Modernize IT- Modernize Data Analytics Capabilities

Goal Leaders:

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Mission Area Dashboards – Goal & Vision

Goal Statement- Modernize information technology and data analytics capabilities across the Department, resulting in a USDA that is customer-focused, evidence-based, and efficient in the use of American taxpayer's dollars.

Impact Statement- By September 30, 2019, provide USDA leadership with instant access to key data on program activities and trends, allowing the Department to make informed and data-driven decisions, and comply with White House and Congressional requirements to improve data use.

Challenges
- Decisions are frequently made with static, outdated, or limited information
- There is a lack of access to analytical tools supporting rapid and well-informed decisions
- Data is not integrated or standardized across agencies or business function
- The authoritative source of data elements are not clear
- The quality of data is often too low to support decision-making

Opportunities
- Develop a comprehensive approach to data management that significantly improves data quality and availability for all internal USDA stakeholders
- Extend to all mission areas analytical and visualization tools introduced to executive offices in FY18 that increase manager and employee capabilities to communicate information clearly and efficiently
- Support increased fact-based, data-driven decision-making that enables the department to better use taxpayer dollars and more efficiently support critical mission functions

Mission Area Dashboard - Conceptual Overview

Provide USDA leaders with instant access to key program data that will enable data-driven decisions

FY19 DASHBOARD CONCEPT

Farm Production & Conservation (FPAC): Mitigates risks of farming (weather, market, etc.)

Rural Development (RD): Financial programs to support essential public facilities and services

Natural Resources and Environment (NRE): Supports sustainable land management

Food, Nutrition and Consumer Services (FNCS): Administers nutrition assistance and research

Marketing and Regulatory Programs (MRP): Facilitates marketing of U.S. agricultural products and ensures animal and plant health

Trade and Foreign Agricultural Affairs (TFAA): Provides U.S. producers opportunities to compete in the global marketplace

Research, Education and Economics (REE): Integrates research and education to support safe, competitive agriculture production

Food Safety: Ensures safety and properly labeling of U.S. commercial meat, poultry, and egg products
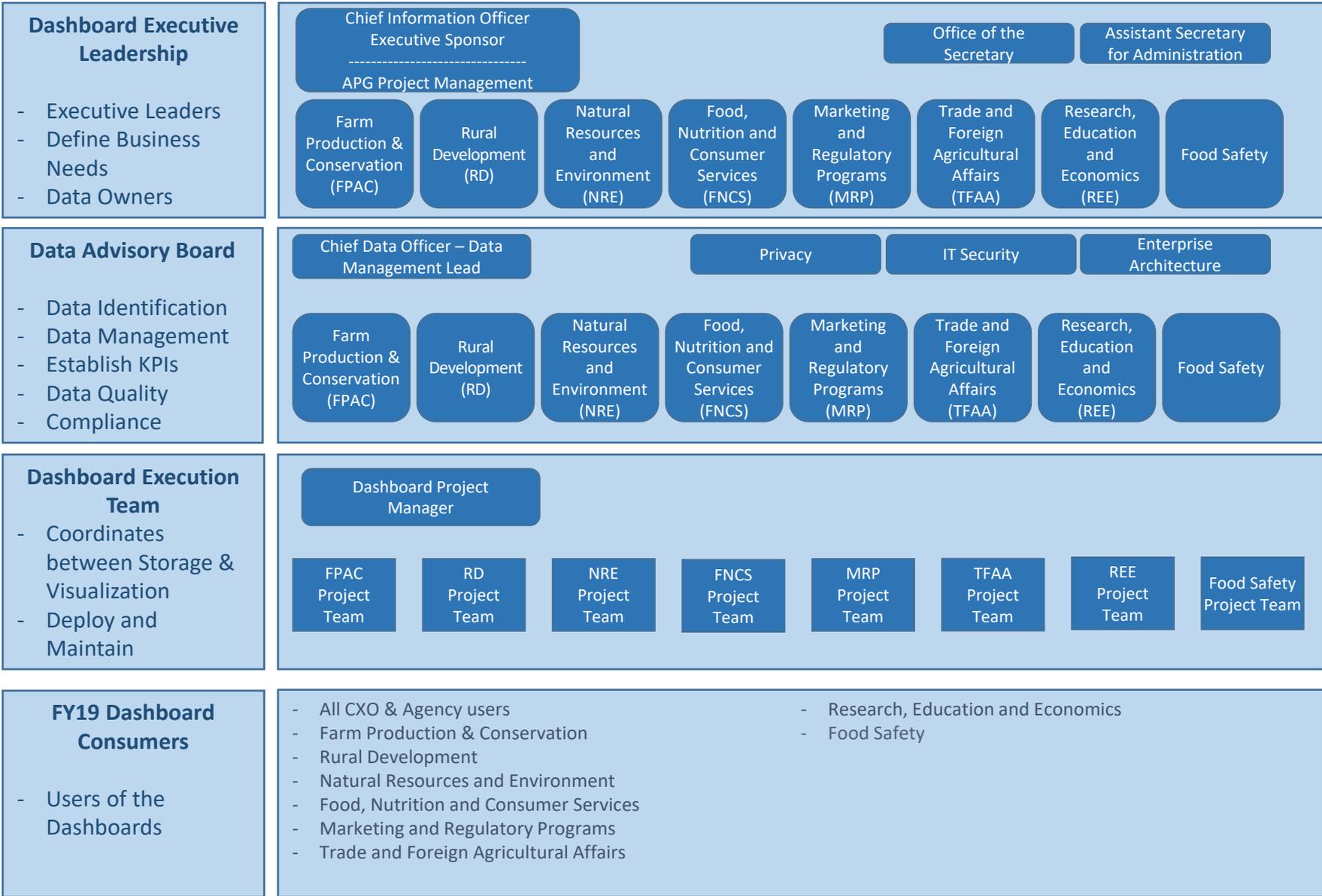
Dashboard Metrics:
- **Program effectiveness**
- **Availability/expenditure of resources**
- **Customer distribution & needs**
- **Customer service**
- **Key indicators of risk**

