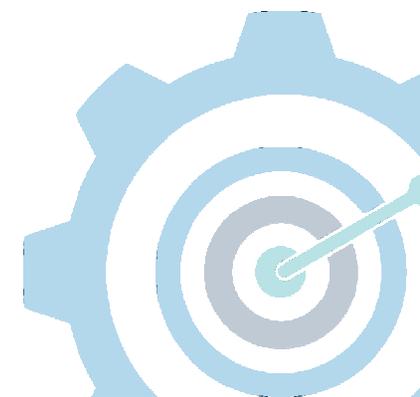
NASCIO CIO Priority	CIOs	Ohio
Security & Risk Management	☑	In Place/Ongoing
Cloud Services	☑	In Place/Ongoing
Consolidation/Optimization	☑	In Place/Ongoing
Digital Government	☑	In Place/Ongoing
Budget, Cost Control, Fiscal Management	☑	In Place/Ongoing
Shared Services	☑	In Place/Ongoing
Broadband/Wireless Connectivity	☑	In Process
Data Management & Analytics	☑	In Place/Ongoing
Enterprise IT Governance	☑	In Place/Ongoing
Agile & Incremental Software Delivery	☑	In Process



STATE CIO TOP 10 PRIORITIES for 2018 – NASCIO

Technologies, Applications and Tools

NASCIO CIO Priority	CIOs	Ohio
Cloud Solutions	☑	In Place/Ongoing
Legacy Application Modernization/Renovation	☑	In Process
Security Enhancement Tools	☑	In Place/Ongoing
Identity & Access Management	☑	In Process
Business Intelligence & Business Analytics	☑	In Place/Ongoing
Data Management	☑	In Process
Enterprise Resource Planning	☑	In Place/Ongoing
Disaster Recovery/Business Continuity	☑	In Place/Ongoing
Customer Service/CRM	☑	In Process
Networking	☑	In Process



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Data Analytics

Nate Huskey – Dept of Health and

Derek Bridges – Dept of Administrative Services



We Now Live in a Data Driven World

90%

of the data in the world today has been created in the last two years alone¹

88%

of data is ignored. Most organizations analyze 12% of the data they have¹

80%

estimated amount of unstructured enterprise data²

33%

of data will pass through a cloud by 2020¹

Taking Ohio to where it needs to be in the 21st Century by embracing technology (*H.B. #49 Sec. 125.32*)

Cloud Compute & Storage

Pre-Qualified Analytics Firms

Data Sharing & Analytics Platform

Visual Analytics

Data Analytics Support Services

The State provides access to cloud compute and storage for analytical projects as part of a hybrid cloud/on-prem strategy

The State provides access to pre-qualified firms with expertise in data analytics & machine learning across 14 functional domains