Users:
- **Secretary & sub-cabinet**
- **USDA program administrators**
- **Mission area/agency business functions & staff**
- **State/regional directors**

3

Mission Area Dashboard – Governance Structure

Dashboard Executive Leadership

- Executive Leaders
- Define Business Needs
- Data Owners

| Chief Information Officer Executive Sponsor ------------------------------- APG Project Management | | | | | Office of the Secretary | Assistant Secretary for Administration |

| Farm Production & Conservation (FPAC) | Rural Development (RD) | Natural Resources and Environment (NRE) | Food, Nutrition and Consumer Services (FNCS) | Marketing and Regulatory Programs (MRP) | Trade and Foreign Agricultural Affairs (TFAA) | Research, Education and Economics (REE) | Food Safety |

Data Advisory Board

- Data Identification
- Data Management
- Establish KPIs
- Data Quality
- Compliance

| Chief Data Officer – Data Management Lead | | Privacy | IT Security | Enterprise Architecture |

| Farm Production & Conservation (FPAC) | Rural Development (RD) | Natural Resources and Environment (NRE) | Food, Nutrition and Consumer Services (FNCS) | Marketing and Regulatory Programs (MRP) | Trade and Foreign Agricultural Affairs (TFAA) | Research, Education and Economics (REE) | Food Safety |

Dashboard Execution Team

- Coordinates between Storage & Visualization
- Deploy and Maintain

Dashboard Project Manager

| FPAC Project Team | RD Project Team | NRE Project Team | FNCS Project Team | MRP Project Team | TFAA Project Team | REE Project Team | Food Safety Project Team |

FY19 Dashboard Consumers

- Users of the Dashboards

- All CXO & Agency users
- Farm Production & Conservation
- Rural Development
- Natural Resources and Environment
- Food, Nutrition and Consumer Services
- Marketing and Regulatory Programs
- Trade and Foreign Agricultural Affairs

- Research, Education and Economics
- Food Safety

Key Milestones

The dashboards will be developed using agile methodology to enable rapid delivery of functionality to the leadership team.