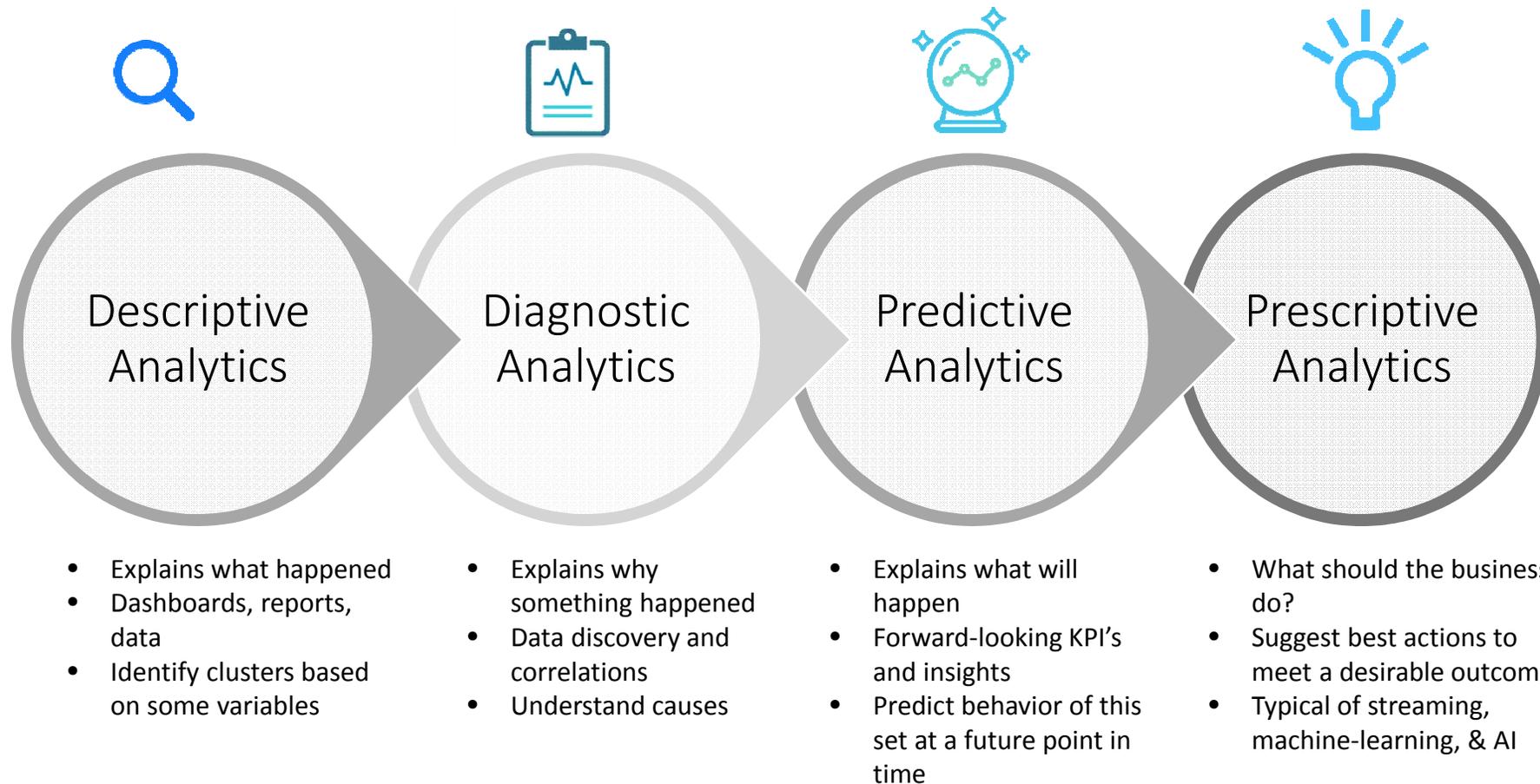
The State has a highly secured hosted analytics platform inside the State data center featuring industry leading tools for secure data sharing and analytical workloads