Milestone Summary					
Key Milestones	**Milestone Due Date**	**Milestone status**	**Change from last month**	**Owner**	**Anticipated Barriers or other Issues Related to Milestone Completion**
CXO Dashboard: OBPA	Q1FY19	Complete			N/A; milestone complete
Mission Area 1: FPAC	Q1/Q2FY19	Complete			N/A; milestone complete
Mission Area 2: RD	Q1/Q2FY19	Complete			N/A; milestone complete
Mission Area 3 NRE	Q3FY19	Complete			
Mission Area 4: FNCS	Q3FY19	Complete			
Mission Area 5: REE	Q4FY19	Underway			
Mission Area 6: TFAA	Q4FY19	Underway			

Summary of Progress – FY19 Q3

During FY19 Q3, the project team continued the progress in support of USDA's Modernize Data Analytics Capability' Agency Priority Goal.

- Dashboarding
  - Completed NRE dashboards in Q3: includes Citizen Services, Preparedness, Forest Conditions and Work Environment.
  - Completed FNCS dashboards in Q3: includes Program Stewardship, Waivers, Disaster Response and USDA Foods.
  - Worked with the Office of Budget and Program Analysis (OBPA) in Q1 and Q2 to develop a dashboard to support the Deputy Secretary's Quarterly Strategic Review (QSR) process. Dashboard has been used for all Q2 QSRs.
  - Launched dashboard program for REE in Q3: includes dashboards on Research Impact, Partnerships and Funding, and Product Delivery (e.g. Report Dissemination and Data Product Usage).
  - Launched dashboard program for TFAA in Q3: dashboards include Business Operations, Global Programs, Global Market Analysis, and Trade Policy.
- Data Management
  - USDA's data team is working with the CXOs and Mission Areas to ensure data management practices are at a level necessary for rapid advances in analytics.
  - The team is applying CMMI model widely accepted in government and industry.
  - Data team is also conducting interviews and workshops with data stewards and other staff to ensure their organizations' staffing and skills, funding, processes, and infrastructure are optimized to best support the data analytics effort .

Summary of Progress – FY19 Q3

- Upskilling/training
  - Introduced throughout Q1 and Q2 to executive offices and mission areas with active dashboard programs to expand user knowledge of the dashboarding tools and best practices.
  - Conducted workshops on Data Visualization and Storytelling With Data.
  - Organized Doctor's Hours to provide rapid solutions to developer questions.
  - Numerous training materials and recorded webinars are being made available on AgLearn for future use as the data analytics and dashboarding expands throughout the Department.

- Adoption
  - Held monthly communities of practice (CoPs) meetings for Open Data Stewards and Dashboard Champions.
  - Achieved record month (April) in the increased participation among community members.
  - Distributed USDA Insight of the Month email newsletter for the USDA dashboard community to provide information, generate interest, and drive users to the dashboards.

- Data Portal
  - Continued development and prototyping of portal.
  - Allows USDA stakeholders to develop and share data relevant to interagency teams.
  - Portal will:
    - Feature interfaces to datasets for retrieval from the data lake
    - Enable deep-dive analyses into visualizations, allowing stakeholder to interact with data.

Operational Performance Indicators

**Accessibility and adoption are the key indicators. They are measured by 3 key performance indicators:**

- Develop and launch mission area dashboards. Goal was 6 mission areas by the end of the FY. Currently there are 4 mission areas completed and 2 in development.

- Develop and publish success stories about how USDA data is being used to create public or private sector value. Goal was 3 success stories per mission area. Currently, 19 success stories have been compiled and metrics are being collected for them.

- Double usage of the dashboards as measured by click per month. Baseline was 1,700, goals was 3,400. Chart below shows the usage trend vs. the goal.

Dashboard Views and Users
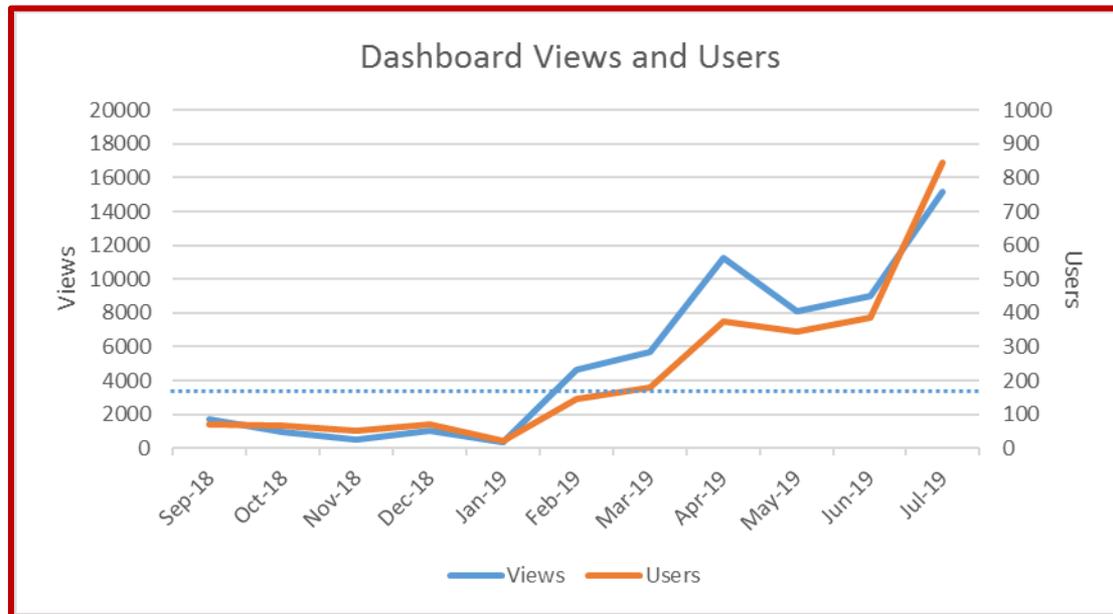
Communications Plan

Our Change Approach is a three-phased approach to activate various stakeholder groups across the organization.

- Initiate communications with leadership buy-in from USDA and mission area leadership
- Develop campaign to spread awareness of the analytics project, such as CoPs and electronic newsletters
- Create and distribute training and communications

ANALYTICS

PHASE 1:
Outreach

PHASE 2:
Institutionalize Governance

PHASE 3:
Training and Communications
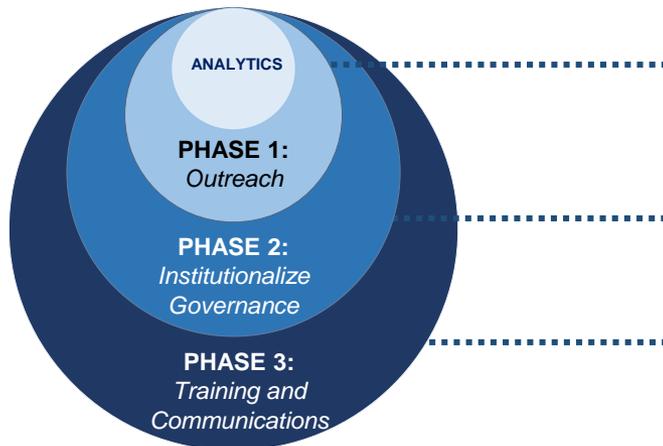
Phase 1: Outreach
Socialize purpose and goals of the analytics project by conducting a stakeholder assessment. Create a logo and mission statement and deploy multi-staged campaign to attract and spread awareness of the dashboards. Channels include emails, newsletters, boards, etc.

Phase 2: Institutionalize Governance
Design and invite members to join the new Analytics Governance Board, equip leaders with the steps to deal with and address change across agencies, stand up CoPs to increase interest and investment of subject matter experts

Phase 3: Training and Communications
Create training material (FAQs, User Guides) and communications (Implementation Playbook) to help deploy and support analytics. Create change measurement and tracking through adoption rates on dashboards, development of success stories.