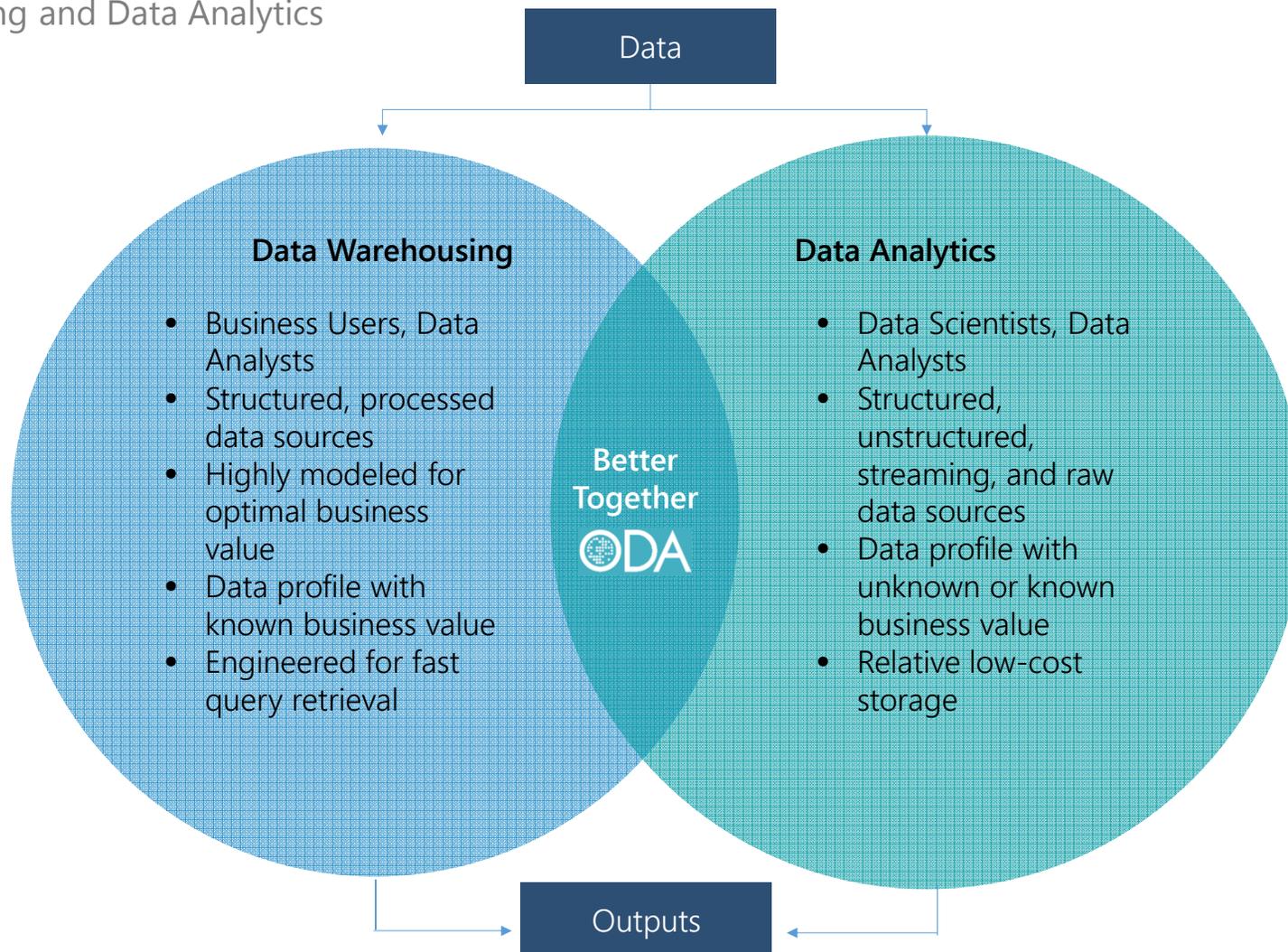
Visual analytics and interactive dashboards are provided out of an enterprise service based on Tableau software

The State supports the tools and hybrid data platform, supports data staging and curation, and provides scope and procurement services

To unlock State data that drives meaningful social change to make a difference for Ohioans – fixing communities, restoring hope to those most in need, identifying inefficiencies, creating jobs and economic growth, adjusting policies, and predicting and preparing for otherwise unexpected events.







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Guiding Principles

Data is a Strategic Resource



Aligns with Am. Sub. H. B. No. 49, Sec. 125.32.A,

Data is a State Shared Asset



Aligns with DP-001 – Data is a State Shared Asset, & Am. Sub. H. B. No. 49, Sec. 125.32.B

Analytical & Research Purposes



Aligns with Am. Sub. H. B. No. 49, Sec. 125.32.A

Preserving Privacy & Confidentiality



Aligns with DP-004 – Data Security, Am. Sub. H. B. No. 49, Sec. 125.32.C.2 & Sec. 125.32.D

Data is Governed by Accountable Entities



Aligns with Am. Sub. H. B. No. 49, Sec. 125.32.C.1 and 125.32.D

Data is Reusable



Aligns with Am. Sub. H. B. No. 49, Sec. 125.32.D

Data is Interoperable



Aligns with Am. Sub. H. B. No. 49, Sec. 125.32.D

“Expand and enhance predictive models and profiling models to determine those at-risk for infant mortality in Ohio and design targeted interventions”

- State of Ohio Infant Mortality RFP

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Infant Mortality Project Outcomes

KEY QUESTIONS

Which mothers and infants are most at risk of infant death?

Which families are most likely to benefit from targeted interventions?

Which families are most likely to participate in targeted interventions?

Which intervention programs yield the best return on investment?

KEY MODELS

Evaluating Efficacy of State Intervention Programs

Identifying Mothers at High Risk of Infant Mortality and Constructing Their Profiles

Predicting the Characteristics of Mothers Most Likely To Benefit From An Intervention Program

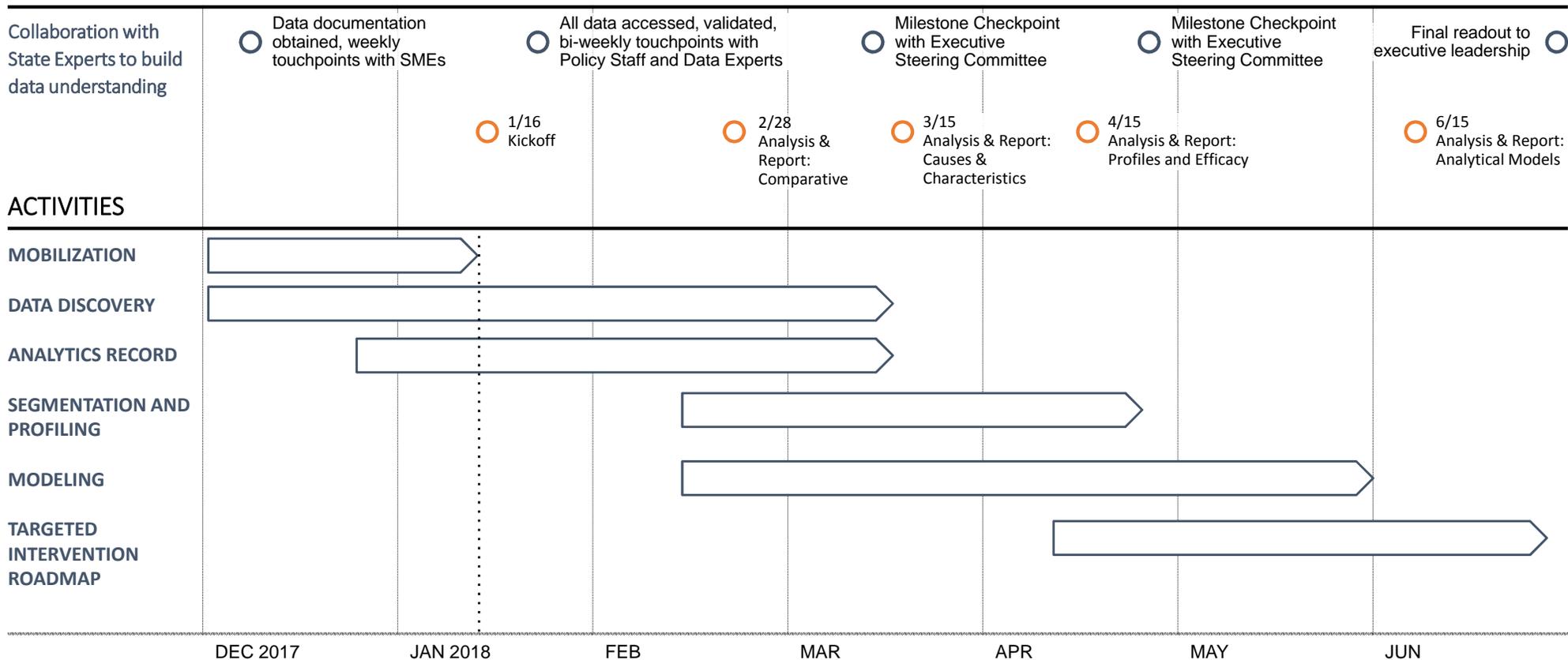
Predicting Which Intervention Program(s) At-Risk Mothers Should be Enrolled In

Identifying Mothers Most At-Risk of Having a Baby that will Require a NICU Admission

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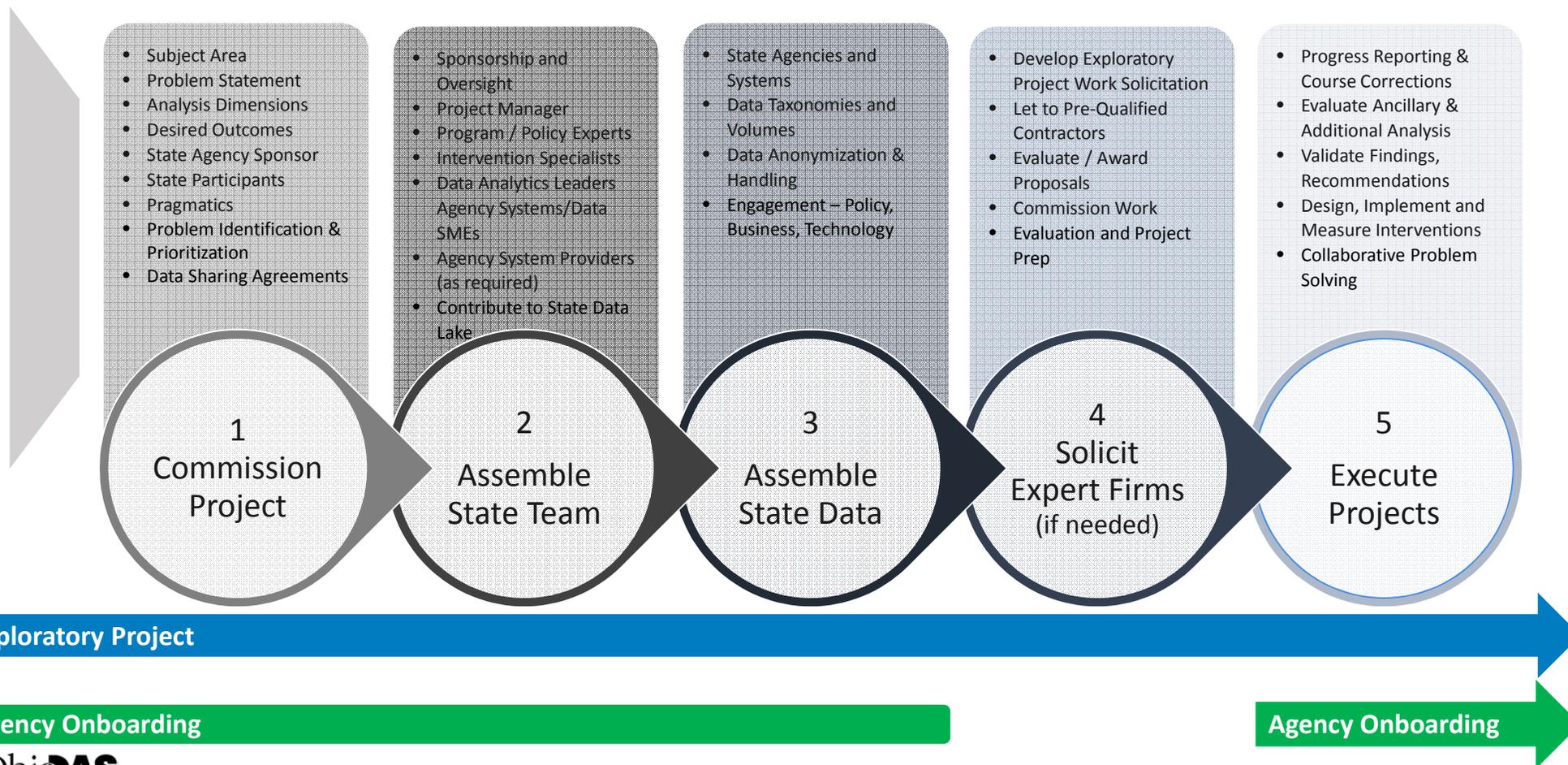
Infant Mortality Project Proposed Timeline

MILESTONES AND CHECK-INS



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Launching a Project



Questions or next steps?

*Contact Derek Bridges at derek.j.bridges@das.ohio.gov or
OhioDataAnalytics@das.ohio.gov*

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Intelligent Automation

Derek Bridges, Deven Mehta & Spencer Wood
Dept of Administrative Services



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Continuous Improvement through Agile Adoption

Brian Lee – Dept of Public Safety and
Mark Walker – Dept of Taxation



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IT OPTIMIZATION SUMMIT UPCOMING SCHEDULE:

March 1: Leveraging Cloud (Platform & Software)

- Cloud Experience & Salesforce: Ed Carr, Scott Brock, Chris Bowsher
- MS CRM Dynamics: James Gregory, Deval Parikh, Bright Thomas
- Agile vs Traditional Software Development – Matt Curren
- Cloud Governance – Michael Carmack

March 22: Leveraging Existing Enterprise Solutions/Tools

- Skype & Video Conferencing – Michael Carmack & Eric Schmidt
- OneDrive – Greg Buskirk
- SharePoint – Deven Mehta
- ServiceNow – Renee Evans
- Enterprise Document Management – Glen Coleman
- Ohio Digital Experience – Derek Bridges





Thank You!